

# WELCOME

## Community Information Sharing Session

Saturday June 20, 2015  
9:00 am to 11:30 am

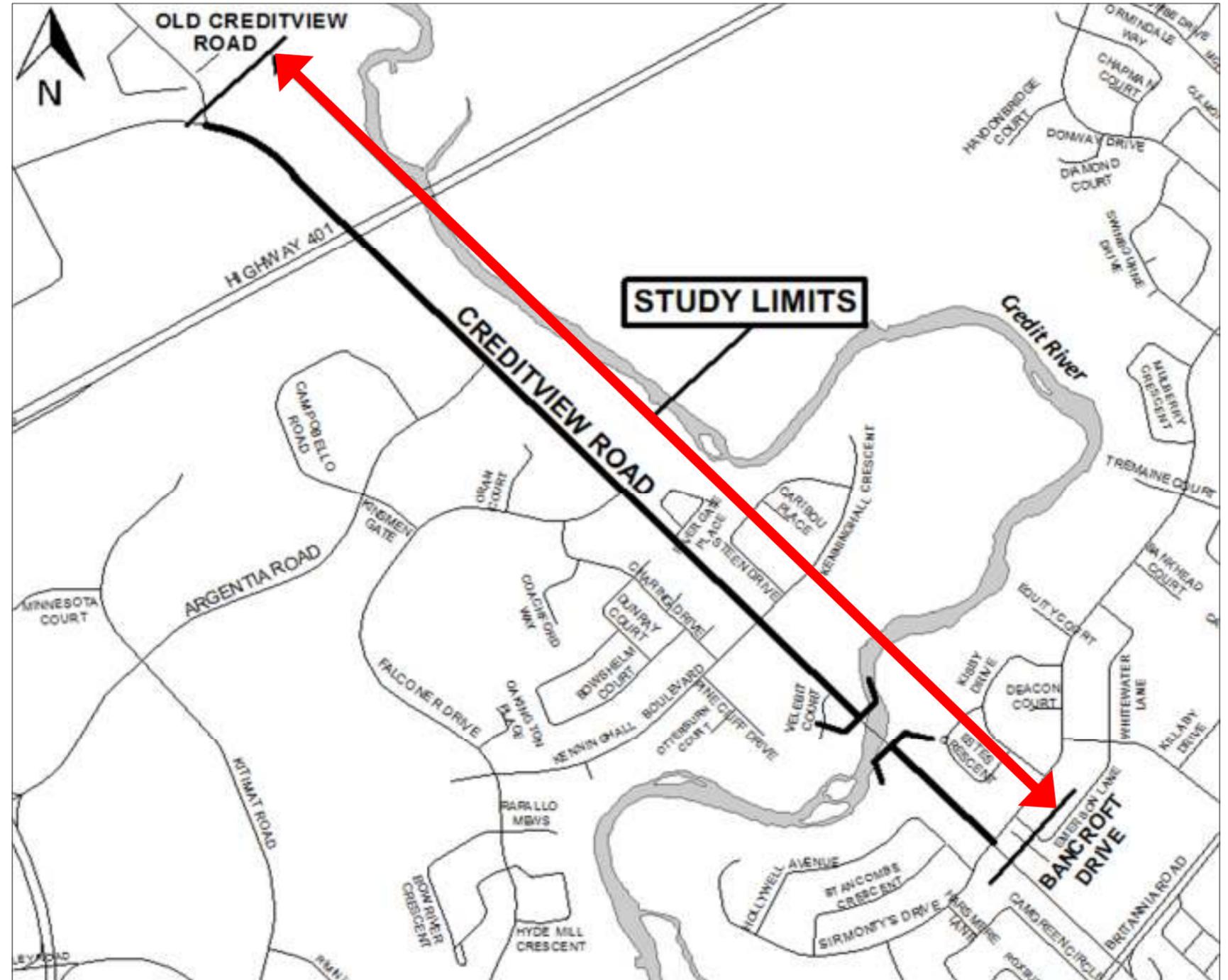
Please sign in

Direct any questions or comments to Study Team  
Members

# Agenda

- Opening Remarks
- Study Update
- Presentation
- AIMM Exercise
- Rating Exercise for Future Consideration
- Next Steps/Closing Remarks
- Information Stations (Display Boards)

# Study Area



# Study Purpose and Background

The purpose of this study is to investigate the need for additional north-south road capacity, intersection and safety improvements for Creditview Road, taking into consideration:

- Creditview Road is classified as a Major Collector within the Official Plan;
- Roadway is identified as a scenic route from Britannia Road to north of Highway 401 in the City's Cultural Heritage Inventory;
- Creditview Road bridge structure improvement opportunities over Highway 401;
- Preservation, restoration and enhancement of the existing natural heritage features;
- Adjacent land uses;
- Consideration of existing and future travel demands;
- Future plans for an active transportation corridor, including a multi-use trail with connections to other facilities in the adjacent neighbourhoods;
- Streetscaping and landscaping improvement opportunities; and,
- Local community interests.

A separate Class EA study was completed by the City in 2013 for the Creditview Road Bridge over the Credit River. The construction for the bridge is expected to occur in 2016.

# Our Creditview Road

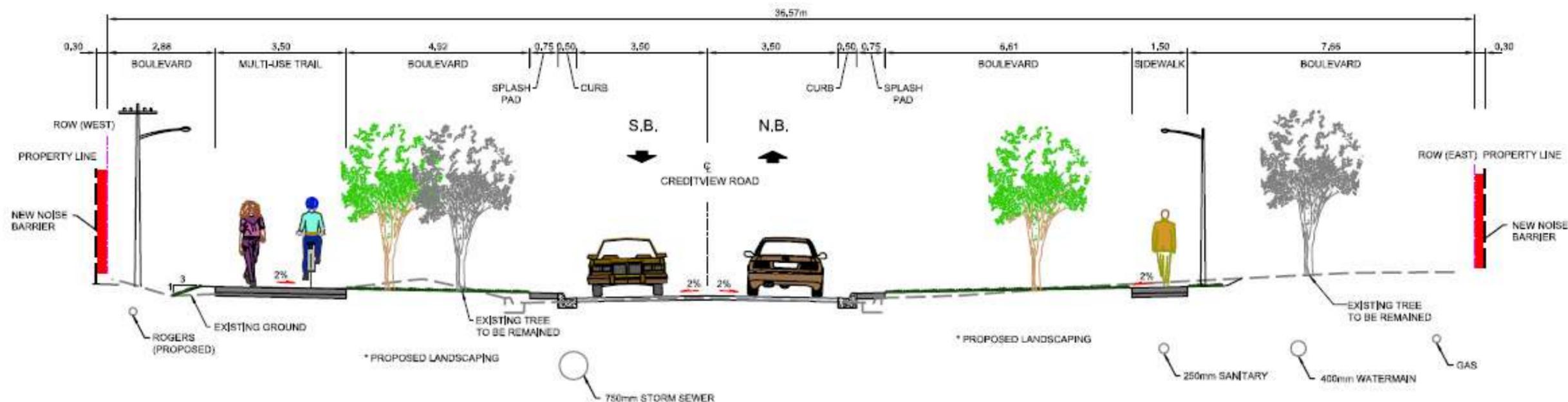
- Following a context sensitive design approach;
- Implementing roundabouts as a unique solution to addressing existing and future traffic demands;
- Maintaining Creditview Road as 2 lanes between Bancroft Drive and Argentia Road;
- Providing opportunities to enhance landscaping and community features;
- Minimizing property impacts; and,
- Providing facilities for pedestrians and cyclists.



# Preferred Alternative

To address the future needs of the corridor, an evaluation of five alternatives was undertaken and the preliminary preferred alternative was selected and includes the following key elements:

- Maintaining 2 lanes from Bancroft Drive to Argentia Road;
- Widening to 4 lanes from Argentia Road to Old Creditview Road;
- Maintaining Bancroft Drive and Old Creditview Road as signalized intersections;
- Proposing 1-lane roundabouts at Kenninghall Boulevard and Falconer Drive;
- Proposing a 2-lane roundabout at Argentia Road;
- Implementing a continuous multi-use trail along the west side of the corridor; and,
- Implementing a continuous sidewalk along the east side of the corridor.





# Impacts and Mitigation

## Preferred Alternative

### Trees

- Expected to impact +/-250 trees, many of which are in poor to fair condition.
- A Tree Protection Zone will be established prior to construction to protect the remaining trees.
- Trees that are removed will be replaced at a 2:1 ratio along the corridor as much as possible and additional trees may be planted in nearby parks and natural areas.

### Air Quality

- The improvements to Creditview Road will reduce traffic congestion (e.g. delays, idling).

### Speed and Safety

- Incorporate roundabout design to manage speeds and facilitate safe pedestrian crossing.

### Noise

- Based on findings of the traffic noise assessment, similar to today, noise levels are mostly above 60 dBA, which is the threshold for noise barrier installation under the City's Noise Attenuation Barrier on Major Roadways Policy.
- New noise barriers will be installed where none currently exist.

### Property and Construction

- Approximately 2,158 m<sup>2</sup> of additional right-of-way will be required for the preferred alternative, 132 m<sup>2</sup> of which is private property.
- The City will negotiate the property requirements with private owners during Detail Design.
- A Construction Management Plan will be developed during Detailed Design.

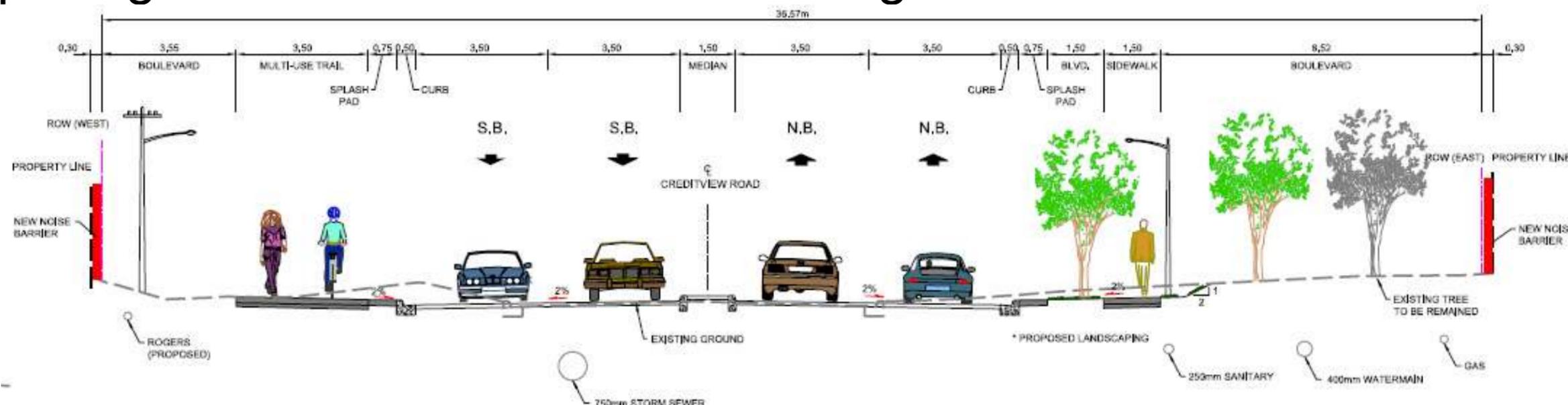
# Long-term Solution

The preliminary preferred alternative is expected to support traffic operations to Year 2031 and potentially beyond.

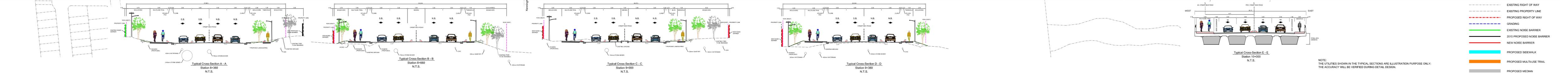
The City will implement a monitoring program on Creditview Road to ensure the road continues to meet the needs of the community. If and when additional capacity is required, community consultation at that stage will take place prior to the implementation of the long-term solution.

The **long-term solution** includes the following key elements:

- Widening to 4 lanes from Bancroft Drive to Argentia Road; and,
- Proposing 2-lane roundabouts at Kenninghall Boulevard and Falconer Drive.



# LONG-TERM SOLUTION



NOTE:  
THE UTILITIES SHOWN IN THE TYPICAL SECTIONS ARE ILLUSTRATION PURPOSE ONLY.  
THE ACCURACY WILL BE VERIFIED DURING DETAIL DESIGN.



CREDITVIEW ROAD CLASS EA PLAN / CROSS SECTIONS LONG-TERM SOLUTION PLAN - STA. 8+037 TO STA. 10+487			
DESIGN	DRAWN	CHECKED	CONTRACT No.
SCALE: 1" = 30'	15' 0' 30'	DRAWING NUMBER	SHEET
DATE:			

CONSULTANTS	HORIZONTAL / VERTICAL CONTROL MONUMENTS	DIGITAL INFORMATION	No.	DATE	REVISIONS	INITIAL	SIGNED
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# Impacts and Mitigation

## Long-term Solution

### Trees

- An additional +/- 50 trees will be impacted, many of which are in poor to fair condition.
- A Tree Protection Zone will be established prior to construction to protect the remaining trees.
- Trees that are removed will be replaced at a 2:1 ratio along the corridor as much as possible and additional trees may be planted in nearby parks and natural areas.

### Air Quality

- The improvements to Creditview Road will reduce traffic congestion (e.g. delays, idling).

### Speed and Safety

- Incorporate roundabout design to manage speeds and facilitate safe pedestrian crossing.

### Noise

- No additional noise mitigation is required as new noise walls will be installed as part of the preferred alternative.

### Property and Construction

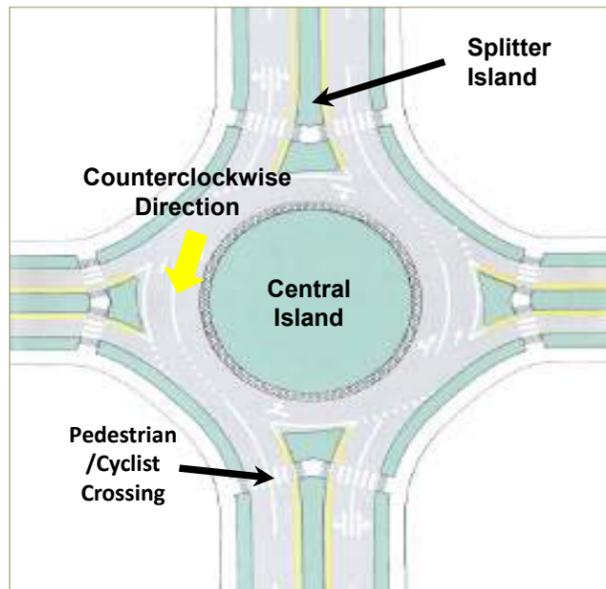
- Approximately 875 m<sup>2</sup> of additional right-of-way will be required for the recommended long-term solution, 61 m<sup>2</sup> of which is private property.
- The City will negotiate the property requirements with private owners.
- A Construction Management Plan will be developed.

\* Further community consultation will take place prior to the implementation of the long-term solution.

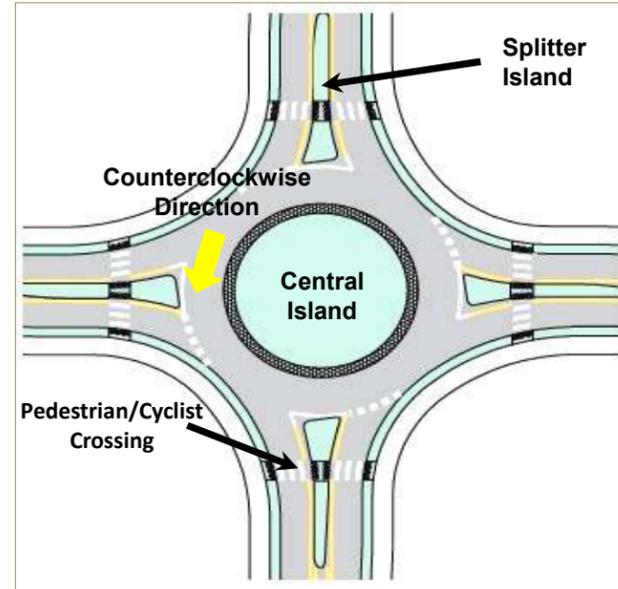
# Roundabouts

**A circular intersection design that has specific traffic control features and is designed to control speeds.**

**Two-Lane Roundabout With One- and Two-Lane Approaches**



**Single-Lane Roundabout With One-Lane Approaches**



Source: Manual on Uniform Traffic Control Devices for Streets and Highways

## Pedestrian and Cyclist Use

- Pedestrians use splitter islands to cross one direction of traffic at a time.
- Experienced cyclists may ride through a roundabout as per other vehicles.
- Other cyclists dismount and walk their bicycles as per pedestrians.

## Traffic Flow

- All traffic circulates in a counterclockwise direction, to the right of a central island.
- Traffic must yield at entry to traffic already within the roundabout.
- Vehicles entering or leaving the traffic circle must stop to allow pedestrians to fully cross at the crosswalk.

## The following are benefits of roundabouts over traditional intersections:

**Improved safety** - Reducing the number of vehicular conflict points and reducing vehicular speeds, in turn, reduces the potential for severe crashes and serious injury.

**Speed management** - A reduction in speed is necessary to negotiate the roundabout, whereas vehicles may not slow down during the green phase of a traffic signal or speed through a yellow/red phase.

**Increased capacity** - A high volume of left turning vehicles is better handled by a roundabout than a multi-phased traffic signal.

**Fewer stops and reduced delays** - Delay is significantly reduced by yielding at the entry of a roundabout, rather than stopping and waiting for a green light at a signalized intersection; or waiting for a gap in the traffic at a stop sign.

**Less idling and air pollution** - Reduced delays mean reduced fuel consumption and improved air quality by reducing emissions.

**Reduced maintenance costs** - The roundabout eliminates maintenance and electricity costs associated with traffic signals.

**Aesthetics** - There is an opportunity for landscaping within the central island.

Reference: [mto.gov.on.ca](http://mto.gov.on.ca)

## Streetscape Vision

- Improve active transportation opportunities and connections to adjacent neighbourhoods and open spaces;
- Balance the functional and aesthetic requirements of pedestrians, cyclists, transit, vehicles and the natural environment;
- Enhance the natural and scenic route qualities along Creditview Road with new tree species and vegetative planting;
- Opportunities to enhance the City parkland;
- Consideration of the transition of land uses in the study area from businesses and Highway 401 crossing to low/medium density residential and parklands;
- Incorporate plantings into the central island of roundabouts as a means of enhancing the natural and scenic route qualities; and,
- Restoration of the natural environment using appropriate tree, shrub and herbaceous species throughout the corridor.





# Preliminary Tree Protection and Planting Plan

## Tree Protection

- A Tree Protection Zone will be established prior to construction. Root damage will be minimized to the extent possible;
- Root pruning will occur prior to the start of construction and under the supervision of a certified arborist;
- Any roots severed during construction will be cut cleanly to minimize decay and entry points for disease;
- Limbs and/or branches will be pruned prior to construction, where it is expected that they could be damaged or interfere with construction, under the supervision of the contract administrator;
- Construction restrictions and maintenance practices; and,
- Special consideration will be given to the preservation of identified significant/mature trees.

## Tree Planting

- Trees that will be removed or damaged during construction will be replaced in appropriate locations;
- Replacement planting will include native tree species where appropriate; and,
- Significant tree species (e.g. Sugar Maple, Red Oak, Bur Oak, Shagbark Hickory and Black Walnut) will be planted, where appropriate.

Enhanced street tree planting helps to improve air quality and enhances the aesthetics of the roadway. Opportunities to plant additional trees and improve the diversity of age and species will be explored as part of this project.

# Conceptual Design



# Conceptual Design



# Conceptual Design



# Conceptual Design



# Study Area Context

## Creditview Road is a Major Collector Road:

- Collects and distributes traffic between local streets, other collector roads and arterial roads.

## Primary Function:

- Major north-south route that currently consists of a 2-lane cross-section.
- Carry through traffic between neighbourhoods, provide vehicular and pedestrian access to abutting businesses, and indirectly to residential properties via minor collector and local streets.
- Provides north-south connectivity for existing and future modes of transportation, linked with east-west connectivity via intersecting arterials and major collectors.
- Major transit route (MiWay) for northbound and southbound travel on Bus Route 38 (weekdays) and 38A (weekends).

## Features:

- Utilities are present along both sides of Creditview Road.
- A concrete sidewalk exists on the west side and a partial sidewalk exists on the east side.
- Construction of a multi-use trail on the west side from Britannia Road to Velebit Court was approved in 2013.
- Signalized Intersections at Old Creditview Road, Argentia Road, Kenninghall Boulevard and Bancroft Drive.
- Creditview Road bridge over Highway 401.
- Creditview Road bridge over the Credit River (not included as part of this study).



# Needs and Opportunities

## Traffic:

- Traffic on Creditview Road currently operates at or beyond capacity and is forecasted to increase further within the planning horizon (2031).
- Capacity improvements are required.
- Opportunity for safety improvements.
- Intersection geometric improvements (i.e. dedicated turning lanes) are required.

## Active Transportation:

- City of Mississauga Cycling Master Plan designates Creditview Road as a Primary Boulevard Route.
- Opportunity to enhance sidewalk and cycling route connectivity.
- Buffer pedestrians and cyclists from traffic.
- Balance the functional requirement of pedestrians, cyclists, transit and vehicles.

## Streetscaping:

- Enhance existing Cultural and Natural Heritage features.
- Enhance the natural and scenic route qualities along Creditview Road with new tree species and vegetative planting.

## Other:

- Increase transit reliability.
- Coordinate improvements to the Creditview Road bridge structure with Highway 401 expansion project.

# Problem / Opportunity Statement

The City of Mississauga Official Plan identifies Creditview Road as a Major Collector Road. Existing traffic volumes have reached or exceeded the available road capacity. There is projected traffic growth which will exacerbate existing conditions.

An opportunity exists to address the capacity and operational deficiencies on Creditview Road. It allows for the implementation of City-wide strategic objectives which promote sustainable multi-modal transportation options that provide residents with opportunities to walk, cycle, or use public transit to reach their destinations. Improvements to Creditview Road will facilitate safer operations along the corridor and coordinate bridge capacity across Highway 401 as well as enhancing cultural and natural heritage of the corridor.

# Summary of Comments Received at PIC #1

Category	Comment	Response/How Concern Will Be Addressed
Safety	<ul style="list-style-type: none"> <li>Increased traffic will impact pedestrian safety.</li> <li>Safety concerns at the Creditview Road/Kenninghall Boulevard intersection as school bus drop off/pickup requires students to cross Creditview Road.</li> <li>Concerns on speeding (particularly north of Kenninghall Boulevard).</li> </ul>	Both the City and the Project Team understand and appreciate the importance of safety. The Project Team welcomes all input from residents who reside within the area that can provide important local knowledge on current problems, as well as the types of mitigation measures they would like to see implemented. The Project Team has undertaken a comprehensive traffic safety study, which has been considered in the evaluation of the alternatives.
	<ul style="list-style-type: none"> <li>The right turn lane to Bancroft Drive from Creditview Road north is not being used as intended. Many drivers continue north on Creditview Road which is a safety issue.</li> </ul>	The transition lane has been removed north of Bancroft Drive on Creditview Road. The right turn lane will be used as intended.
	<ul style="list-style-type: none"> <li>Greater enforcement by police is required to enforce the truck restriction.</li> </ul>	Issue requires additional enforcement and will be brought to the attention of Peel Police and the City of Mississauga By-Law Officers.
Traffic	<ul style="list-style-type: none"> <li>Turning out of Velebit Court is difficult, especially during rush hour.</li> </ul>	All of the noted concerns and suggestions have been considered in the evaluation of the alternatives.
	<ul style="list-style-type: none"> <li>Review traffic signal synchronization.</li> <li>The left turn signal from northbound Creditview Road to Kenninghall Boulevard should be at least between 4 pm and 7 pm.</li> <li>Remove the left turn prohibition from southbound Creditview Road to Bancroft Drive during morning rush hour. Add left turn signal for northbound Creditview Road/Sir Monty's Drive. Left turns at this intersection are dangerous in the evening.</li> </ul>	The existing traffic operation concerns will be reviewed with the City's Traffic Engineering and Operations Section.
	<ul style="list-style-type: none"> <li>If improvements are made, use the centre lane as a reversible flow lane.</li> </ul>	Reversible lanes work best when the peak traffic direction changes between the morning and afternoon peak travel periods. This does not occur on this road where the traffic directions remain constant throughout the day; and providing reversible lanes requires the installation of extensive wiring and signals above the road to control the directions of traffic, and this would have a significant impact on the scenic value of the road.
Wildlife Concerns	<ul style="list-style-type: none"> <li>Both turtle and deer have been observed crossing the roadway. Bird nesting (heron, owl, and hawk) has also been observed in the vicinity of the roadway.</li> <li>Wildlife habitat within and in the vicinity of the Credit River and adjacent natural areas needs to be preserved.</li> <li>How will improvements to Creditview Road factor in concerns for wildlife?</li> </ul>	The Project Team has undertaken wildlife and terrestrial assessments to identify any impacts to species and their habitats as a result of improvements to Creditview Road. Although the limits for this study are from Bancroft Road to Old Creditview Road, we anticipate minor, if any impact on the Credit River. Comments received at the PIC regarding wildlife in the vicinity of the Creditview Road Bridge over the Credit River have been forwarded to the project team responsible for the detail design of the bridge.
Vegetation	<ul style="list-style-type: none"> <li>Concern over potential for loss of vegetation, including existing trees lining roadway and effects on Natural Areas in the vicinity of the Credit River.</li> <li>How will improvements to Creditview Road lessen effects to existing vegetation?</li> </ul>	A tree inventory and assessment has been completed as part of this Class EA study. A tree protection and planting plan will be established. Tree protection fencing will be maintained during construction.

# Summary of Comments Received at PIC #1

<b>Recreation</b>	<ul style="list-style-type: none"> <li>• The multi-use trail looks like a “sea of concrete” – it should be picturesque.</li> <li>• Off-road cycling lanes are a better option than on-road due to speeding.</li> <li>• Existing sidewalks are dangerous, especially on the Creditview Bridge.</li> </ul>	<p>The Mississauga Cycling Master Plan outlines a strategy to develop both on and off-road cycling routes in the city over the next twenty years. A primary boulevard cycling route in the form of a multi-use trail is identified along Creditview Road. The City is proposing to construct a multi-use trail for the section between Bancroft Drive and Kenninghall Boulevard, as well as Kenninghall Boulevard and Old Creditview Road. Further information can be found on the City of Mississauga website: <a href="http://www.mississauga.ca/portal/residents/mississaugacyclingplan">http://www.mississauga.ca/portal/residents/mississaugacyclingplan</a>.</p>
<b>Property Impacts</b>	<ul style="list-style-type: none"> <li>• There is no room for 4 lanes. Properties will be severely impacted, especially the townhomes on Falconer Drive backing onto Creditview Road.</li> <li>• Concern about the devaluation of properties with the potential reduction of natural features and proximity of potentially widened roadway to homes.</li> </ul>	<p>Should the need for 4 lanes be recognized beyond 2031, the recommended design for the long term solution is expected to require approximately 874.9 m<sup>2</sup> of additional right-of-way, only 60.9 m<sup>2</sup> of which is private property. In addition, based on the proposed preliminary design for the long term/4 lane design, no additional property is required on the north side of Falconer Drive/Creditview Road. It should be noted that property requirements will be confirmed during detailed design, at which time property owners will be further contacted.</p> <p>The City of Mississauga will confirm the landscape restoration and streetscape plan, as well as tree protection and planting plan (i.e. enhanced street tree planting) during detailed design. In addition, opportunities to plant additional trees and improve the diversity of age and species will be explored as part of this project.</p>
<b>Noise and Pollution</b>	<ul style="list-style-type: none"> <li>• Pollution in the community will increase as a result of construction, and ultimately, increased traffic.</li> <li>• If the road is to be widened/traffic increased, noise barriers should be considered, especially if speed is not being reduced.</li> </ul>	<p>Based on findings of the traffic noise assessment, similar to today, noise levels are mostly above 60 dBA, which is the threshold for noise barrier installation under the City’s Noise Attenuation Barrier on Major Roadways Policy.</p>
<b>Cultural Heritage</b>	<ul style="list-style-type: none"> <li>• The areas unique cultural environment should be preserved.</li> </ul>	<p>The City recognizes the cultural heritage importance of Creditview Road. A Heritage Impact Assessment, including recommendations for appropriate mitigation measures, has been prepared for the preferred alternative.</p>
<b>Transit</b>	<ul style="list-style-type: none"> <li>• Shelters for bus stops should be considered.</li> </ul>	<p>The Project Team has considered bus shelters in the development of the Preferred Alternative and the Long-term Solution. According to the current ridership, the existing bus stops do not warrant for bus shelters. However, the City will monitor the ridership for future needs of bus shelters.</p>
<b>Need for Improvements</b>	<ul style="list-style-type: none"> <li>• Divert traffic to parallel arterials (McLaughlin Road, Mavis Road, Winston Churchill Boulevard, and Erin Mills Parkway).</li> <li>• The proposal benefits other areas of the City, not the local community.</li> </ul>	<p>The need for improvements to Creditview Road has been established at the planning level through numerous policies/ studies. In addition, traffic on Creditview Road currently operates at or beyond capacity and is forecasted to increase further within the planning horizon (2031).</p>

# Evaluation Criteria

The following criteria and factors were used in the assessment and evaluation of the Alternative Designs:

## Transportation

- Traffic Operations
- Traffic Safety
- Road Network Compatibility
- Accommodation of Transit/Pedestrians/Cyclists
- Response Times / Access for Emergency Vehicles

## Engineering Considerations

- Utilities
- Cost
- Construction Staging

## Cultural Environment

- Archaeological resources
- Cultural Landscape
- Built Heritage Resources

## Socio-Economic Environment

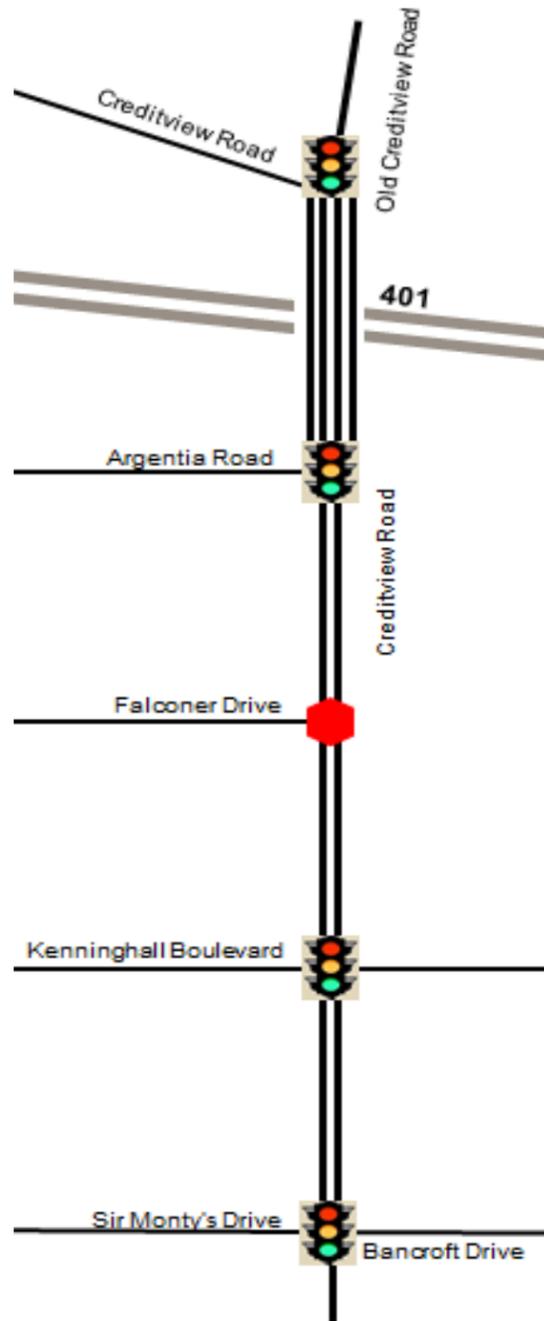
- Planning Policies
- Noise Impacts
- Aesthetics
- Property Impacts

## Natural Environment

- Vegetation and Wildlife
- Trees
- Surface Drainage and Groundwater

# Design Alternatives

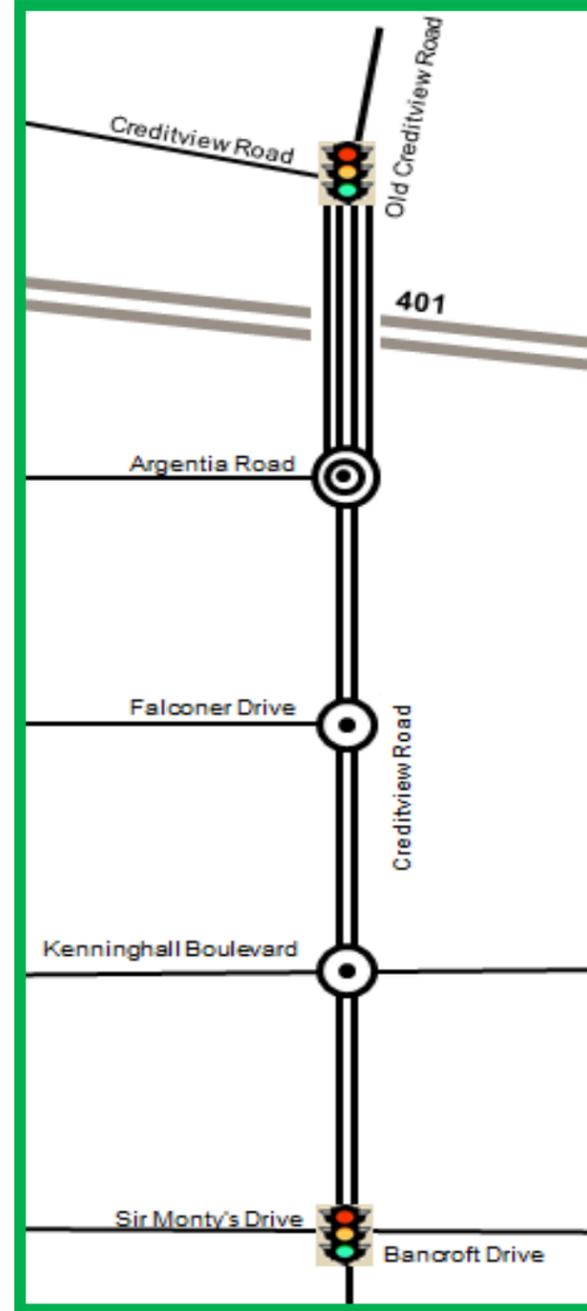
Alternative #1



Alternative #2

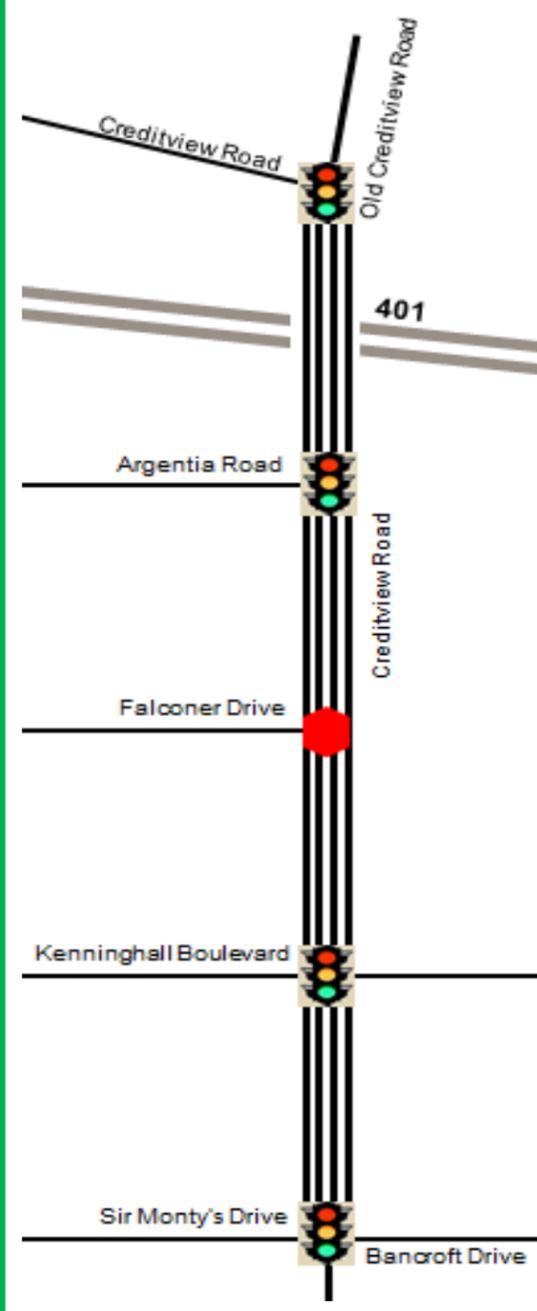


Alternative #3

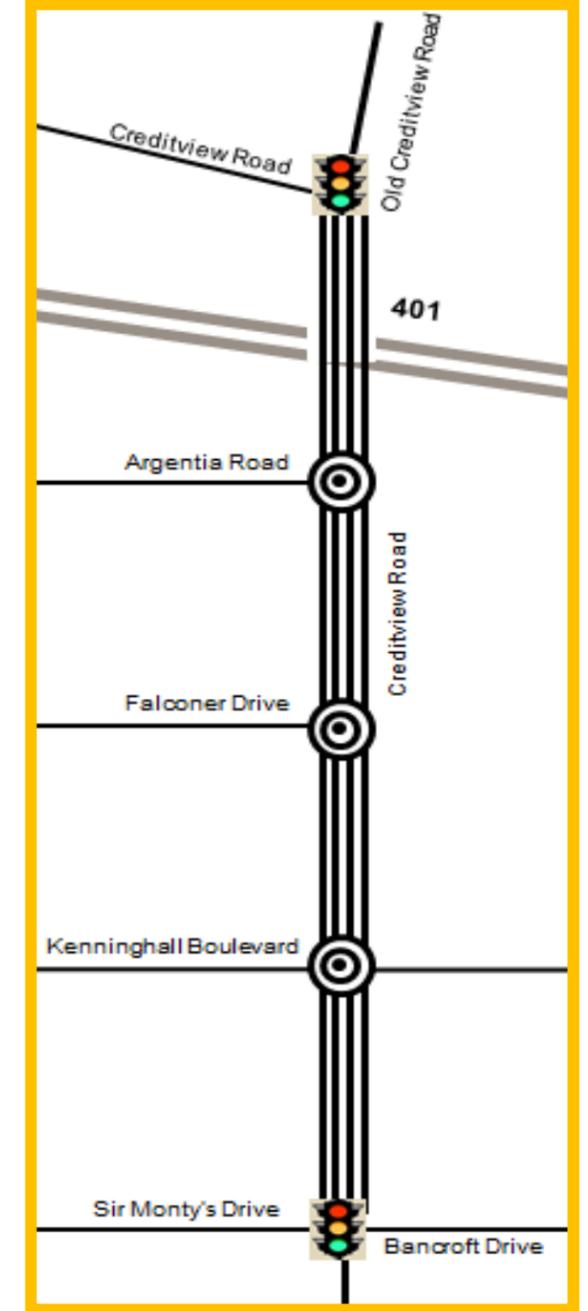


Preferred Alternative

Alternative #4



Alternative #5



Long-Term Solution

**LEGEND**

-  Stop Sign
-  Signalized Intersection

-  Two Lane Roundabout
-  Single Lane Roundabout

Evaluation Criteria and Sub-Factors	Criteria Indicators	Unit of Measure	MUNICIPAL CLASS EA FOR CREDITVIEW ROAD DESIGN ALTERNATIVES EVALUATION				
			Alternative #1 (2-lane with existing signals)	Alternative #2 (2-lane with 1 roundabout)	Alternative #3 (2-lane with 3 roundabouts)	Alternative #4 (4-lane with existing signals)	Alternative #5 (4-lane with 3 roundabouts)
			4-lane design between Argentia Road and Old Creditview Road				
<b>TRANSPORTATION</b>							
Traffic Operations	Ability to accommodate future traffic demands	Overall Corridor Traffic Performance	<b>Unacceptable</b> <ul style="list-style-type: none"> <li>Mix of stable and unstable flow with major delays by 2021.</li> <li>Many of the individual turning movements at the intersections are operating poorly and experiencing long delays by 2021.</li> <li>Kenninghall Boulevard intersection has exceeded its capacity by 2021 in the PM peak period.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted based on the traffic volumes, pedestrian volumes and collision history.</li> <li>Refuges at unsignalized intersection (e.g. Velebit Court, Rivergate Place, Falconer Drive) to facilitate a 2-stage left turn to minimize the left turn delay onto Creditview Road.</li> </ul>	<b>Unacceptable</b> <ul style="list-style-type: none"> <li>Mix of stable and unstable flow by 2021.</li> <li>Kenninghall Boulevard intersection is approaching its capacity by 2021 in the PM peak period.</li> <li>Falconer Drive intersection is operating poorly with major delays by 2021 due to upstream roundabout at Argentia Road.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted based on the traffic volumes, pedestrian volumes and collision history.</li> <li>Refuges at unsignalized intersection (e.g. Velebit Court, Rivergate Place, Falconer Drive) to facilitate a 2-stage left turn to minimize the left turn delay onto Creditview Road.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Stable flow and no major delays with intersections operating well to 2031.</li> <li>Although the movements are approaching capacity by 2031 due to the function of roundabouts, motorists are able to travel through the roundabout with minimal delay.</li> <li>Refuges at unsignalized intersection (e.g. Velebit Court, Rivergate Place) to facilitate a 2-stage left turn to minimize the left turn delay onto Creditview Road.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Mix of stable and unstable flow to 2031.</li> <li>Many of the individual turning movements at the intersections are operating poorly and experiencing long delays by 2031.</li> <li>Kenninghall Boulevard intersection is approaching its capacity by 2031 in the PM peak period.</li> <li>Falconer Drive intersection is operating poorly with major delays by 2031.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted based on the traffic volumes, pedestrian volumes and collision history.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Stable flow and no delays with intersection operating well beyond 2031.</li> <li>All three roundabouts have residual capacity.</li> </ul>
Traffic Safety	Ability to improve traffic safety for all users.	Potential for Conflicts and Speed Management	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Although signal-controlled crossings are provided, pedestrians/cyclists are required to be aware of vehicles making turns (multiple conflict points).</li> <li>Potential for pedestrians (including transit users) to cross Creditview Road at the unsignalized Falconer Drive intersection.</li> <li>Collision types between vehicles are typically more severe at signalized intersections (i.e. right-angle collision due to running a red light).</li> <li>No speed management measures proposed resulting in no change to operating speeds.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1 with the exception of the Argentia Road intersection.</li> <li>Reduced severity of collisions due to the reduced vehicular travel speed at the Argentia Road roundabout.</li> <li>In the absence of auditory cues at the Argentia Road roundabout, other measures may be required to accommodate the visually-impaired pedestrians.</li> <li>Minor speed management effect on the operating speed at Argentia Road due to use of a roundabout at the intersection.</li> <li>Multi-lane roundabout at the intersection of Argentia Road may result in additional conflict points between vehicles, as compare to single lane roundabout, due to the additional travel lanes and increased pedestrian/cyclist crossing complexity.</li> <li>At the intersection of Argentia Road, pedestrians/cyclists are required to be aware of only one direction of traffic at a time when crossing through a roundabout and have a refuge at the median splitter island.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Pedestrians/cyclists are required to be aware of only one direction of traffic at a time when crossing through all three roundabouts and have a refuge at the median splitter island.</li> <li>Reduced severity of vehicle-pedestrian/cyclists collisions as the vehicular travel speed is typically slower at roundabouts.</li> <li>In the absence of auditory cues at roundabouts, other measures may be required to accommodate the visually-impaired pedestrians.</li> <li>Multi-lane roundabout at the intersection of Argentia Road may result in additional conflict points between vehicles, as compare to single lane roundabout, due to the additional travel lanes and increased pedestrian/cyclist crossing complexity.</li> <li>Reduced severity of collisions due to the reduced vehicular travel speed at roundabouts (i.e. rear-end).</li> <li>Moderate speed management effect on the operating speed due to use of a series of roundabouts at three consecutive intersections.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Pedestrians (including transit users) are required to cross a 4-lane Creditview Road at the unsignalized Falconer Drive intersection.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Increased pedestrian/cyclist crossing complexity due to multi-lane roundabouts at all three intersections.</li> </ul>
Road Network Compatibility / Connectivity	Consistency with Other Road Network Improvements	All modes of transportation	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Creditview Road is a major collector and provides a key role as part of the City's transportation network. Although the proposed alternative improves the connectivity and movement for all modes of transportation, it does not support future travel demands beyond 2021.</li> </ul>		<b>Preferred</b> <ul style="list-style-type: none"> <li>Creditview Road is a major collector and provides a key role as part of the City's transportation network. Therefore, the proposed alternative improves the connectivity and movement for all modes of transportation.</li> </ul>		
Accommodation of Transit	Ability to Accommodate Transit	Transit Operation and Infrastructure	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Reduced reliability of service as this alternative does not support future travel demands beyond 2021.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Improved reliability of service as this alternative supports future travel demands to 2031.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Improved reliability of service as this alternative supports future travel demands beyond 2031.</li> </ul>
Accommodation of Cyclists	Ability to Accommodate Cyclists	Cycling Facilities	<b>Acceptable</b> <ul style="list-style-type: none"> <li>All options provide a multi-use trail along the west side of the corridor.</li> <li>Operation of cyclists traveling through the intersections is similar for all options.</li> </ul>				
Accommodation of Pedestrians	Ability to Accommodate Pedestrians	Pedestrian Facilities	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Facilities (sidewalk and multi-use trail) provided.</li> <li>No crosswalks provided across Creditview Road at the Falconer Drive intersection.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Facilities (sidewalk and multi-use trail) provided</li> <li>Roundabout at Falconer Drive will facilitate a crossing of Creditview Road.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Increased pedestrian/cyclist crossing complexity due to multi-lane roundabouts.</li> </ul>
Response Times / Access for Emergency Vehicles	Potential to Improve Emergency Service Response Time	Emergency Services Operation	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>There would be more delay and queuing approaching the intersections that must be negotiated; this may be particularly challenging along segments with 2-lane cross-section.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>There would be less delay and queuing approaching the roundabouts, facilitating faster emergency vehicle travel.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar operations to Alternative 3, however, a passing lane is provided with the 4-lane cross-section.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Better operations when compared to Alternatives 3 and 4.</li> <li>Additional passing lane is provided with the 4-lane cross-section.</li> </ul>
<b>TRANSPORTATION – OVERALL</b>			●	●	●	●	●
<b>ENGINEERING CONSIDERATIONS</b>							
Utilities	Impact to Existing and Future Utilities	Type of Impact	<ul style="list-style-type: none"> <li>No Significant difference between the alternatives.</li> <li>Relocation of some hydro poles and underground utilities (e.g. Bell, gas and hydro) may be required.</li> </ul>				
Costs	Capital Construction and Maintenance Cost (roadway, utilities, etc.). Excludes property costs.	Estimated Present Value Cost	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Moderate capital cost and high maintenance.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Moderate capital cost and high maintenance.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Moderate capital cost and low maintenance.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>High capital cost and high maintenance.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Highest capital cost and low maintenance.</li> </ul>
Construction Staging	During Construction (Traffic Management Requirements)	Complexity	<b>Preferred</b> <ul style="list-style-type: none"> <li>Low Complexity.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Low to Moderate Complexity.</li> <li>Requires potential detouring of traffic due to the construction of the roundabout.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Low to Moderate Complexity.</li> <li>Requires potential detouring of traffic due to the construction of the roundabouts.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Low to Moderate Complexity.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Moderate to High Complexity.</li> <li>Requires potential detouring of traffic due to the construction of the roundabouts.</li> </ul>
<b>ENGINEERING CONSIDERATIONS – OVERALL</b>			●	●	●	●	●
<b>CULTURAL</b>							
Archaeological Resources	Potential for loss of archaeological resources	Area impacted beyond ROW	<b>Preferred</b> <ul style="list-style-type: none"> <li>Not anticipated to impact area identified as having archaeological potential.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Grading activities may encroach onto portion of land identified as having archaeological potential.</li> <li>Stage 2 Archaeological Assessment would be completed to confirm presence/absence of archaeological resources, if required.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Roadway widening has potential to impact a greater area of land identified as having archaeological potential.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Multi-lane roundabout and associated roadway widening has potential to impact a greater area of land identified as having archaeological potential.</li> </ul>
Cultural Landscapes	Maintain/Enhance Character of the Roadway	Subjective	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Limited opportunities to compliment the overall cultural landscape of the roadway and scenic qualities.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>The Argentia Road roundabout improves the views and vistas of the overall cultural landscape of the roadway and scenic qualities.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Roundabouts improve the views and vistas of the overall cultural landscape of the roadway and scenic qualities.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Roadway widening further reduces the opportunities to compliment the overall cultural landscape of the roadway and scenic qualities.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Roundabouts improve the views and vistas of the overall cultural landscape of the roadway and scenic qualities.</li> <li>Roadway widening further reduces the opportunities to compliment the overall cultural landscape of the roadway and scenic qualities.</li> </ul>
Built Heritage Resources	Potential for displacement of built heritage features	Area impacted beyond ROW	<ul style="list-style-type: none"> <li>No Significant difference between the alternatives.</li> <li>No impact to built heritage resources identified and/or expected to be impacted by alternatives.</li> </ul>				
<b>CULTURAL – OVERALL</b>			●	●	●	●	●

Evaluation Criteria and Sub-Factors	Criteria Indicators	Unit of Measure	MUNICIPAL CLASS EA FOR CREDITVIEW ROAD DESIGN ALTERNATIVES EVALUATION				
			Alternative #1 (2-lane with existing signals)	Alternative #2 (2-lane with 1 roundabout)	Alternative #3 (2-lane with 3 roundabouts)	Alternative #4 (4-lane with existing signals)	Alternative #5 (4-lane with 3 roundabouts)
<b>SOCIO-ECONOMIC ENVIRONMENT</b>							
Planning Polices	Supports Planning Policies	Yes/No	<ul style="list-style-type: none"> <li>No Significant difference between the alternatives.</li> <li>Each alternative will be designed to support local and regional planning policies.</li> </ul>				
Noise Impacts	Proximity to Residences	Noise Level	<b>Acceptable</b> <ul style="list-style-type: none"> <li>No significant change in traffic noise levels.</li> <li>Noise mitigation measures would be implemented, where warranted.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Noise mitigation measures would be implemented, where warranted.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Noise mitigation measures would be implemented, where warranted.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Moderate potential increase in traffic noise levels due to the increase of travel lanes.</li> <li>Noise mitigation measures would be implemented, where warranted.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 4.</li> <li>Noise mitigation measures would be implemented, where warranted.</li> </ul>
Aesthetics	Potential to enhance area aesthetics	Subjective	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Midblock potential for aesthetics are similar for all alternatives.</li> <li>Anticipated to provide least opportunities to implement enhanced landscaping and community features.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Streetscape elements will be considered within the central island of the roundabout.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Streetscape elements will be considered within the central island of the three roundabouts.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Roadway widening reduces midblock potential for aesthetics.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Roadway widening reduces midblock potential for aesthetics.</li> </ul>
Property Impacts	Impacts on Residential / Commercial/Parkland	Property access during normal operation	<b>Preferred</b> <ul style="list-style-type: none"> <li>No impact to existing property accesses.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Existing access (1) impacted to private property on Kenninghall Crescent; however, potential to mitigate impact will be further reviewed.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> </ul>
	Additional Right-of-Way	Area (m <sup>2</sup> ) of Private/ City Park Lands Property	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Largest area of private property required to accommodate modifications.</li> <li>Private property predominantly occupied/owned by developers, commercial/retail land uses and/or utilities.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Smallest area of private property required to accommodate modifications.</li> <li>Private property predominantly occupied/owned by developers, commercial/retail land uses and/or utilities.</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Smallest area of private property required to accommodate modifications.</li> <li>Private property predominantly occupied/owned by developers, commercial/retail land uses and/or utilities.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Largest area of private property required to accommodate modifications.</li> <li>Private property predominantly occupied/owned by developers, commercial/retail land uses and/or utilities.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Moderate area of private property required to accommodate modifications.</li> <li>Private property predominantly occupied/owned by developers, commercial/retail land uses and/or utilities.</li> </ul>
<b>SOCIO-ECONOMIC ENVIRONMENT – OVERALL</b>			●	●	●	●	●
<b>NATURAL ENVIRONMENT</b>							
Vegetation and Wildlife	Impact to vegetation, wildlife and wildlife habitat	Vegetation and habitat impacts	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Expected to impact the smallest area of vegetation, when compared to the other alternatives.</li> <li>Potential impacts to habitat limited to edge effects.</li> <li>Impacts will be mitigated through vegetation restoration and/or enhancement, as well as habitat compensation planting and limiting construction to appropriate timing windows.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Expected to impact a moderate area of vegetation, when compared to the other alternatives.</li> <li>Impacts limited to habitat edge effects.</li> <li>Impacts will be mitigated through vegetation restoration and/or enhancement, as well as habitat compensation planting and limiting construction to appropriate timing windows.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Expected to impact a large area of vegetation, when compared to the other alternatives.</li> <li>Impacts limited to habitat edge effects.</li> <li>Impacts will be mitigated through vegetation restoration and/or enhancement, as well as habitat compensation planting and limiting construction to appropriate timing windows.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Expected to impact the largest area of vegetation, when compared to the other alternatives.</li> <li>Impacts limited to habitat edge effects.</li> <li>Impacts will be mitigated through vegetation restoration and/or enhancement, as well as habitat compensation planting and limiting construction to appropriate timing windows.</li> </ul>
Trees	Impact to Trees	Number of trees to be removed	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Expected to impact +/-210 trees, many of which are in poor to fair condition.</li> <li>Tree planting will be undertaken to mitigate impacts to existing trees.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Expected to impact +/-190 trees, many of which are in poor to fair condition.</li> <li>Tree planting will be undertaken to mitigate impacts to existing trees.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Expected to impact +/-250 trees, many of which are in poor to fair condition.</li> <li>Tree planting will be undertaken to mitigate impacts to existing trees.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Expected to impact +/-310 trees, many of which are in poor to fair condition.</li> <li>Tree planting will be undertaken to mitigate impacts to existing trees.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Expected to impact +/-300 trees, many of which are in poor to fair condition.</li> <li>Tree planting will be undertaken to mitigate impacts to existing trees.</li> </ul>
Surface Drainage and Groundwater	Stormwater Quality and Quantity	Additional Paved Area	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Stormwater treatment required to accommodate roadway modifications.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Roundabout provides opportunity to implement Low Impact Development strategies to mitigate water quality, quantity and groundwater recharge (e.g. bioretention areas, infiltration galleries, soakways or permeable pavement).</li> </ul>	<b>Preferred</b> <ul style="list-style-type: none"> <li>Similar to Alternative 2.</li> <li>Additional opportunities to implement Low Impact Development strategies at three roundabouts.</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 1.</li> <li>Roadway widening increases pavement area.</li> </ul>	<b>Acceptable</b> <ul style="list-style-type: none"> <li>Similar to Alternative 3.</li> <li>Roadway widening increases pavement area.</li> </ul>
<b>NATURAL ENVIRONMENT – OVERALL</b>			●	●	●	●	●
<b>OVERALL SUMMARY AND CONCLUSIONS</b>			●	●	●	●	●
			<b>NOT RECOMMENDED</b>	<b>NOT RECOMMENDED</b>	<b>PREFERRED</b>	<b>NOT RECOMMENDED</b>	<b>PREFERRED LONG-TERM SOLUTION</b>
			<ul style="list-style-type: none"> <li>Does not support future travel demands beyond 2021.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted as a result no designated cross-walk provided.</li> <li>Although this alternative can be implemented at a moderate capital cost it is expected to incur high maintenance costs.</li> <li>Limited opportunity to improve the views and vistas of the overall cultural landscape of the roadways and scenic qualities.</li> <li>Encroaches onto the largest area of private property.</li> <li>Least natural environment impacts compared to all other alternatives, however, limited opportunity for landscaping.</li> </ul>	<ul style="list-style-type: none"> <li>Does not support future travel demands beyond 2021.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted as a result no designated cross-walk provided.</li> <li>Similar to Alternative 1 in terms of capital costs; however, implementation of the roundabout at Argentia Road will result in a lower maintenance cost.</li> <li>Limited opportunity to improve the views and vistas of the overall cultural landscape of the roadway and scenic qualities.</li> <li>Similar to Alternative 1 in terms of natural environment.</li> </ul>	<ul style="list-style-type: none"> <li>Provides significant improvements to traffic operations to 2031.</li> <li>Reduces severity of collisions due to the reduced vehicular travel speed at roundabouts (i.e. rear-end).</li> <li>Designated cross-walk is provided at Falconer Drive crossing Creditview Road.</li> <li>A higher capital cost when compared to Alternatives 1 and 2; however, the maintenance cost is expected to be lower as maintenance of signal infrastructure and powering of signals at Kenninghall Boulevard and Argentia Road is not required.</li> <li>Roundabouts improve the views and vistas of the overall cultural landscape of the roadways and scenic qualities.</li> <li>Encroaches onto the smallest area of private property.</li> <li>Slightly higher natural environment impacts compared to Alternatives 1 and 2, however, increase opportunity for landscaping within the roundabouts.</li> </ul>	<ul style="list-style-type: none"> <li>Although the corridor is widened to 4-lanes, it doesn't provide any improvement to traffic operations compared to Alternative 3.</li> <li>A traffic signal at the Falconer Drive intersection is not warranted as a result no designated cross-walk provided.</li> <li>Expected to incur high capital cost and highest maintenance costs.</li> <li>Limited opportunity to improve the views and vistas of the overall cultural landscape of the roadways and scenic qualities.</li> <li>Encroaches onto the largest area of private property</li> <li>Higher natural environment impacts compared to Alternative 3 and limited opportunity for landscaping.</li> </ul>	<ul style="list-style-type: none"> <li>With a widened 4-lane corridor with roundabouts, it provides significant improvements to traffic operations beyond 2031.</li> <li>Similar to Alternative 3, reduces severity of collisions, however multi-lane roundabouts increases complexity.</li> <li>Designated cross-walk is provided at Falconer Drive crossing Creditview Road.</li> <li>Highest capital cost when compared to all alternatives; however, similar to Alternative 3, the maintenance cost is expected to be low.</li> <li>Roundabouts improve the views and vistas of the overall cultural landscape of the roadways and scenic qualities.</li> <li>Encroaches onto a moderate area of private property.</li> <li>Higher natural environment impacts compared to all other alternatives, however, increase opportunity for landscaping within the roundabouts.</li> </ul>

RATING / SCORING: ● Preferred ● Acceptable ● Less Desirable ● Unacceptable

# Next Steps

- Review all comments and suggestions received from the public, stakeholders and agencies, before, during and following this event.
- The preliminary preferred alternatives will be reviewed taking into consideration the comments received and the design will be confirmed or modified.
- Prepare the Environmental Study Report and issue the Notice of Study Completion (30-day public review process).
- Upon approval of the Environmental Study Report, proceed to Detail Design.

# Remain Involved in the Project

Thank you for attending this Community Information Sharing Session and participating in the study 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 **Monday, July 13, 2015**, to the individuals listed below:

<p><b>Jessica Lee, P.Eng.</b> <b>Project Manager</b> <b>City of Mississauga</b> 201 City Centre Drive, Suite 800 Mississauga, ON L5B 2T4 Tel: 905-615-3200, Ext. 3170 Fax: 905-615-3173 E-mail: <a href="mailto:creditviewprojectteam@aecom.com">creditviewprojectteam@aecom.com</a></p>	<p><b>Tammy Dow, M.Sc.Eng, P.Eng., CVS</b> <b>Consultant Project Manager</b> <b>AECOM</b> 290-50 Sportsworld Crossing Road Kitchener, ON N2P 0A4 Tel: 519-650-8656 Fax: 519-650-3424 Email: <a href="mailto:creditviewprojectteam@aecom.com">creditviewprojectteam@aecom.com</a></p>	<p><b>Mirjana Osojnicki, BES</b> <b>EA and Public Consultation Lead</b> <b>AECOM</b> 5080 Commerce Boulevard Mississauga, ON L4W 4P2 Tel: 905-712-6987 Fax: 905-501-0181 Email: <a href="mailto:creditviewprojectteam@aecom.com">creditviewprojectteam@aecom.com</a></p>
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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.

If you would like more information on the Creditview Road Class EA  
please visit the project website at:

<http://www.mississauga.ca/portal/residents/creditviewroadenvironmentalassessmentstudy>