

# Hamilton Road and Gore Road Intersection Improvements



Source: City of London, 2021

**Integrated Transportation Community Advisory Committee Meeting - June 21, 2023**

●●● Hamilton Road & Gore Road EA



# Presentation Agenda

- Overview of the project area and scope of work
- Problem/Opportunity – Class EA
- Background Studies
- Alternatives
- Evaluation of Alternatives
- Changes from PIC#1
- Property Impacts
- Roundabout Safety
- Next Steps





# Study Area

- The intersection of Hamilton Road and Gore Road has been identified as an intersection that no longer meets current standards, and is in need of improvement.
- The City has initiated this study to evaluate alternatives for improvement at this intersection. Hamilton Road and Gore Road are classified as arterial roads with volumes exceeding 14,000 vehicles per day at the intersection, and usage as a commuter route has grown in recent years.
- This study reviews options for modifying the intersection with the objective of determining the most suitable alternative, which can then be carried forward to the detailed design phase.

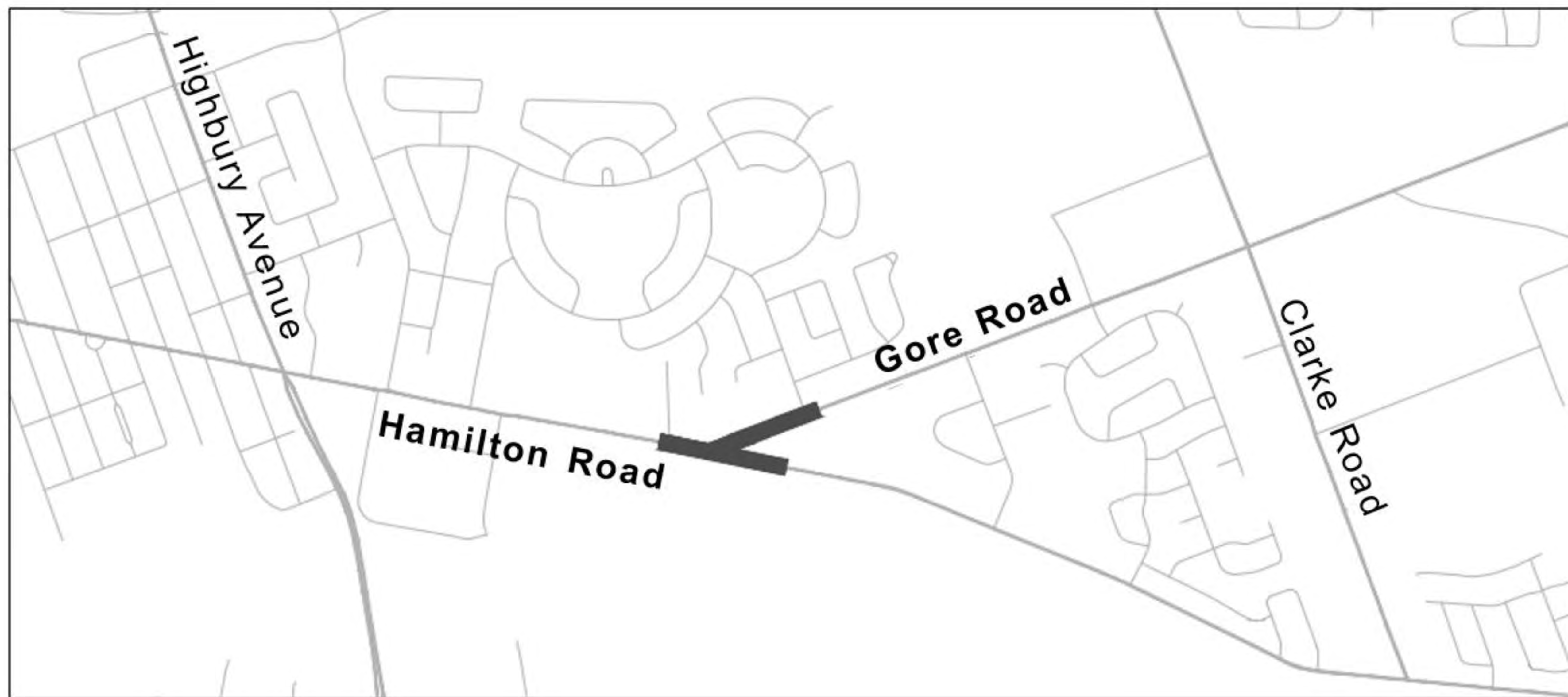


Figure 1: Hamilton Road & Gore Road Intersection & Study Area (City of London)



# Problem/Opportunity Statement

- Hamilton Road and Gore Road are arterial roads in the eastern side of London. Gore Road intersects Hamilton Road at a three-legged stop-controlled intersection at challenging angle. The intersection has seen an increase in traffic volumes, leading to a greater number of incidents and necessitating a review of the current intersection.
- Through the EA process, a review of design alternatives will be conducted to determine a preferred alternative for an improved intersection arrangement and controls while addressing the safety of drivers, cyclists and pedestrians. The study will also consider protection of the environment; minimization of disruption to residents and surrounding areas; engage a broad range of stakeholders; optimize costs; and document the study process in compliance with the Municipal Class Environmental Assessment Schedule “B” process.



Figure 2: Hamilton/Gore Road Intersection



# Municipal Class Schedule B EA Planning and Design Process

- 1 Background Studies
- 2 Develop Preferred Alternatives
- 3 PIC#1 – Present Design Alternatives
- 4 Address PIC comments
- 5 PIC#2 – Present Preferred Alternative
- 6 Address PIC#2 comments
- 7 Prepare Project File Report
- 8 Notice of Study Completion
- 9 Project File Report Review Period

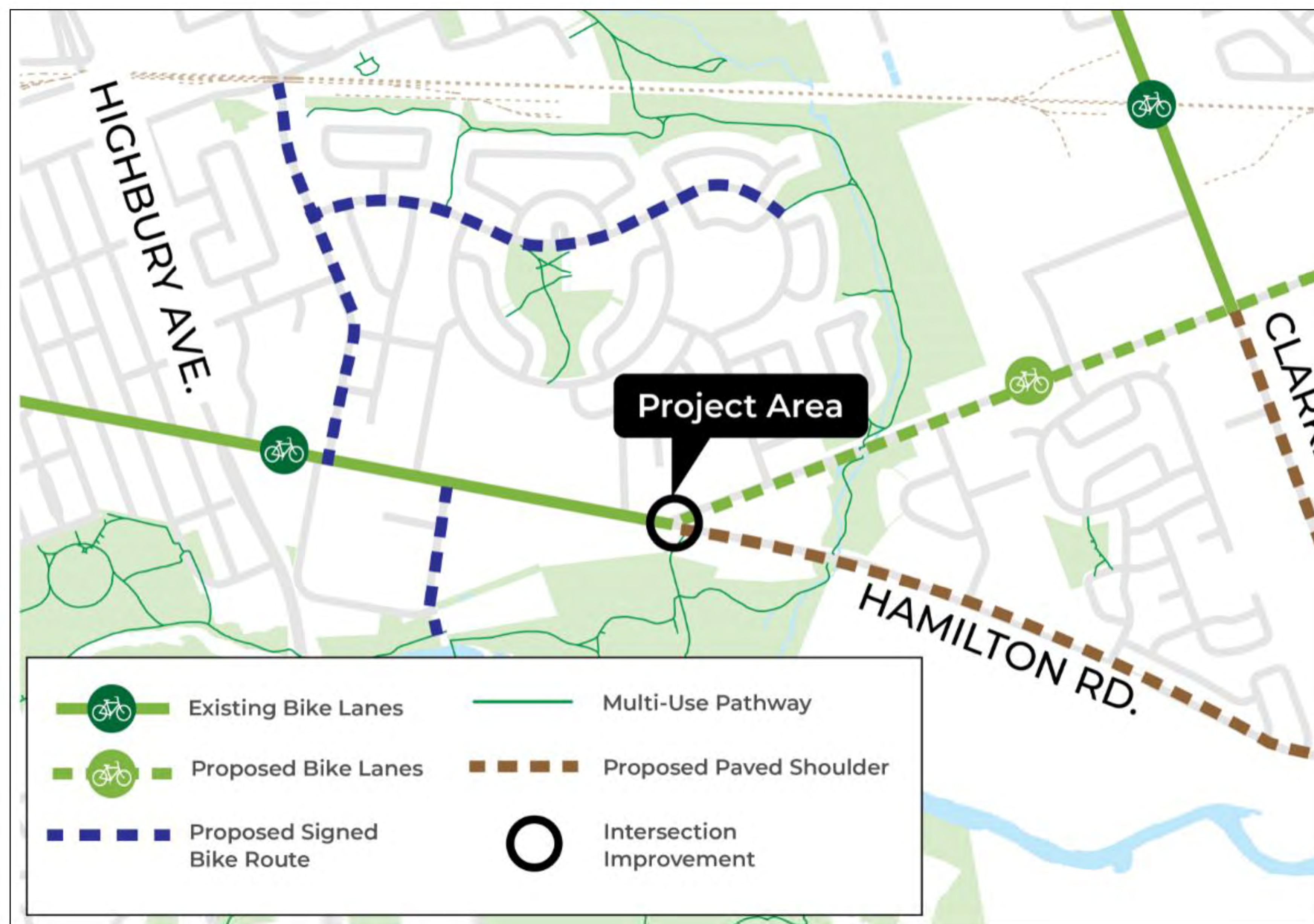
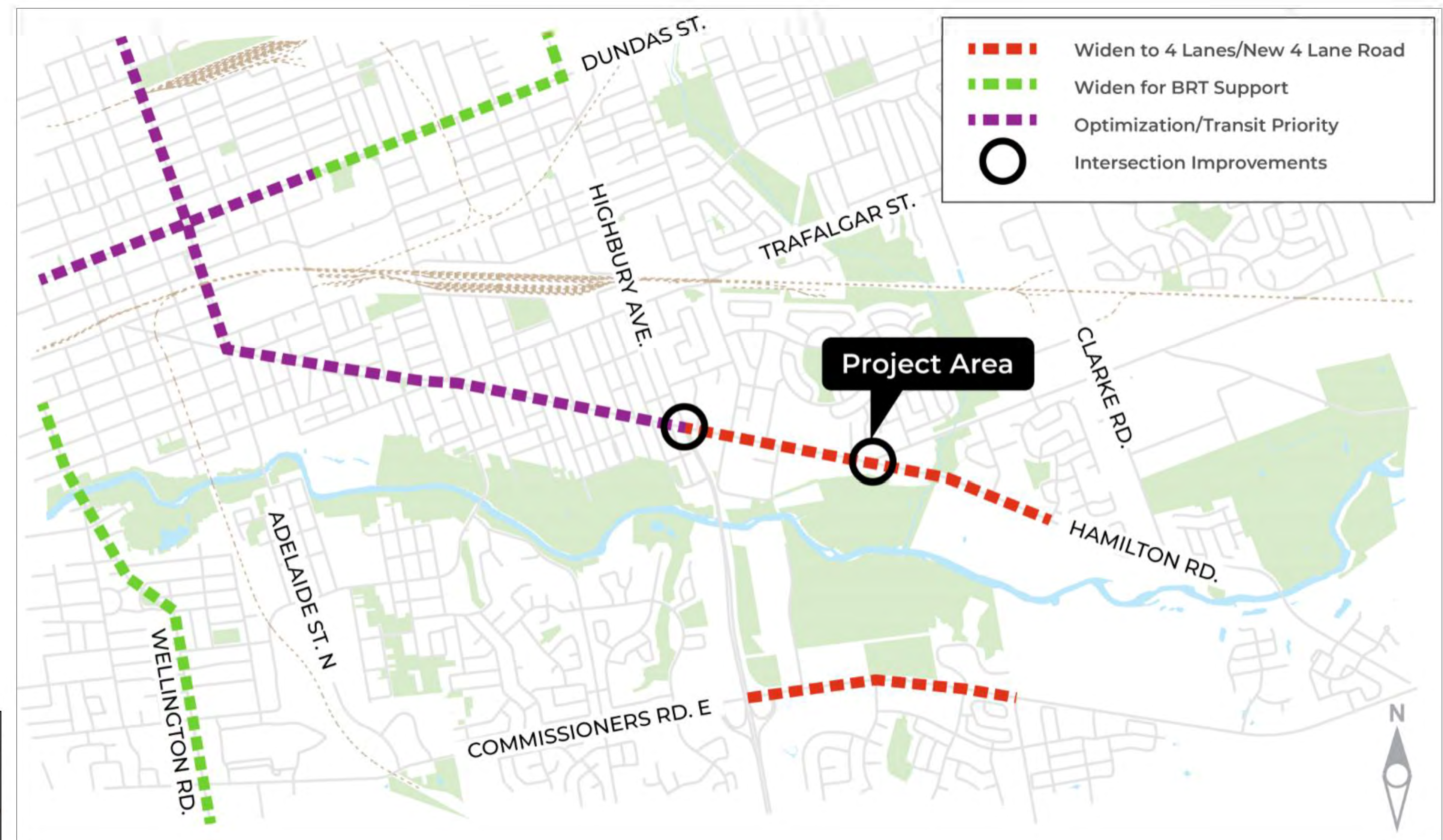




# City of London Planning Documents

## Transportation Master Plan

The current Transportation Master Plan identified the Gore Road and Hamilton Road intersection for improvements as a potential roundabout. The TMP recommends widening Hamilton Road to 4 lanes between Highbury Avenue and River Run Terrace. Will undergo separate Environmental Assessment.



## Cycling Master Plan

The current Cycling Master Plan indicates that there are proposed future bike lanes on Gore Road, and should have bike lane on Hamilton Road up to Gore Road. Proposed paved shoulder east of Gore Road.



# Alternatives Evaluated

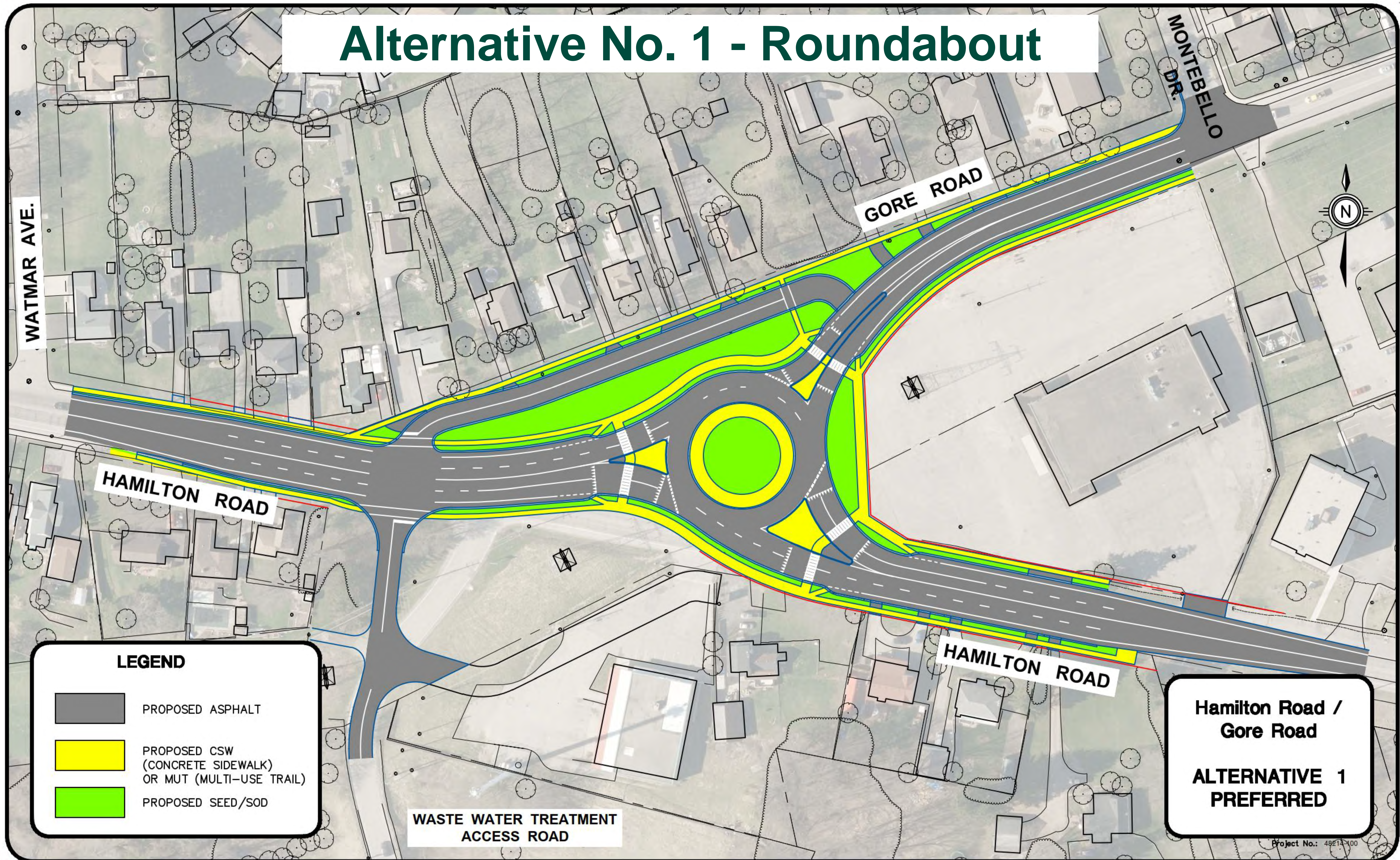
Alternative	Description
<b>Do Nothing</b>	<ul style="list-style-type: none"> <li>• No improvements – do not continue any further with project</li> </ul>
<b>Alternative 1: Roundabout</b>	<ul style="list-style-type: none"> <li>• Convert the Hamilton Road and Gore Road intersection to a 3-leg roundabout.</li> <li>• Design will accommodate projected traffic on Hamilton Road</li> </ul>
<b>Alternative 2: Signalized Intersection A</b>	<ul style="list-style-type: none"> <li>• Major Realignment of Hamilton Road and Gore Road</li> <li>• Hamilton Road would no longer be straight through road – eastbound drivers would turn left at intersection to stay on Hamilton Road</li> <li>• Introduction of traffic signals</li> </ul>
<b>Alternative 3: Signalized Intersection B</b>	<ul style="list-style-type: none"> <li>• Realignment of Gore Road</li> <li>• Improve skew of Gore Road at Hamilton Road</li> <li>• Introduction of traffic signals</li> <li>• Combine to have 1 single intersection, including driveway to WWTP</li> </ul>

# Evaluation Criteria

Criteria	Description
<b>Traffic Capacity and Operations</b>	<ul style="list-style-type: none"> <li>• Serves the expected vehicular, transit, pedestrian and cycling traffic needs</li> <li>• Efficiently and safely handle the forecasted traffic</li> </ul>
<b>Safety of Intersection</b>	<ul style="list-style-type: none"> <li>• Addresses active transportation</li> <li>• Traffic calming</li> </ul>
<b>Social and Natural Environment</b>	<ul style="list-style-type: none"> <li>• Impact on local community (noise, etc.)</li> <li>• Property impacts (feasibility)</li> <li>• Impact on climate change</li> <li>• Effect on existing vegetation, wildlife, habitat, water quality etc.</li> </ul>
<b>Utility Relocation</b>	<ul style="list-style-type: none"> <li>• Time and Cost of coordination with Hydro One</li> <li>• Capital cost of relocations</li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li>• Capital Cost of alternatives</li> <li>• Land acquisition costs</li> </ul>



# Alternative No. 1 - Roundabout



## LEGEND

- PROPOSED ASPHALT
- PROPOSED CSW (CONCRETE SIDEWALK) OR MUT (MULTI-USE TRAIL)
- PROPOSED SEED/SOD

Hamilton Road /  
Gore Road  
**ALTERNATIVE 1  
PREFERRED**






June 13, 2023 - 1:33 a.m. - Plotted By: prmbout

Project No.: 48214100  
P:\P\48214\100\48214-100-F021.dwg





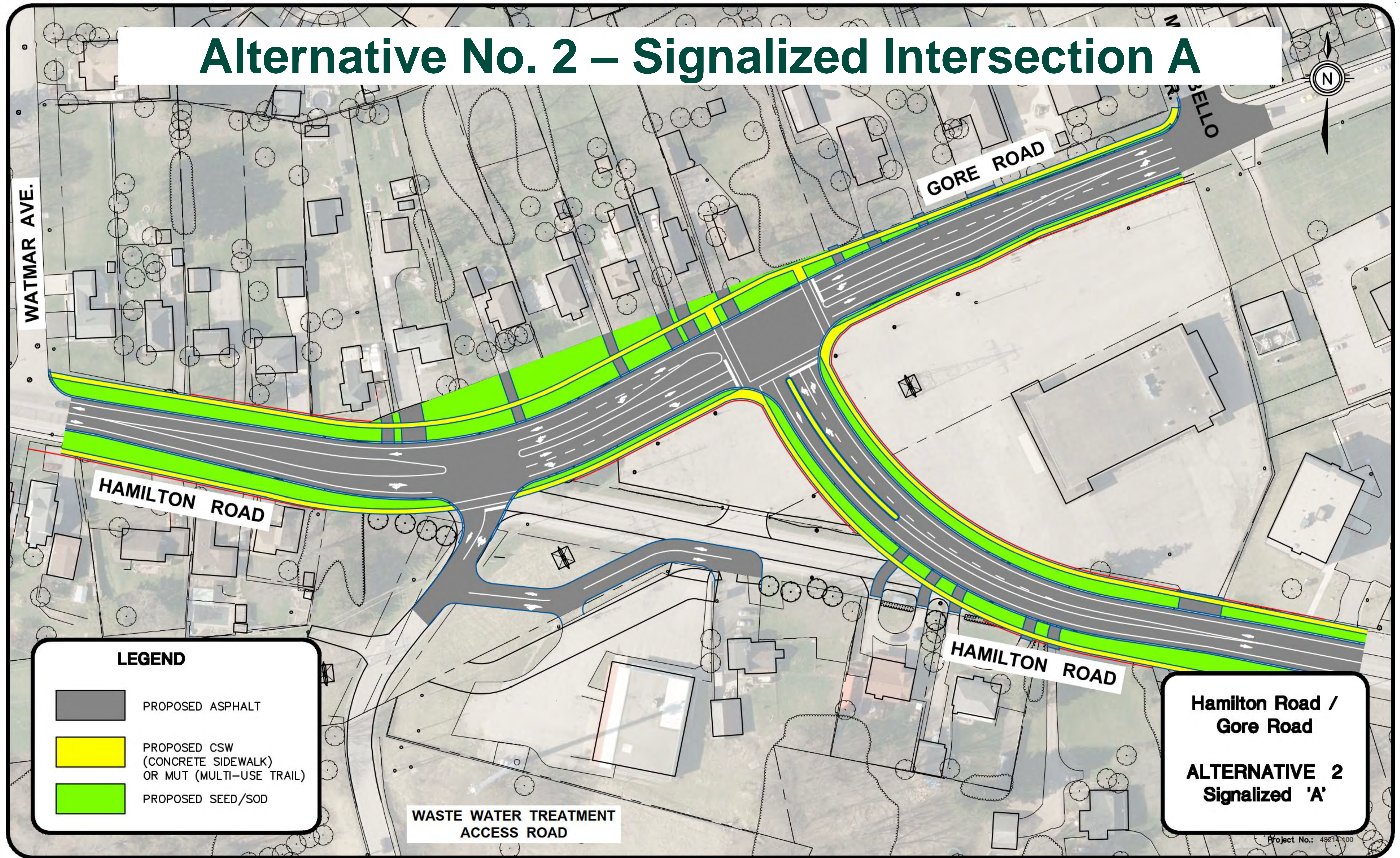
# Alternative No. 1 - Roundabout

Evaluation Criteria	Advantages	Disadvantages	Evaluation
Traffic Capacity and Operations	<ul style="list-style-type: none"> <li>Provides capacity for current and future traffic flow</li> <li>Includes active transportation (accommodates pedestrians and cyclists)</li> </ul>	<ul style="list-style-type: none"> <li>Significant change to the current operation of the intersection</li> <li>Drivers need to become used to navigating the roundabout</li> </ul>	
Overall Safety of Intersection	<ul style="list-style-type: none"> <li>Roundabout provides natural traffic calming</li> <li>Discourages speeding through intersection</li> <li>Shorter crossing distances for pedestrians, maximum of 2 lane widths, compared to signalized intersections crossing distances</li> <li>Reduces the chances of severe collisions</li> </ul>	<ul style="list-style-type: none"> <li>Cyclists must exit the roadway and navigate the roundabout with pedestrians</li> </ul>	
Social and Natural Environment	<ul style="list-style-type: none"> <li>Minimal environmental impact, given area is already urbanized</li> <li>Oil Grit Separators will be introduced to treat runoff from the roadway as part of Stormwater Management improvements</li> <li>Residents along Gore Road will have access from new adjacent roadway</li> <li>Reduces stopped vehicle idling time compared to signalized intersection options. Decreases noise and GHG emissions</li> </ul>	<ul style="list-style-type: none"> <li>Potential for loss of a small number of trees</li> <li>Some driveways will be close to roundabout</li> </ul>	
Utility Impacts	<ul style="list-style-type: none"> <li>Does not impact Hydro One infrastructure, no tower relocations</li> </ul>	<ul style="list-style-type: none"> <li>Requires relocation of London Hydro infrastructure</li> <li>Watermain replacement</li> </ul>	
Cost	<ul style="list-style-type: none"> <li>No cost for traffic signals, or ongoing maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Greater capital cost for installation</li> <li>Largest impact on Infrastructure Ontario Lands, Land Swapping required</li> </ul>	










# Alternative No. 2 – Signalized Intersection A





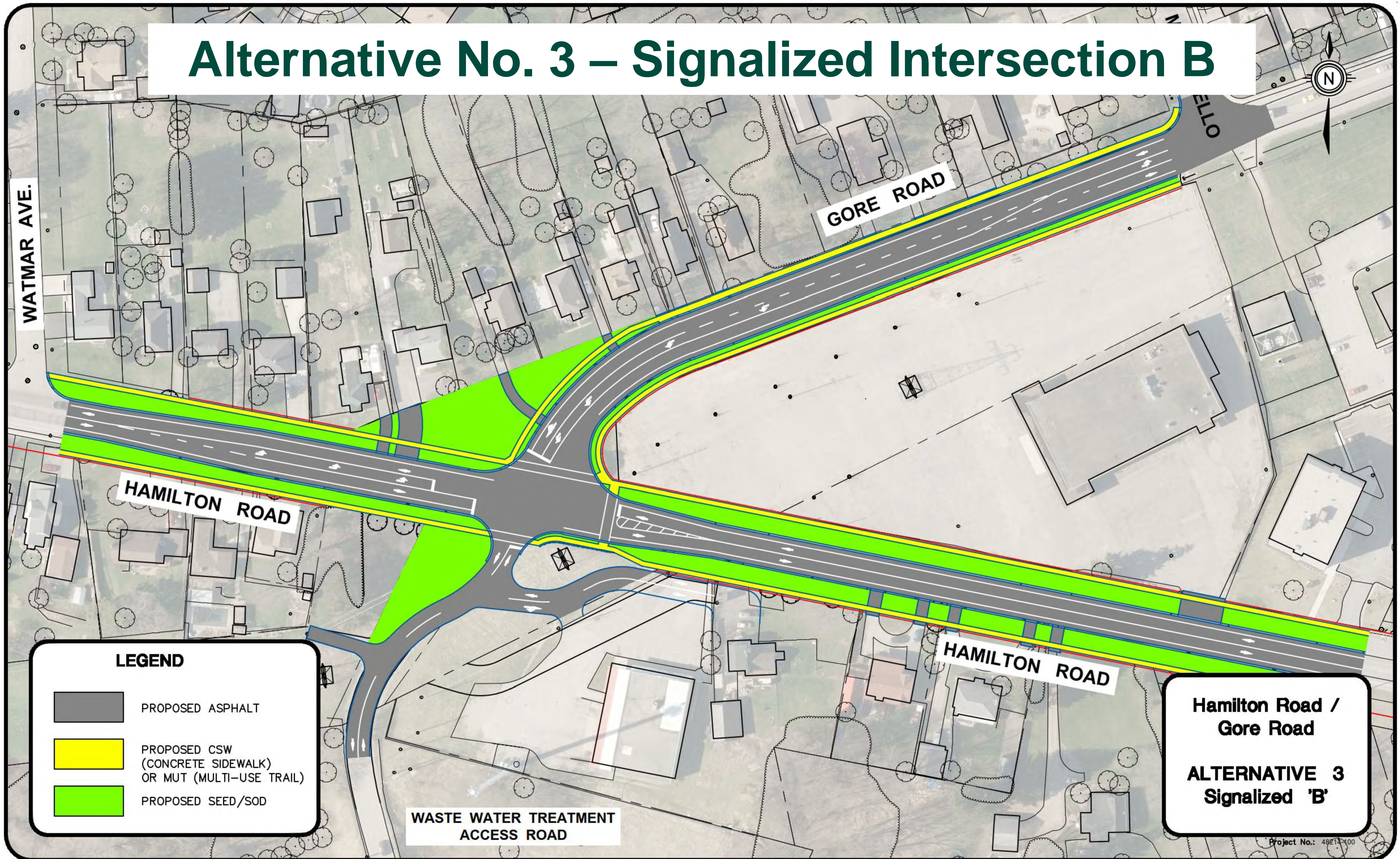
# Alternative No. 2 – Signalized Intersection A

Evaluation Criteria	Advantages	Disadvantages	Evaluation
Traffic Capacity and Operations	<ul style="list-style-type: none"> <li>Left turn movement from Hamilton onto Gore is eliminated with this configuration</li> </ul>	<ul style="list-style-type: none"> <li>In long term traffic scenario, would require double left turn lanes, and possibly double right turn lanes.</li> <li>DOES NOT MEET LONG TERM TRAFFIC NEEDS</li> <li>Space and functionality will be an issue</li> </ul>	
Overall Safety of Intersection	<ul style="list-style-type: none"> <li>Pedestrian and cycling crossing will be improved to AODA standards</li> </ul>	<ul style="list-style-type: none"> <li>Crossing distances are long, minimum of 4 lane widths</li> <li>Minimal affect on traffic calming</li> <li>Would the curve present a challenge for EB traffic?</li> </ul>	
Social and Natural Environment	<ul style="list-style-type: none"> <li>Minimal environmental impact, given area is already urbanized</li> <li>Oil Grit Separators will be introduced to treat runoff from the roadway as part of Stormwater Management improvements</li> </ul>	<ul style="list-style-type: none"> <li>Change of traffic patterns for drivers</li> <li>Will require some driveways to be close to signalized intersection</li> <li>A number of driveways will require extensions and will increase a maintenance cost for property owners</li> <li>Increased air and noise pollution from starts/stops and vehicle idling</li> </ul>	
Utility Impacts	<ul style="list-style-type: none"> <li>Reduces the impact on London Hydro and Hydro One, minimal relocation required. Less impact on Infrastructure Ontario Lands (Coordinated through Hydro One)</li> </ul>	<ul style="list-style-type: none"> <li>Watermain will need to be relocated to be maintained within the City right of way</li> </ul>	
Cost	<ul style="list-style-type: none"> <li>Has less Capital cost than the roundabout alternative, but more expensive than Signalized Alternative B</li> </ul>	<ul style="list-style-type: none"> <li>Some impact to Infrastructure Ontario Lands, requires land swapping with Infrastructure Ontario</li> </ul>	










# Alternative No. 3 – Signalized Intersection B





# Alternative No. 3 – Signalized Intersection B

Evaluation Criteria	Advantages	Disadvantages	Evaluation
Traffic Capacity and Operations	<ul style="list-style-type: none"> <li>Includes left turn from Hamilton Road onto Gore Road, with improved storage capacity</li> </ul>	<ul style="list-style-type: none"> <li>In the long term peak condition, will have some delays due to queueing in left turn movements</li> </ul>	
Overall Safety of Intersection	<ul style="list-style-type: none"> <li>Improved geometry of Gore Road, reduced skew for left turn</li> <li>Pedestrian and cycling crossing will be improved to AODA standards</li> <li>Realigns WWTP driveway to single intersection</li> </ul>	<ul style="list-style-type: none"> <li>Will create a long pedestrian crossing along Hamilton Road</li> <li>Will not address existing speeding concerns from the community</li> <li>Has no affect on traffic calming</li> <li>Increased risk of severe collisions</li> </ul>	
Social and Natural Environment	<ul style="list-style-type: none"> <li>Minimal environmental impact, given area is already urbanized</li> <li>Oil Grit Separators will be introduced to treat runoff from the roadway as part of Stormwater Management improvements</li> <li>Does not impact plans for future widening</li> </ul>	<ul style="list-style-type: none"> <li>Increased air and noise pollution from starts/stops and vehicle idling</li> </ul>	
Utility Impacts	<ul style="list-style-type: none"> <li>Reduces the impact on London Hydro and Hydro One, minimal relocation required</li> </ul>	<ul style="list-style-type: none"> <li>Will have some London Hydro utility relocation</li> </ul>	
Cost	<ul style="list-style-type: none"> <li>Has lowest Capital cost</li> </ul>	<ul style="list-style-type: none"> <li>No impact to Infrastructure Ontario Lands</li> </ul>	





# Evaluation Criteria Matrix

Evaluation Criteria	Do Nothing	Alternative 1: Roundabout	Alternative 2: Signalized A	Alternative 3: Signalized B
Traffic Capacity and Operations				
Safety				
Social and Natural Environment				
Utility Relocation				
Costs				
Preferred	X	✓	X	X





# Changes from PIC#1

At PIC#1 – **Alternative No. 2 - Signalized Intersection A** was evaluated as the Preferred Alternative

## What Changed?

When PIC#1 was held (June 2021), the project team was still in communication with Hydro One regarding the proposed changes to the intersection, and their impact to the Hydro One transmission towers. At that time, their initial comment was that they preferred minimum encroachment below the transmission lines, and that they would likely relocate towers to accommodate design, resulting in significant relocation costs

Hydro One requested more details to be shown on the preliminary drawings in order to initiate their formal review process. The project team determined that the design would be advanced into detailed design enough to satisfy Hydro One, and allow them to fairly evaluate the roundabout option.

Bringing the design forward to a level that met Hydro One's requirements, followed by a lengthy review process caused the delay between PIC#1 and PIC#2.

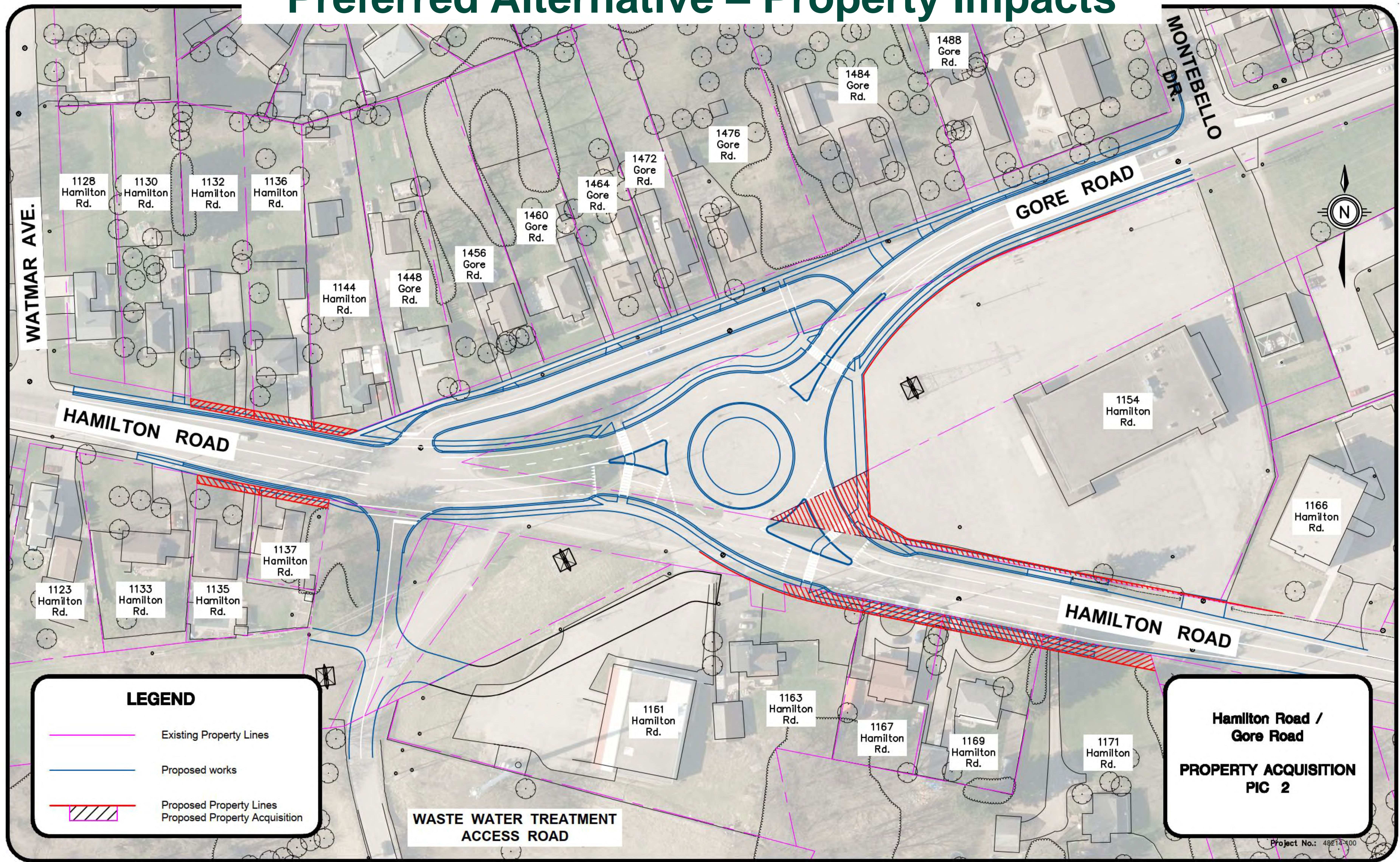
## Why did the Preferred Alternative Change?

The result of Hydro One's review, was that they were in acceptance of the encroachment beneath the Hydro One corridor, provided certain access and spacing requirements were met.

Further evaluation of the traffic study provided additional challenges with meeting the long term capacity needs for Alternative 2 – Signalized Intersection A.



# Preferred Alternative – Property Impacts



June 13, 2023 - 1:32 p.m. - Plotted By: profmbout

Project No.: 49274-100  
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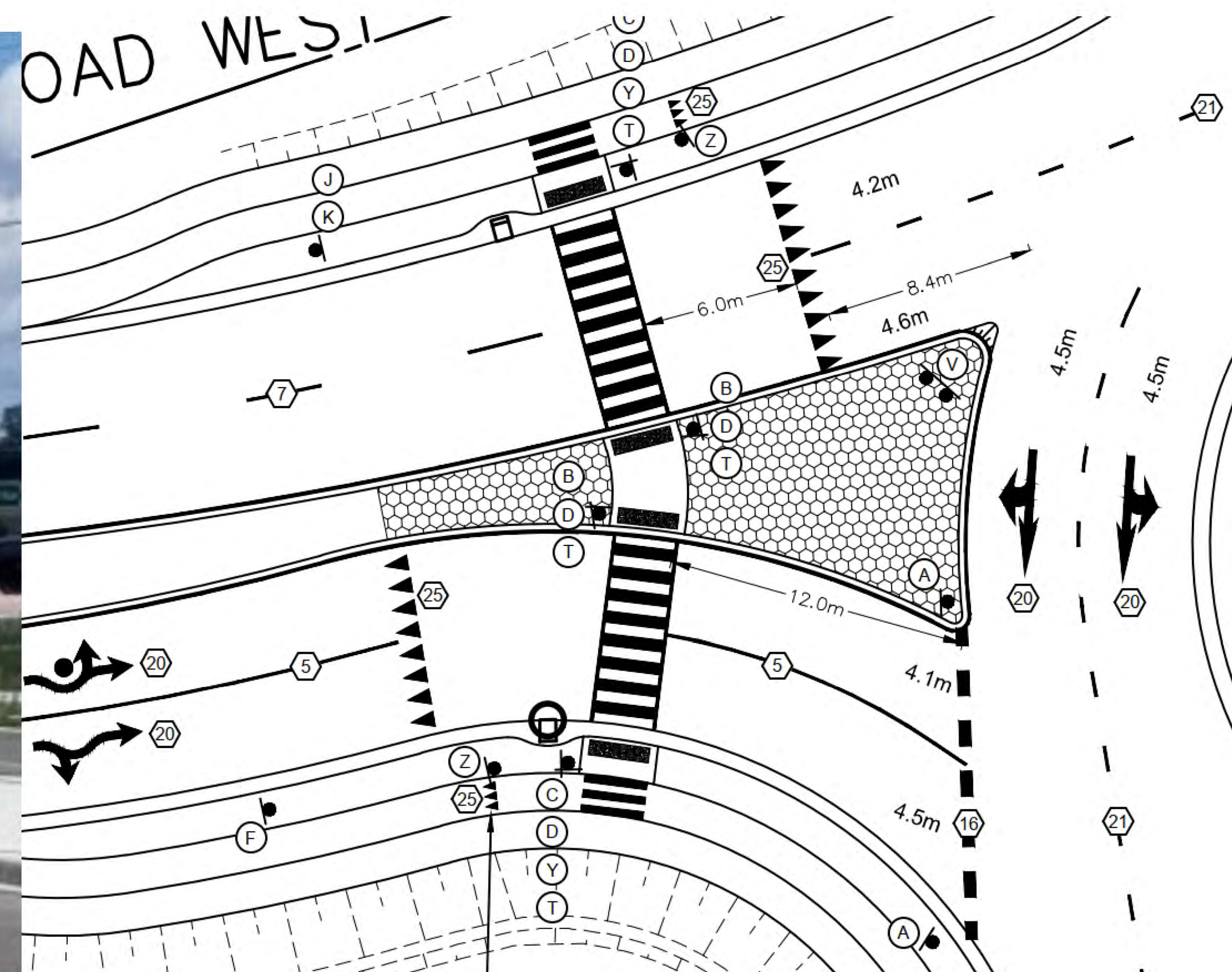




# Roundabout Safety and Active Transportation

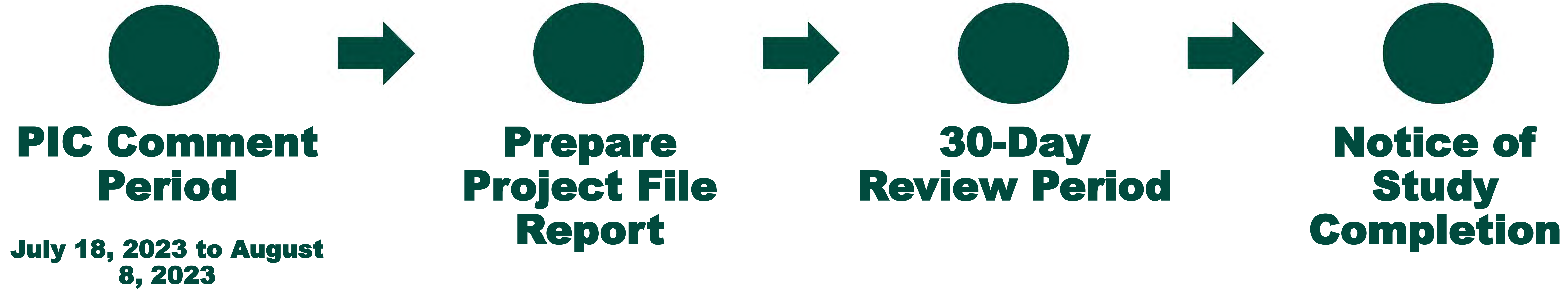
There are many misconceptions about pedestrian and cyclist safety at roundabouts. Reasons why roundabouts are safe:

- Pedestrians only have to address traffic coming from one direction at a time.
- Crossing distances are limited to 2 lanes.
- Cyclists are provided with safe exit from roadway prior to roundabout, with dedicated bike path. Or they can navigate as a vehicle.
- Traffic is slowed naturally by the geometry of the roundabout






# Next Steps





## Comments/Questions


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