



# **Welcome to Public Information Centre #1**

**Preliminary Design and Class Environmental Assessment Study for  
Intersection Improvements at Highway 7A and Country Road 10 in the Township of Cavan**  
[www.Hwy7ACavan.ca](http://www.Hwy7ACavan.ca)



# PROJECT TEAM

## Ministry of Transportation

Francis Omordia, Project Engineer  
Steven Baczyk, Environmental Planner

## WSP

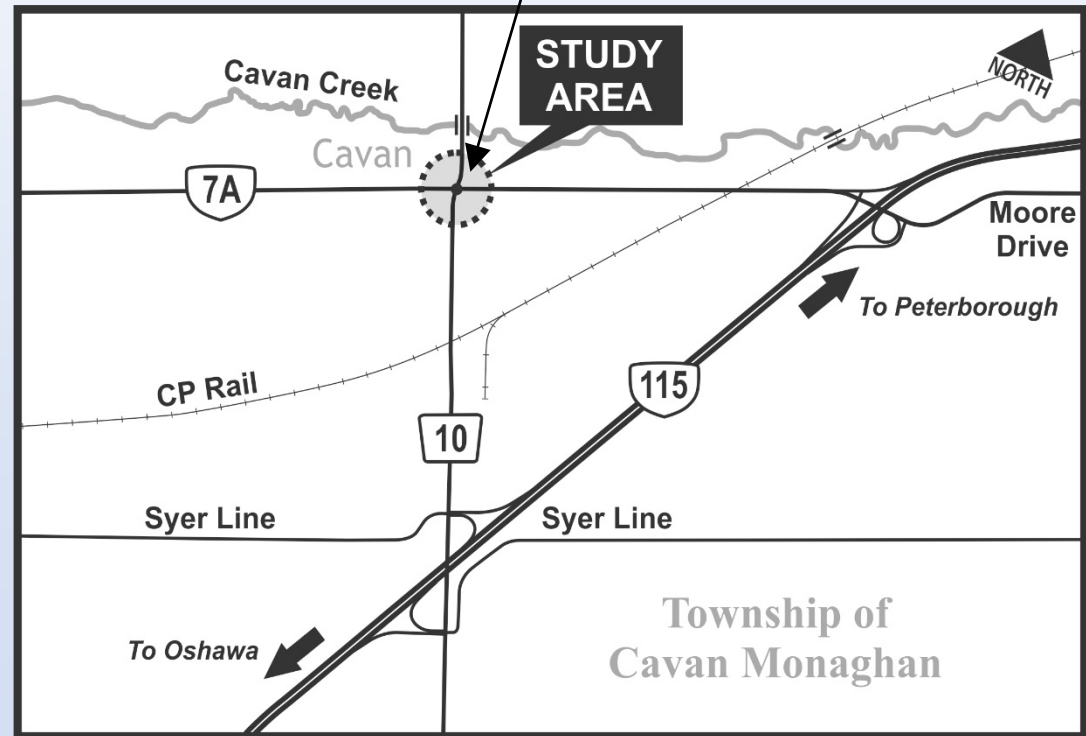
Heather Templeton, Consultant Project Manager  
Rhonda George-Hiebert, Consultant Project Engineer  
Greg Moore, Consultant Senior Environmental Planner

# Study Overview

MTO has retained WSP to undertake the Preliminary Design and Class Environmental Assessment (EA) Study for intersection improvements at Highway 7A & County Road 10 in the Township of Cavan Monaghan.

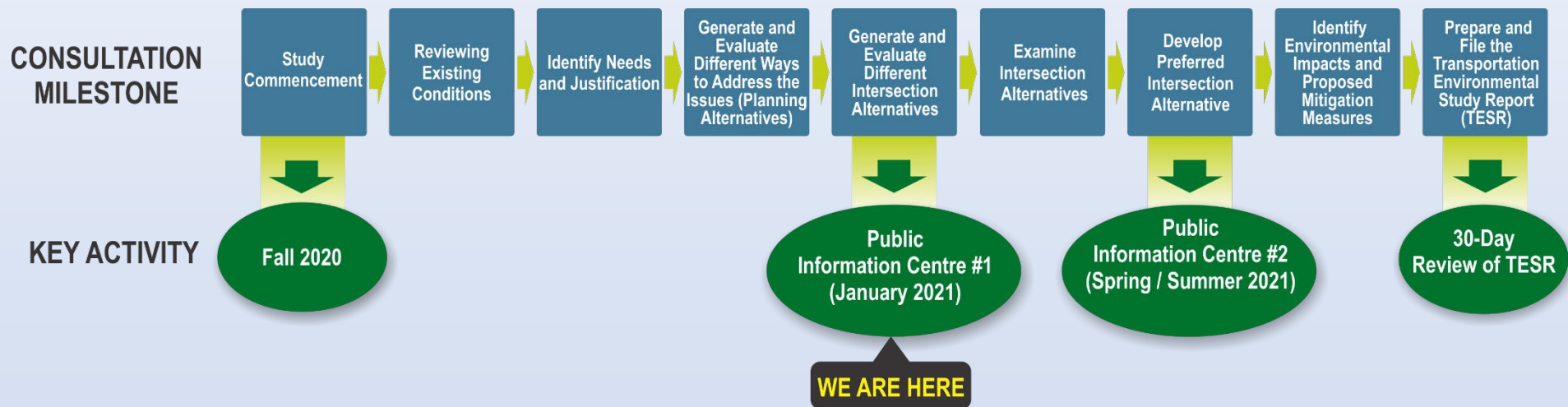
The purpose of this study is to identify the short term and long term improvements as this intersection is reaching the traffic capacity for a stop sign.

Improvements may include signalization or a roundabout, approach road realignments, added turning lanes, or illumination.



# Class Environmental Assessment Process

This Preliminary Design and Class EA Study is following the approved environmental planning process for Group “B” projects under the Class Environmental Assessment for Provincial Transportation Facilities (2000).



# Relevant Policies and Guidelines

## Provincial Policy Statement (2020)

## A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020)

## County of Peterborough Transportation Master Plan Update (2014, as amended)

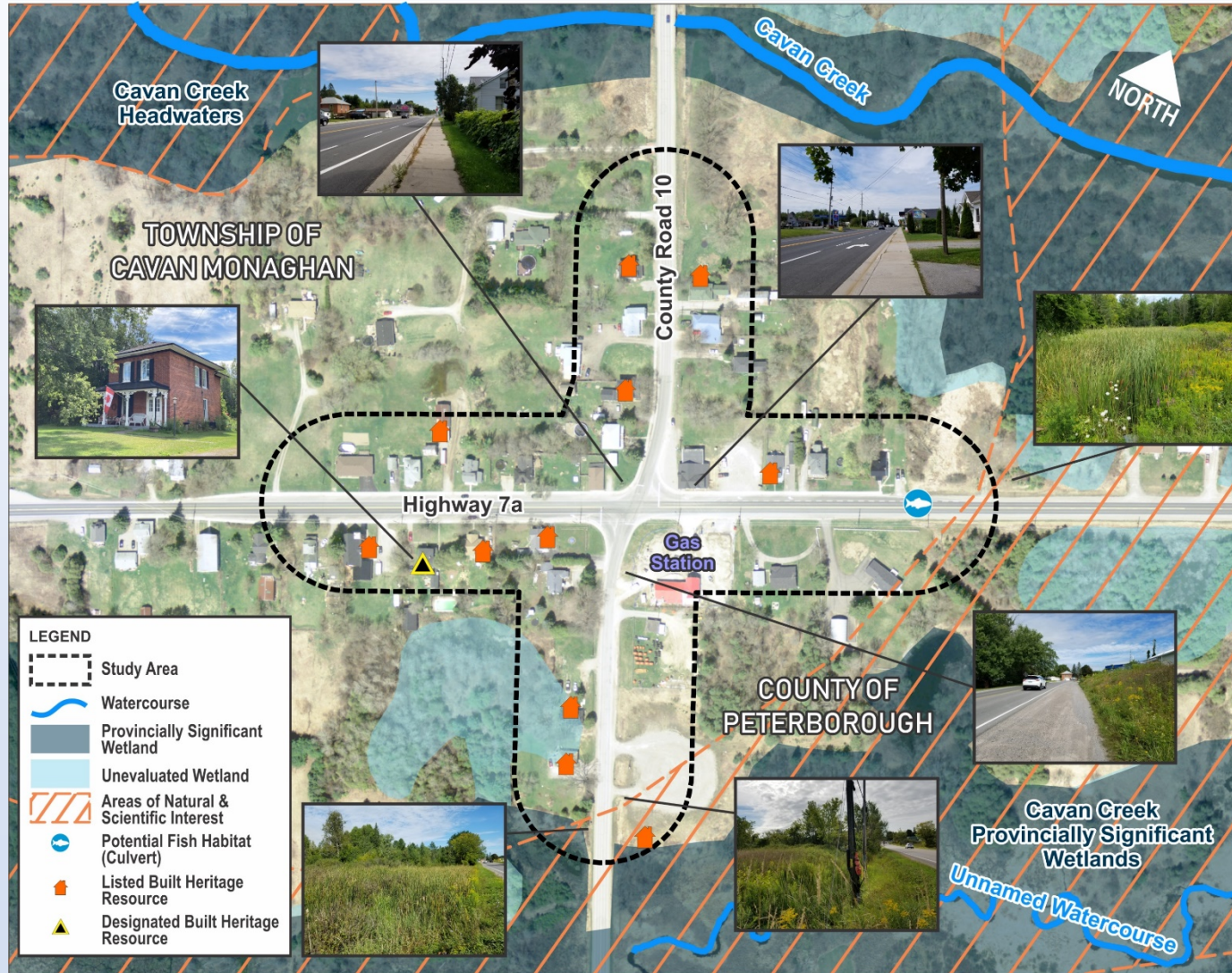
## Township of Cavan Monaghan Official Plan (2013, as amended)

## MTO Highway Corridor Management Manual (2018)



- The Provincial Policy Statement provides policy direction on matters of provincial interest related to land-use planning and development.
- The A Place to Grow Plan establishes a long-term framework for where and how regions in Ontario will grow.
- The County of Peterborough is identified in the Greater Golden Horseshoe Growth Plan Area.
- The County of Peterborough Transportation Master Plan provides recommendations for transportation infrastructure, including active transportation facilities, to meet current and future transportation needs within the County.
- The Township of Cavan Monaghan Official Plan sets the land-use and planning policies to direct growth and development within the Township.
- The Official Plan also includes provisions which the Township's *Zoning By-law 2018-58* (2018) must conform to.
- The MTO Highway Corridor Management Manual serves as a reference to ensure that land-use planning is coordinated with transportation and infrastructure planning, as well as design.

# Existing Environmental Conditions



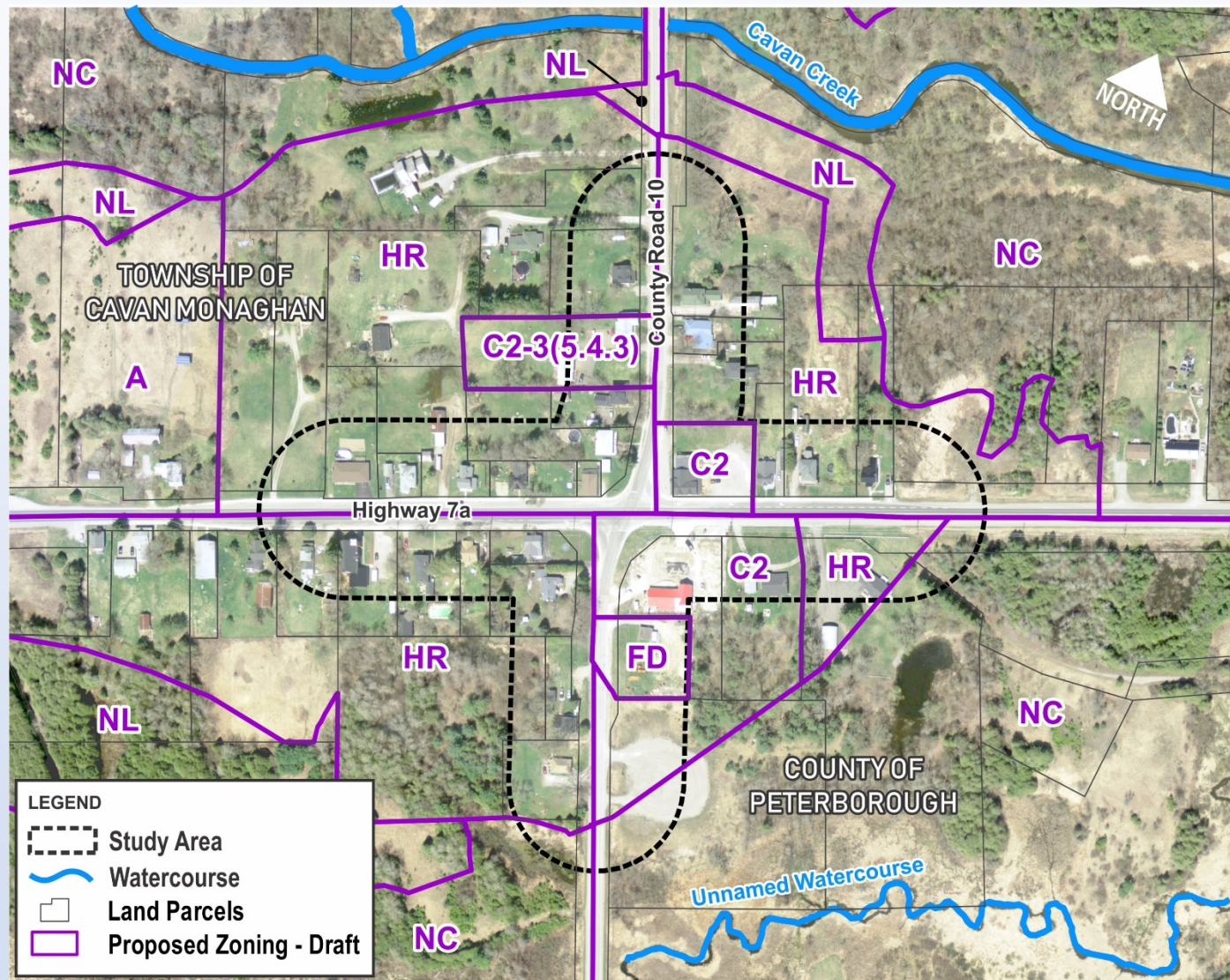
- **Natural Environment:** Environmentally sensitive areas were identified within the study area. Impacts to fish and fish habitats are not anticipated.
- **Cultural Heritage:** A cultural heritage assessment was completed which identified 11 Listed Built Heritage Resources and one Designated Built Heritage Resource in the study area.
- **Archaeology:** A Stage 1 Archaeological Assessment (AA) identified areas requiring further Stage 2 AA.
- **Contamination:** Properties with high and median potential for contamination exist within the study area.

# Township of Cavan-Monaghan Zoning Designations

## Zoning-Designations\*

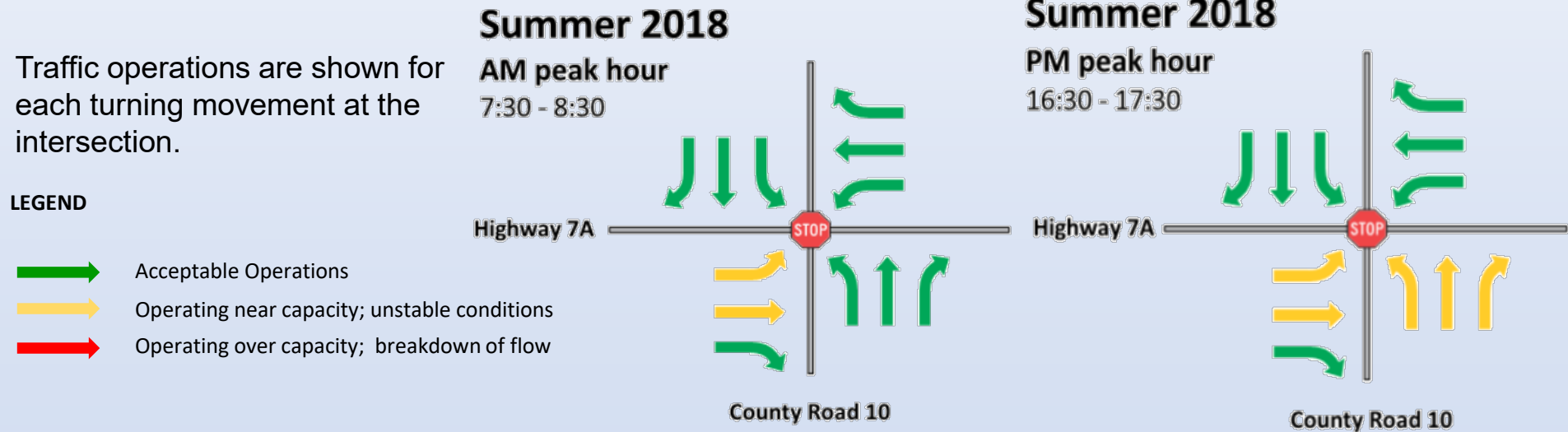
- **A** = Agriculture
- **C2** = Hamlet Commercial
- **FD** = Future Development
- **HR** = Hamlet Residential
- **NC** = Natural Core
- **NL** = Natural Linkage

\*Township of Cavan Monaghan Zoning By-law 2018-58, as amended



# Existing Traffic Conditions

- Existing traffic conditions show moderately good operation in the morning peak hour for most turning movements, except for Northbound and Eastbound from Highway 7A.
- In addition, the afternoon peak hour volumes for the Eastbound, Westbound and Northbound movements from County Road 10 are approaching the capacity of a stop-controlled intersection.

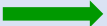




# Future Traffic Conditions

- Future traffic conditions, with no changes to the intersection, result in poor operations.
- The existing morning and afternoon peak hour conditions are worsened; resulting in over-capacity operations at multiple approaches.
- The stop controlled intersection cannot adequately handle future volumes.

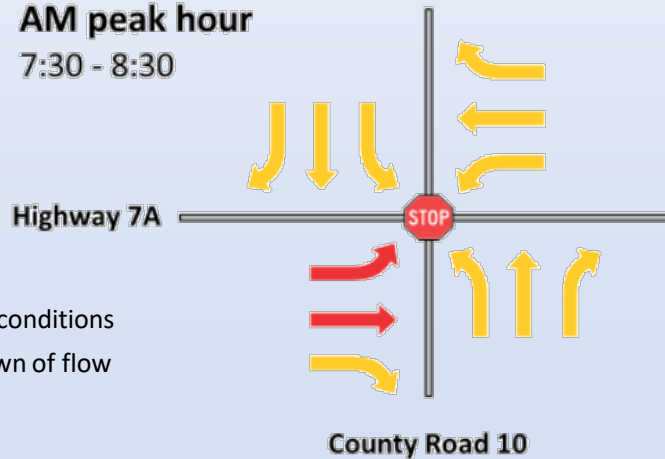
Traffic operations are shown for each turning movement at the intersection.

## LEGEND

-  Acceptable Operations
-  Operating near capacity; unstable conditions
-  Operating over capacity; breakdown of flow

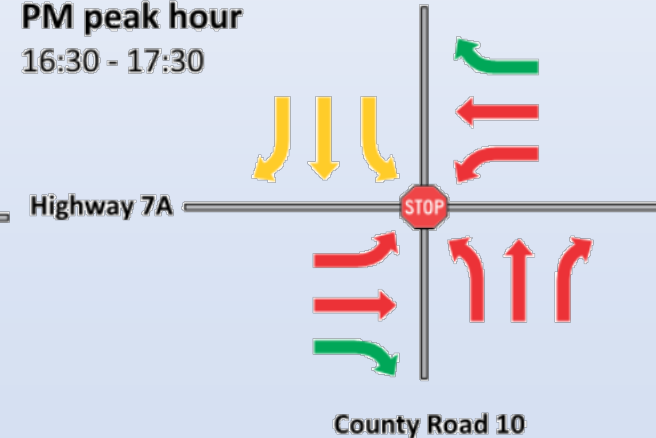
### Summer 2041

AM peak hour  
7:30 - 8:30



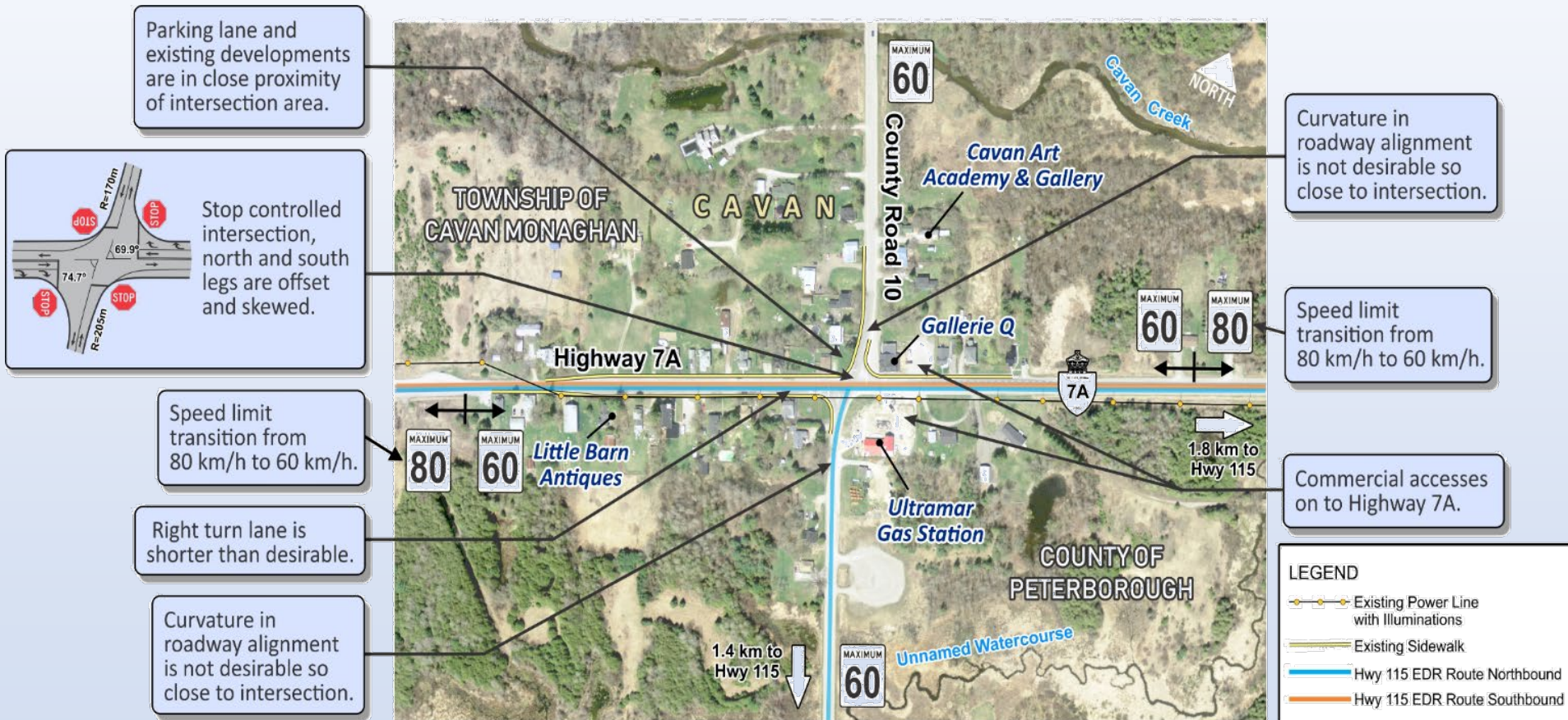
### Summer 2041

PM peak hour  
16:30 - 17:30



# Existing Transportation Conditions

The existing transportation infrastructure and general roadway features in the study area are presented on the plan.





# Summary of Problems & Opportunities

## PROBLEMS

### Limited Capacity



- Existing traffic in the afternoon peak is approaching capacity.
- Current intersection configuration cannot accommodate future volumes.

### Intersection Delays



- Delays are noted for traffic heading northbound coming from both County Road 10 and Highway 7A.

### Collisions



- 16 collisions were recorded between 2007 and 2017.
- 75% of collisions are angle or turning related, and these account for 100% of injuries.

### Access



- Multiple commercial accesses are in close proximity to the intersection.

## OPPORTUNITIES

### Improve Future Traffic Operations



- Improve intersection operations.
- Improve highway corridor operations.
- Supports anticipated growth within the County of Peterborough as stipulated in the *A Place to Grow* Plan.

### Driver Safety



- Improve road alignments, resulting in safer operation.
- Provide better sightlines to the intersection.
- Reduce near misses and intersection conflicts.

### Access



- Complete access management review.
- Provide well-spaced accesses for safer operation near intersection.

# Planning Alternatives

The Class EA process requires that planning alternatives be considered to ensure that there is reasonable and sufficient justification to proceed with the project.

Alternative	Description	Recommendation
<b>Do Nothing</b>	<ul style="list-style-type: none"> <li>Maintain existing roadway and access conditions (i.e. no new infrastructure)</li> <li>Includes routine maintenance (e.g. resurfacing within existing footprint).</li> </ul>	<ul style="list-style-type: none"> <li>Does not address any identified problems or opportunities at the intersection.</li> </ul> <p><b>Not Carried Forward</b></p>
<b>Transportation Demand Management</b>	<ul style="list-style-type: none"> <li>Reduce, shift, or eliminate transportation demand (e.g. flex work hours to shift demand outside of rush hours, carpooling, alternate modes of transportation).</li> </ul>	<ul style="list-style-type: none"> <li>On its own, does not improve operations and safety of the intersection or meet the needs of future area development.</li> </ul> <p><b>Not Carried Forward</b></p>
<b>Active Transportation Improvements</b>	<ul style="list-style-type: none"> <li>Measures to improve pedestrian and cycling facilities such as sidewalks and/or bike lanes.</li> </ul>	<ul style="list-style-type: none"> <li>On its own, does not improve operations and safety of the intersection or meet the needs of future area development.</li> <li>County of Peterborough's Active Transportation Master Plan policies include active transportation initiatives, and would be independent of this study.</li> </ul> <p><b>Not Carried Forward</b></p>
<b>Improve Adjacent Road Systems</b>	<ul style="list-style-type: none"> <li>Upgrade adjacent roads and intersections to reduce travel demand at the intersection.</li> </ul>	<ul style="list-style-type: none"> <li>There is significant distance between the Hwy 7A and County Road 10 intersection and the nearest alternative intersection.</li> </ul> <p><b>Not Carried Forward</b></p>
<b>Intersection Improvements at the Existing Location</b>	<ul style="list-style-type: none"> <li>Improve operations at the existing location by either signaling the intersection (and associated realignment of County Road 10) or construction of a roundabout.</li> </ul>	<ul style="list-style-type: none"> <li>Operational improvements to the intersection will sufficiently add capacity at the intersection and address the problem.</li> </ul> <p><b>Carried Forward</b></p>
<b>New/Improved Provincial Transportation Facility</b>	<ul style="list-style-type: none"> <li>Improve existing provincial highway facilities , service, maintenance, and operations, or construct a new by-pass facility.</li> </ul>	<ul style="list-style-type: none"> <li>Would result in significant economic implications for businesses in the hamlet, and high construction costs.</li> </ul> <p><b>Not Carried Forward</b></p>

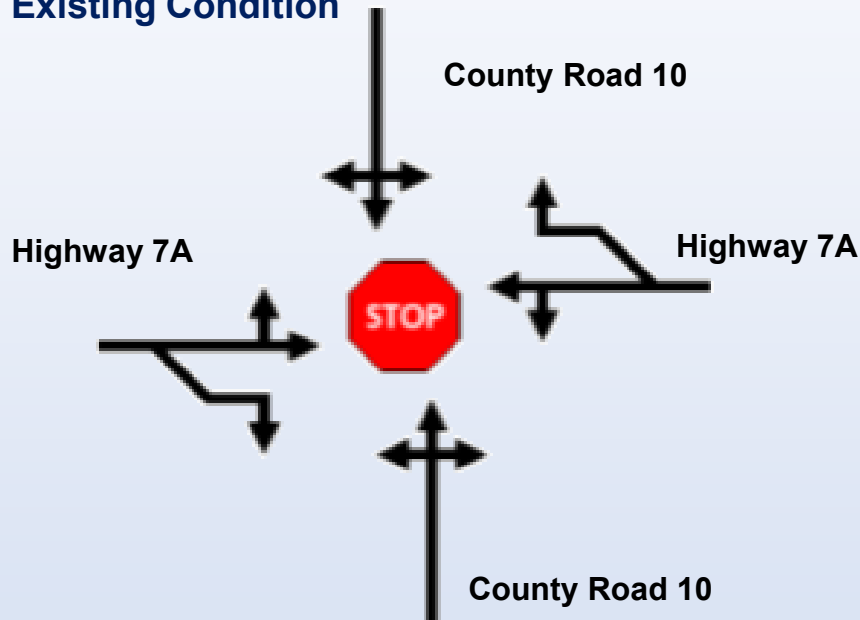
**The Project Team is recommending that Intersection Improvements at the Existing Location be carried forward for further consideration.**



# Development of Alternatives: Signalized Intersection

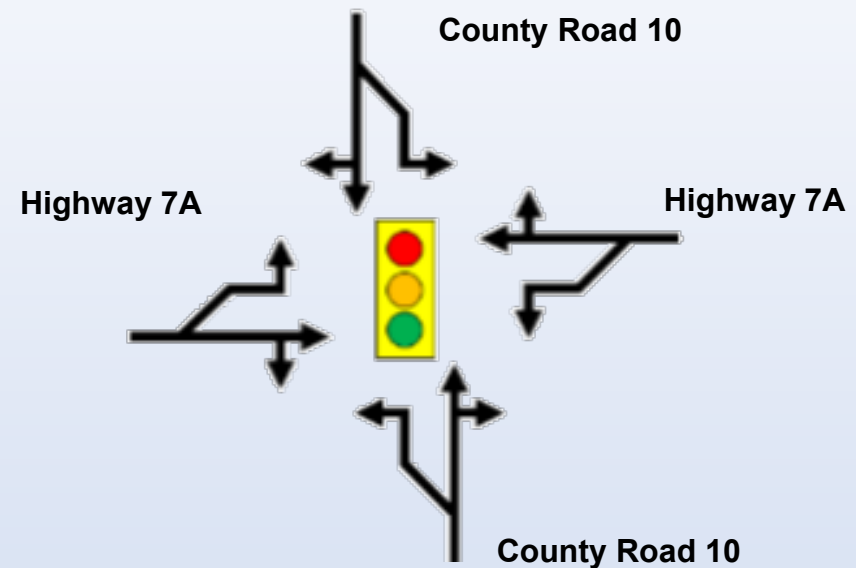
Signalized intersection control provides better traffic flow over the existing stop sign and improved capacity for future volumes.

## Existing Condition



- On Highway 7A, combined left turn and through lanes are present with a dedicated right turn
- On County Road 10, all moves are combined in one lane

## Signalized Intersection



- Dedicated left turn lanes are recommended with a combined through and right turn lane at all approaches
- **Alternatives 1A to 1D illustrate the signalized intersection alternatives being considered**



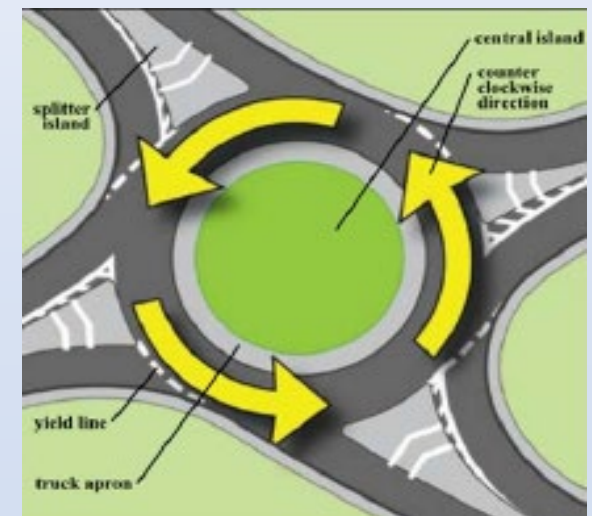
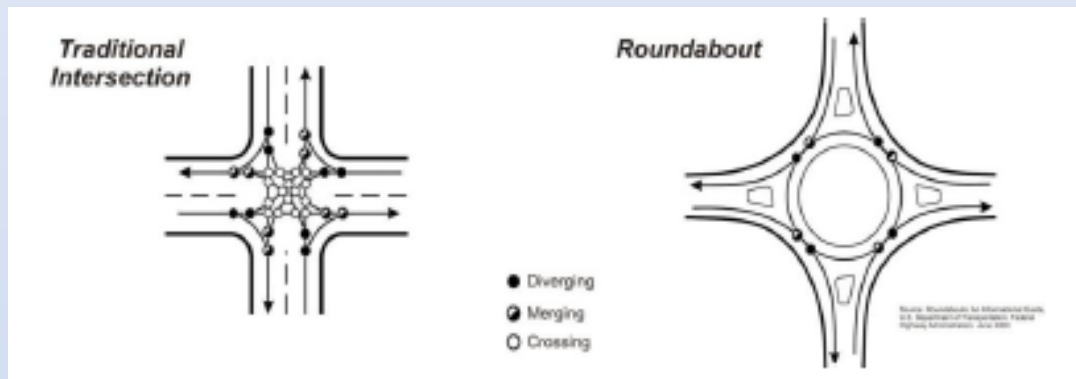
# Development of Alternatives: Roundabout

A roundabout is an alternative form of intersection traffic control that is a circular intersection with yield at entry. Roundabouts promote safe, efficient traffic flow.

Points of conflict occur when vehicles cross paths. As shown in the diagram, a traditional four-legged intersection has 32 points of conflict. A roundabout has only eight points of conflict, reducing the opportunity for collision. Roundabouts also reduce the severity of collisions by lowering vehicle speeds and eliminating right angle turns.

Roundabouts:

- Increases intersection capacity by reducing delays and queues;
- Reduces air and noise pollution, and fuel consumption;
- Reduces severity of collisions; and
- Provides a traffic calming effect.

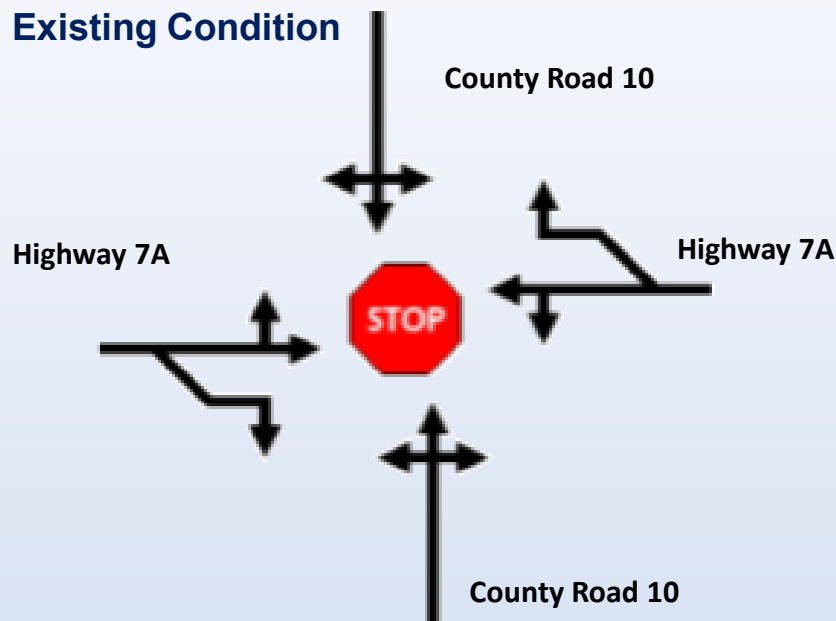




# Development of Alternatives: Roundabout

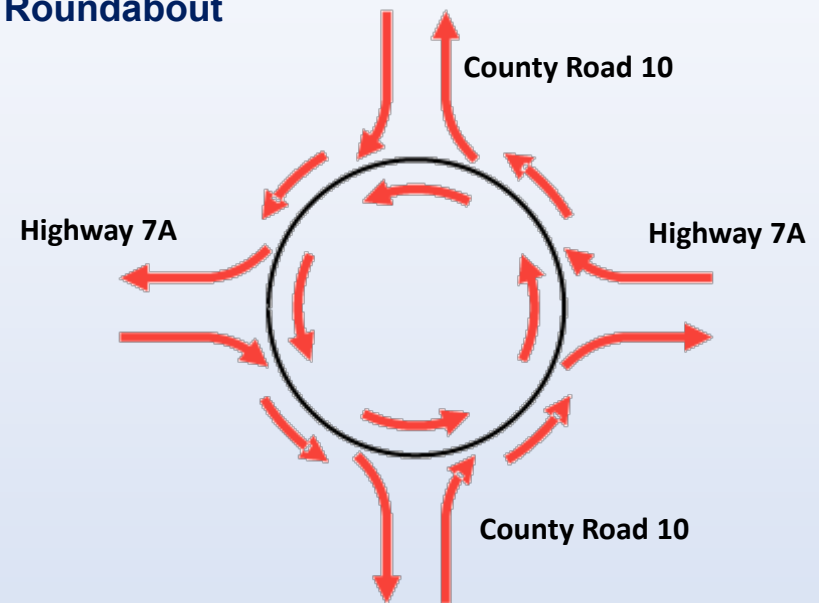
Roundabouts provide better traffic flow over the existing stop sign and improved capacity for future volumes.

## Existing Condition



- On Highway 7A, combined left turn and through lanes are present with a dedicated right turn
- On County Road 10, all moves are combined in one lane

## Roundabout



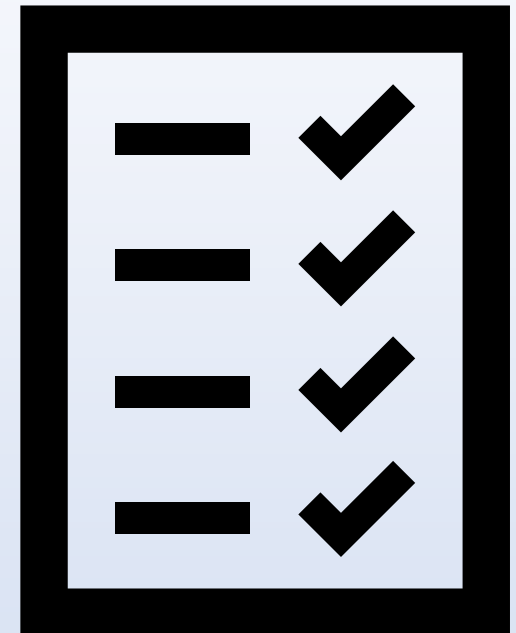
- Each approach at Highway 7A and County Road 10 has one lane entering and one lane exiting the roundabout
- **Alternative 2 illustrates the roundabout alternative being considered**

# Alternatives Screening

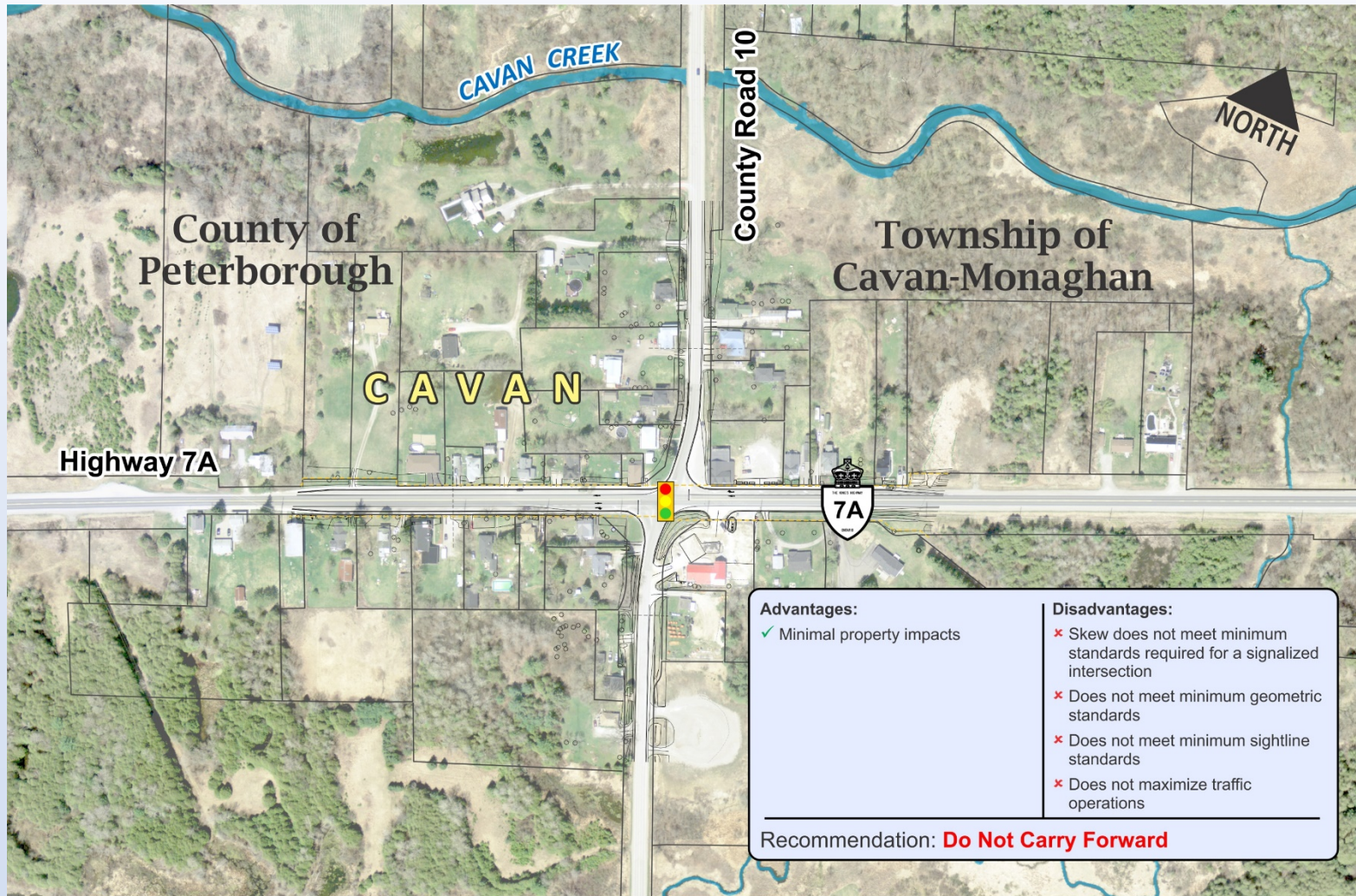
The Project Team developed a long list of a range of signalized intersection and roundabout options (“Alternatives”) with different layouts and alignments. These alternatives addresses the identified problems and opportunities at the Highway 7A and County Road 10 intersection, and have different advantages and disadvantages.

Following the development of alternatives, the Project Team screened each alternative to determine which should be carried forward for further consideration. Factors the Project Team considered included:

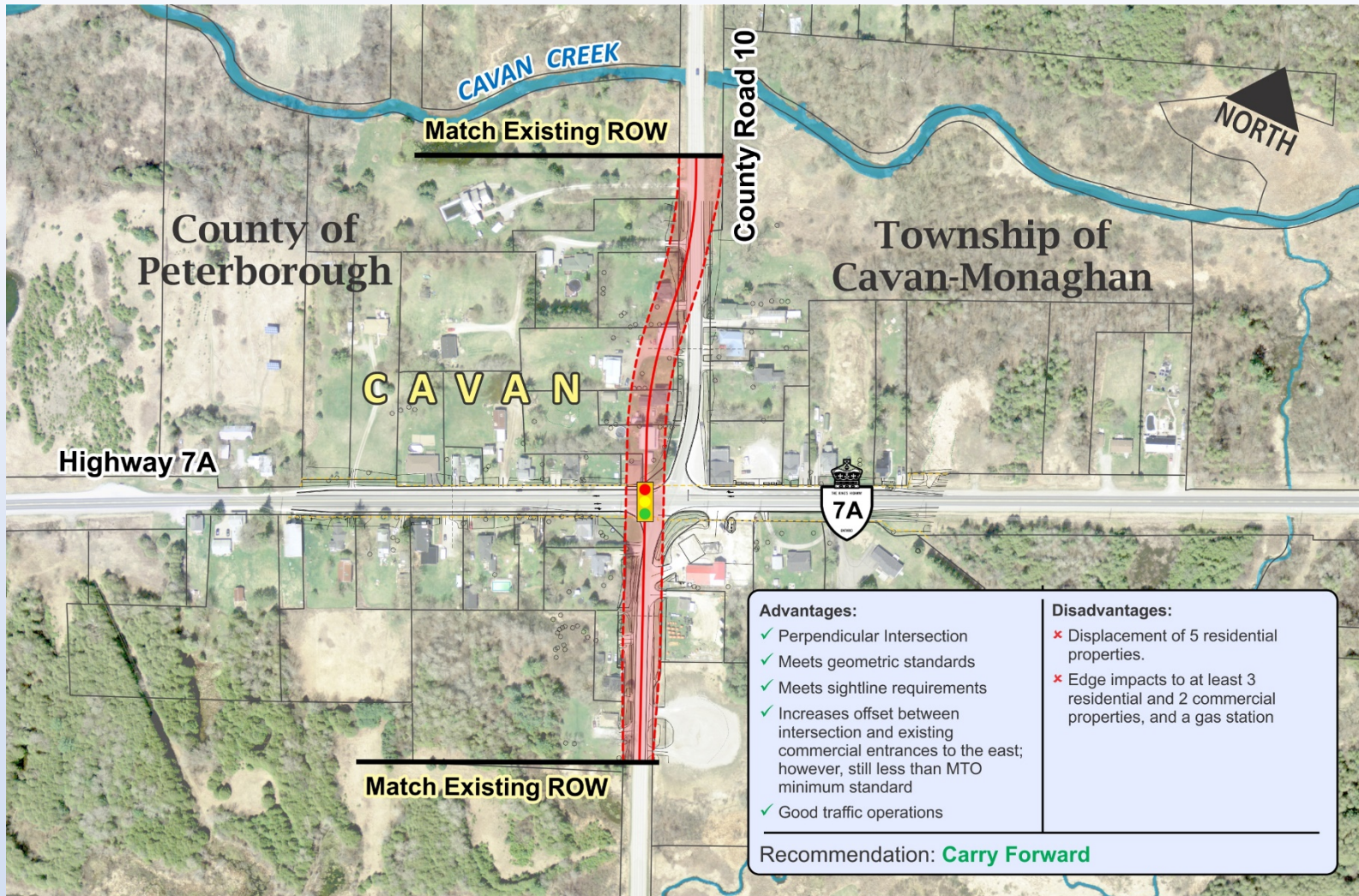
- Technical Feasibility (e.g. MTO standards);
- Intersection Safety;
- Property Impacts;
- Access Impacts; and
- Traffic Operations.



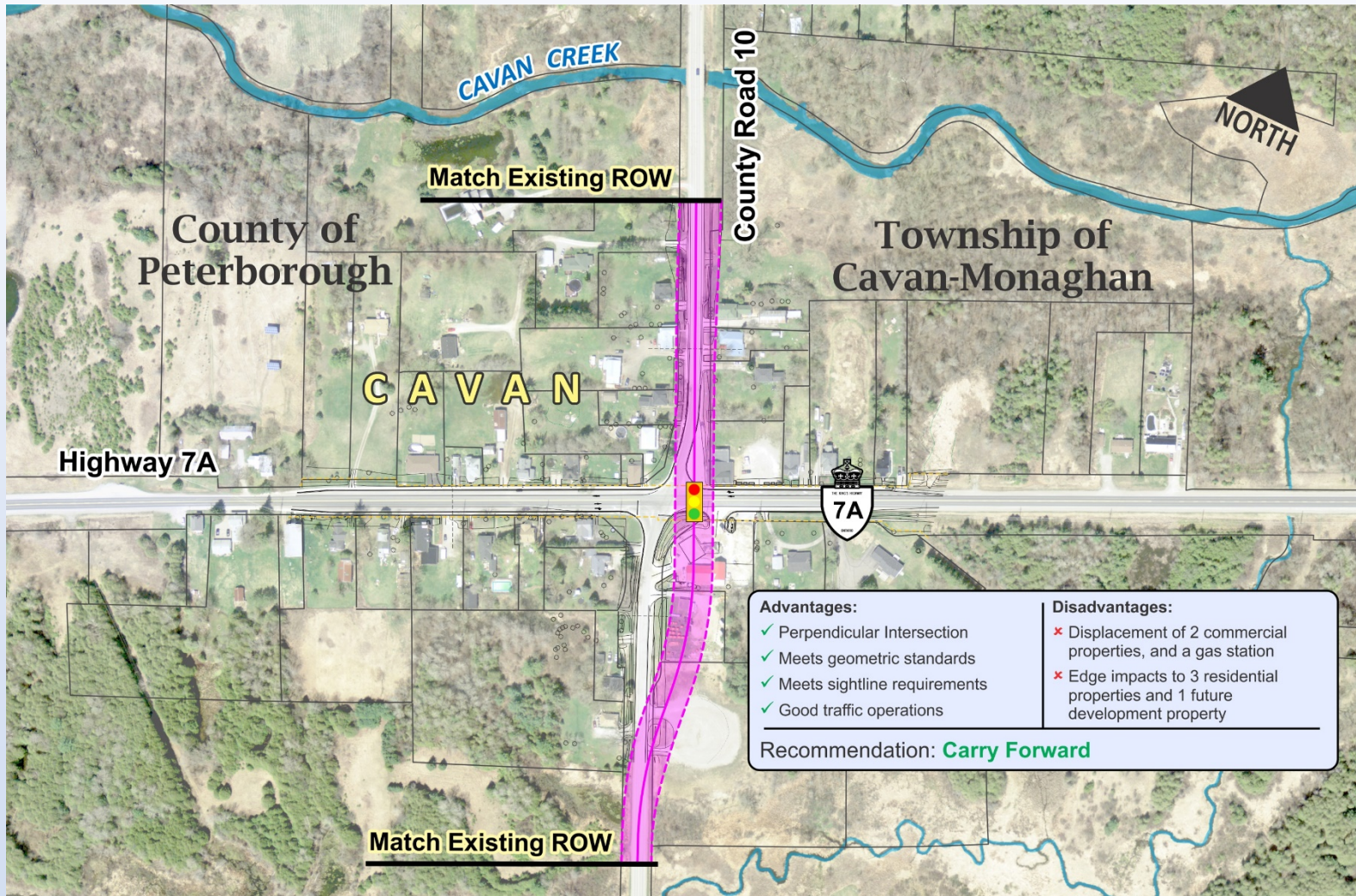
# Alternative 1A: Signalized Intersection at Existing Location



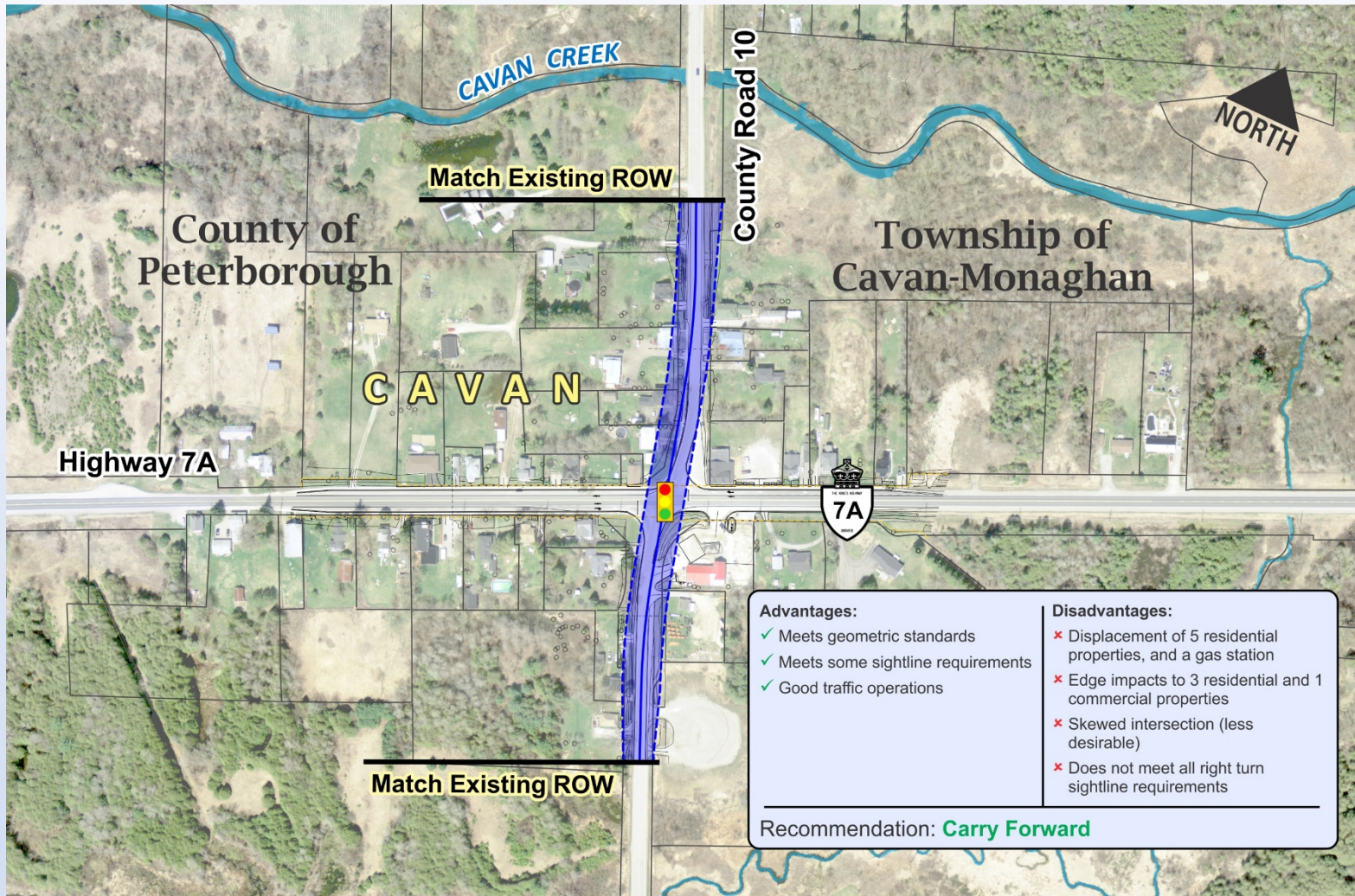
# Alternative 1B: Signalized Intersection and Realign County Road 10 to the West



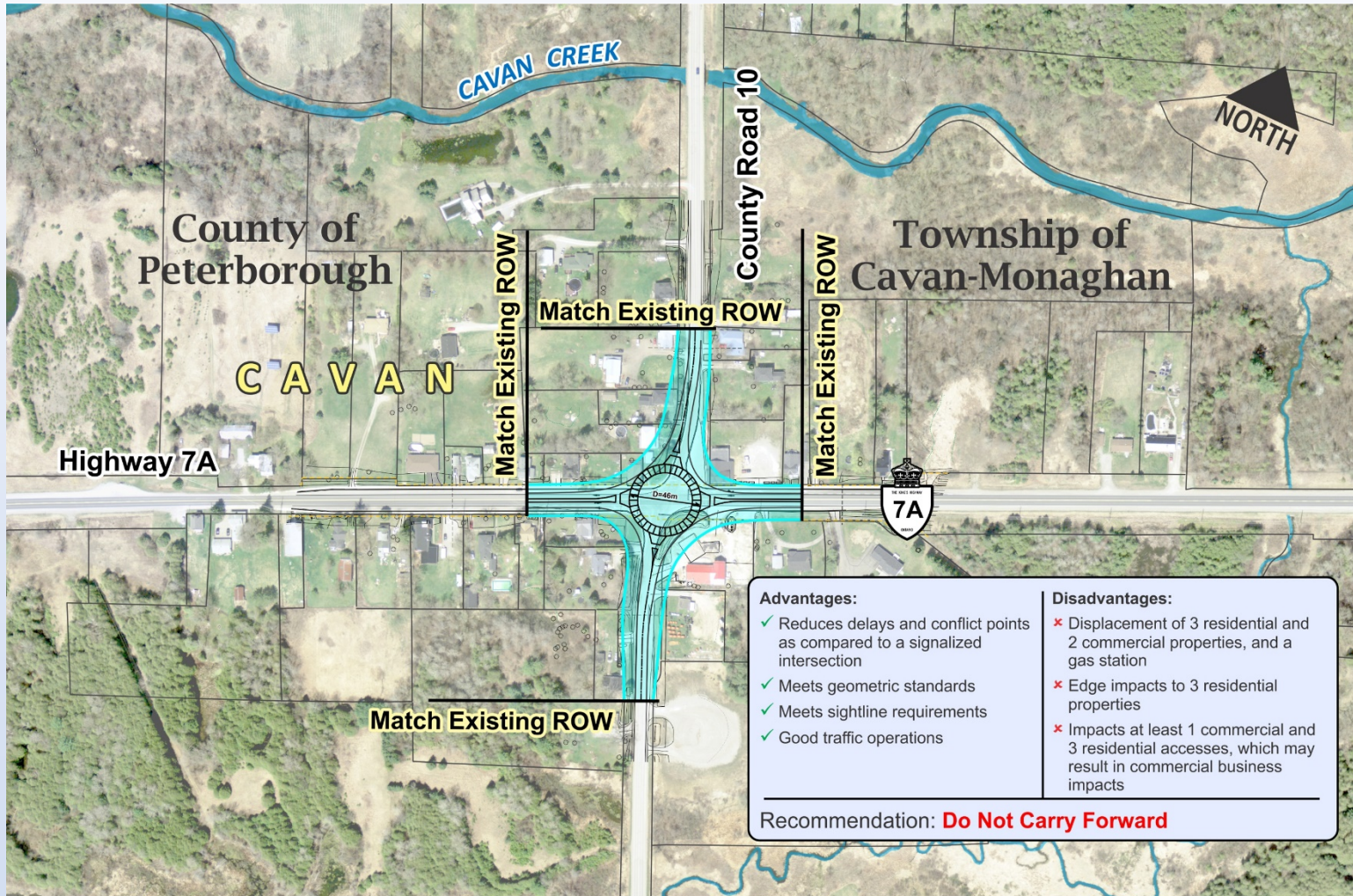
# Alternative 1C: Signalized Intersection and Realign County Road 10 to the East








# Alternative 1D: Signalized Intersection and Realign County Road 10



## Alternative 2: Roundabout







# Short-List of Alternatives

Alternative	Carry Forward?
<b>Alt 1A:</b> Signalized Intersection at Existing Location	
<b>Alt 1B:</b> Signalized Intersection and Realign County Road 10 to the West	
<b>Alt 1C:</b> Signalized Intersection and Realign County Road 10 to the East	
<b>Alt 1D:</b> Signalized Intersection and Realign County Road 10	
<b>Alt 2:</b> Roundabout	



# Approach to Evaluating the Short-List of Alternatives

The qualitative evaluation of the short-list of alternatives will identify the **preferred alternative** that best meets future transportation needs of the intersection, while minimizing negative impacts to the social, economic and natural environments.

Factor	Weight	Evaluation Criteria
 <b>Natural Environment</b>	Low	<ul style="list-style-type: none"> <li>• Direct and indirect impacts on wetlands.</li> <li>• Direct and indirect impacts on species at risk.</li> <li>• Direct and indirect impacts on terrestrial ecosystems.</li> <li>• Storm water drainage.</li> </ul>
 <b>Socio-Economic Environment</b>	High	<ul style="list-style-type: none"> <li>• Impacts to private properties.</li> <li>• Direct and indirect impacts to residents and businesses.</li> <li>• Access for local residents, school buses and emergency vehicles.</li> <li>• Traffic noise effects on adjacent residential areas.</li> <li>• Relocation and/or closure of existing entrances</li> </ul>
 <b>Cultural Heritage Environment</b>	Low	<ul style="list-style-type: none"> <li>• Direct and indirect impacts to built heritage features.</li> <li>• Direct and indirect impacts to cultural landscapes.</li> <li>• Impacts to archaeological resources.</li> </ul>
 <b>Transportation / Technical Considerations</b>	High	<ul style="list-style-type: none"> <li>• Ability to accommodate future traffic forecasts.</li> <li>• Forecasted traffic performance.</li> <li>• Improvements to substandard geometrics and intersection design.</li> <li>• Cost.</li> <li>• Constructability/traffic staging.</li> </ul>

# Next Steps

After this Public Information Centre (PIC), the following will be carried out:



Review the comments received following PIC #1 and respond to comments;



Incorporate any refinements into the planning alternatives based on public and agency input;



Complete the analysis and evaluation of the planning alternatives and select the preferred alternative; and



Hold PIC# 2 later in the study to present and receive feedback on the results of the evaluation process and the preferred alternative.



# Contact Information

**Please feel free to submit comments through the project website or by sending your comments to one of the Project Team members listed below. Comments would be appreciated by February 19, 2021.**

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WSP Canada Inc.**

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**Oakville, ON L6J 4A5**

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**Toll-free: 1-877-562-7947**

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Project Engineer**

**Ministry of Transportation - Eastern Region**

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**Thank you for your time and participation  
Information presented today is available online at the study website: [www.hwy7ACavan.ca](http://www.hwy7ACavan.ca)**

# Freedom of Information and Protection of Privacy



Information collected during this study will be used to assist the Ministry of Transportation in meeting the requirements of the Ontario *Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in the study documentation.

Information collected will be used 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.

