



Welcome to the Online Public Information Centre #2

Municipal Class Environmental Assessment Study
for Merritt Road and Rice Road in Pelham,
Thorold and Welland

June 9, 2021

(Live Presentation 6:00 PM)



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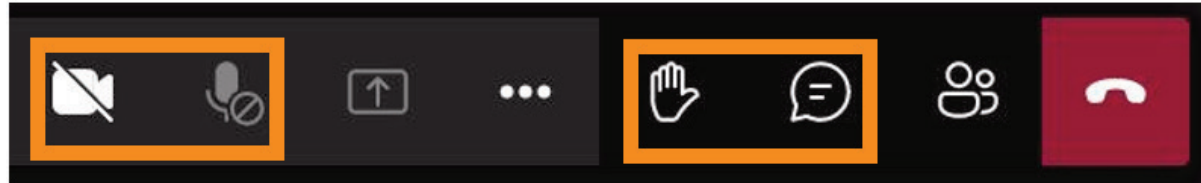
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Presentation Outline

- Introductions
- Study Overview
- Municipal Class EA process and Timeline
- Feedback from the Public Information Centre #1
- Future Traffic Conditions
- Problem Statement
- Evaluation of Alternative Solutions
- Preferred Solution
- Technical Studies
- Possible Cross-sections
- Next Steps and Questions

Housekeeping Items

- When joining the online meeting, the attendees will be muted. We request you to please turn off your camera.
- There will be an opportunity at the end of the presentation to ask any questions or submit comments. Please use the chat function to type in your questions/comments or click on “Raise hand”.



- This presentation is being recorded and will be posted on the project webpage.
- In case if you would like to submit your feedback later, the presentation materials and an online comment form are available on the [project webpage](#).

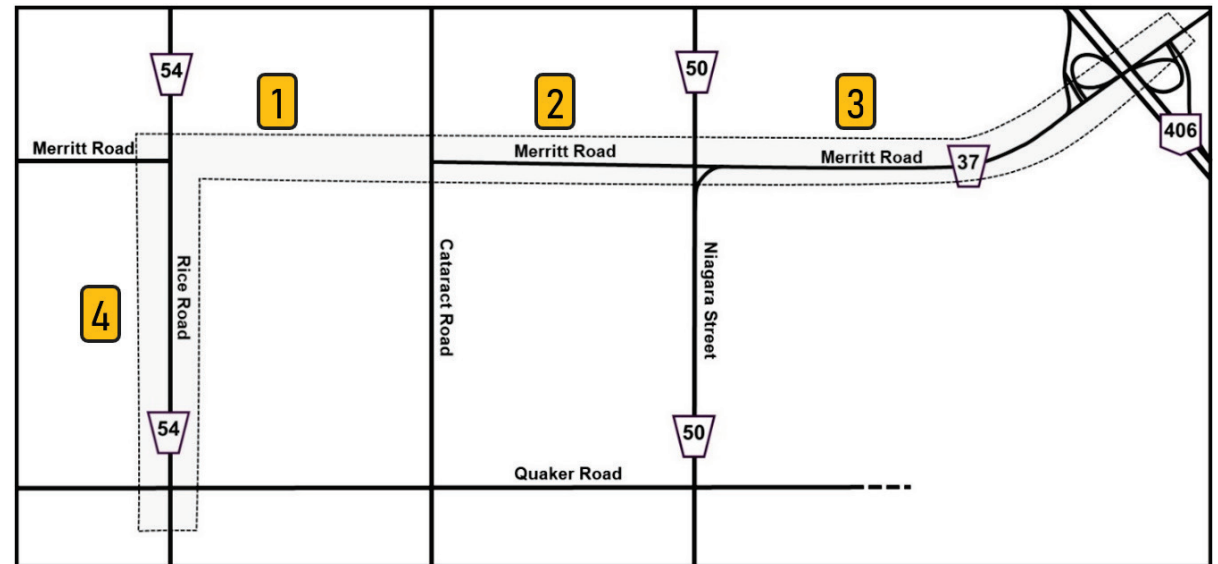
Introductions

Niagara Region	Wood Environment and Infrastructure Solutions
Maged Elmadhoon, M.Eng., P.Eng. Manager, Transportation Planning	Jeff Suggett, M. Sc. Project Manager
Sulaf Alkarawi, P.Eng., PMP Associate Director, Transportation Planning	John McGill, P.Eng., PTOE, RSP Project Advisor
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Study Overview

The Niagara Region is conducting an environmental assessment study for improvements to Merritt Road and Rice Road as a result of proposed developments in the Town of Pelham, the City of Thorold and the City of Welland. Building upon the recommendations of the 2017 Niagara Region Transportation Master Plan, this study will propose improvements and active transportation facilities to the following segments of Merritt Road and Rice Road:

- **Segment 1** – Merritt Road between Rice Road and Cataract Road
- **Segment 2** – Merritt Road between Cataract Road and Merrittville Highway / Niagara Street
- **Segment 3** – Merritt Road between Merrittville Highway / Niagara Street and Highway 406
- **Segment 4** – Rice Road between Merritt Road and Quaker Road



Municipal Class EA Process & Timeline

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
▪ Notice of study commencement ▪ Problem or opportunity statement ▪ Public Information Centre #1	▪ Inventory natural, social and economic exiting conditions ▪ Identify and evaluate alternative solutions ▪ Identify preferred solution ▪ Public Information Centre #2	▪ Inventory natural, social and economic exiting conditions ▪ Identify and evaluate alternative design concepts for preferred solution ▪ Identify preferred design concept ▪ Public Information Centre #3	▪ Document Study process and findings in Environmental Study Report (ESR) ▪ Notice of Study Completion ▪ Place ESR on public record for a minimum of 30-day review period	▪ Proceed to the detailed design and construction of the project ▪ Monitor environmental provisions and commitments
Winter 2021 (Complete)	Spring 2021	Summer / Fall 2021	Fall 2021 / Winter 2022	TBD



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Feedback from the Online Public Information Centre #1

The first Public Information Centre was hosted on March 24, 2021. Comments received from the public are summarized below. PIC #1 Summary Report is available on [project webpage](#).



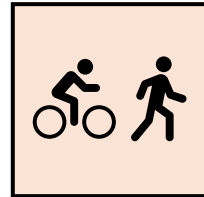
Protect Natural Environment



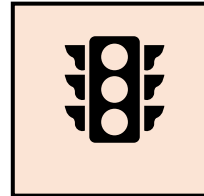
Provide Stormwater Management



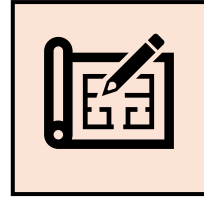
Provide Safety for Road Users



Provide Active Transportation Facilities



Provide Intersection Improvements



Do Not Build Merritt Road Between
Rice Road & Cataract Road

Existing and Future Right-of-Way Widths

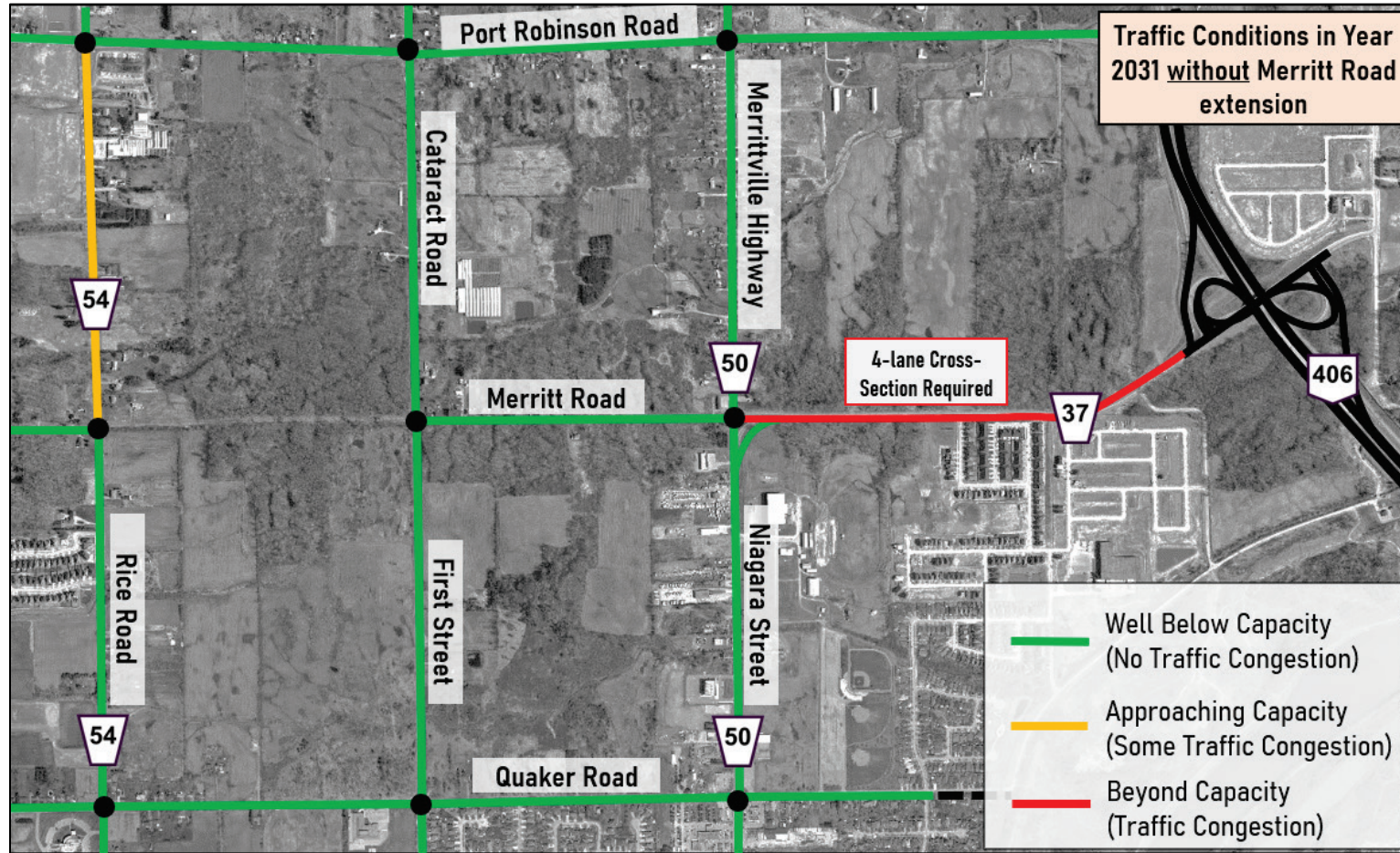
The existing and future right-of-way widths for the four road segments are identified in the table below:

Road Segment	Existing Right-of-Way Width	Future Right-of-Way Width
Segment 1: Merritt Road between Rice Road (Regional Road 54) and Cataract Road	~20m	26m ¹
Segment 2: Merritt Road between Cataract Road and Merrittville Highway / Niagara Street	~20m	-
Segment 3: Merritt Road between Merrittville Highway / Niagara Street and Highway 406	~30m	35m ²
Segment 4: Rice Road between 200m north of Merritt Road and Quaker Road	~20m	26.2m ²

¹ City of Thorold Official Plan (2016)

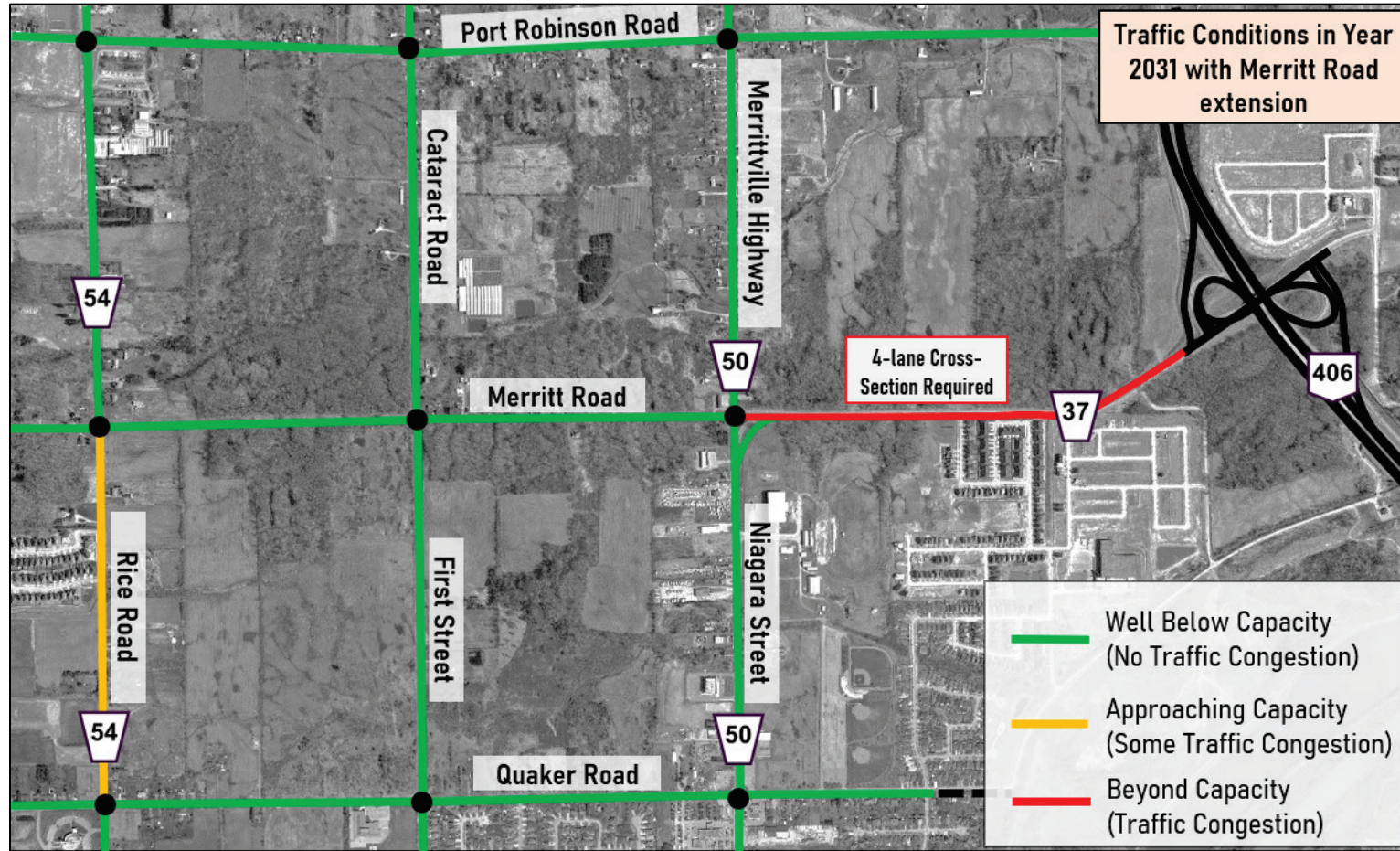
² Identified in Niagara Region Official Plan (2014)

Future Traffic Conditions (2031) – Without Merritt Road Extension



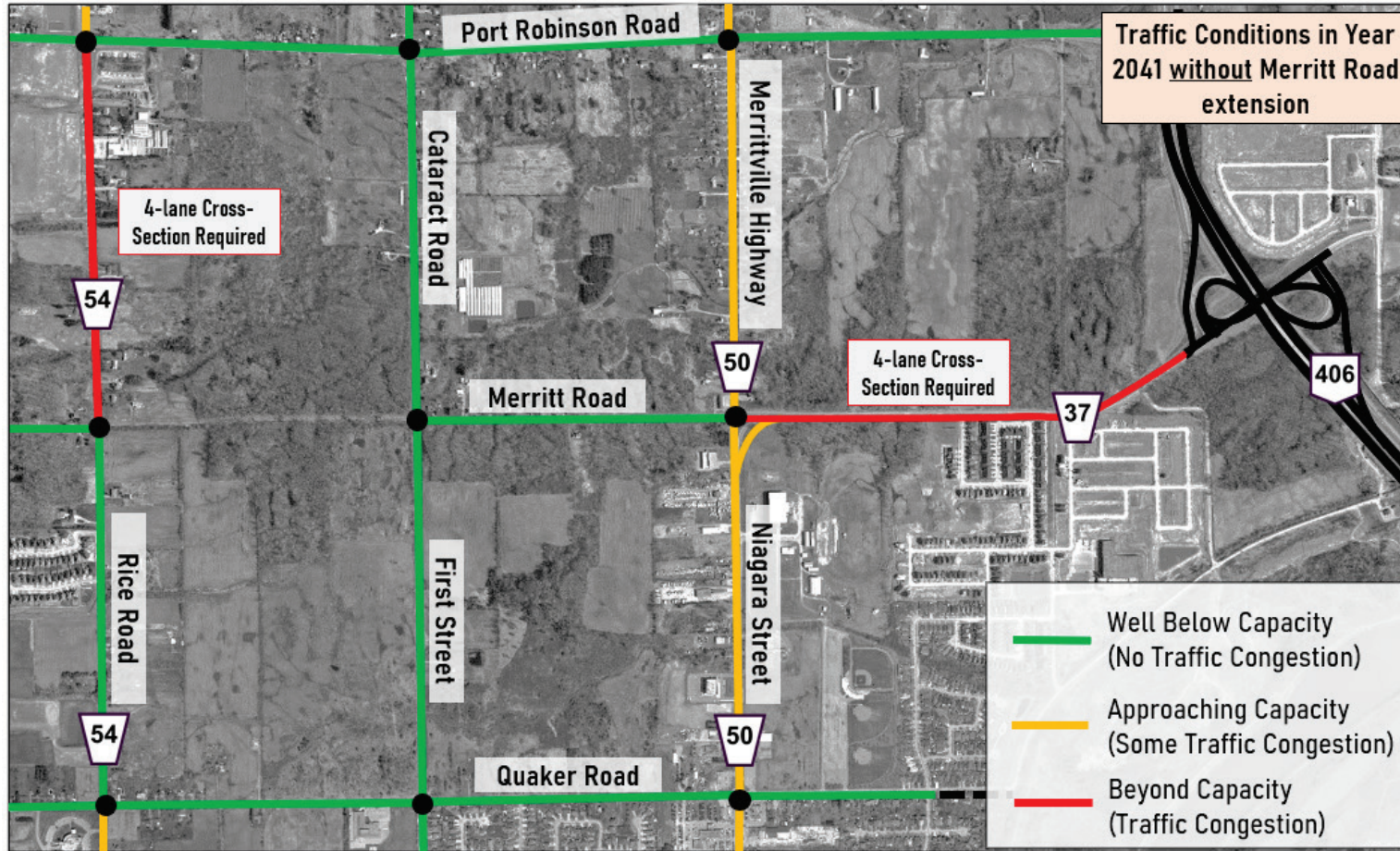
- By 2031, 4-lane cross section required on Merritt Road from Highway 406 to Niagara Street to accommodate future traffic
- Rice Road north of Merritt Road will carry a significant amount of traffic (for travel via Highway 20/Highway 406) with congestion occurring

Future Traffic Conditions (2031) – With Merritt Road Extension



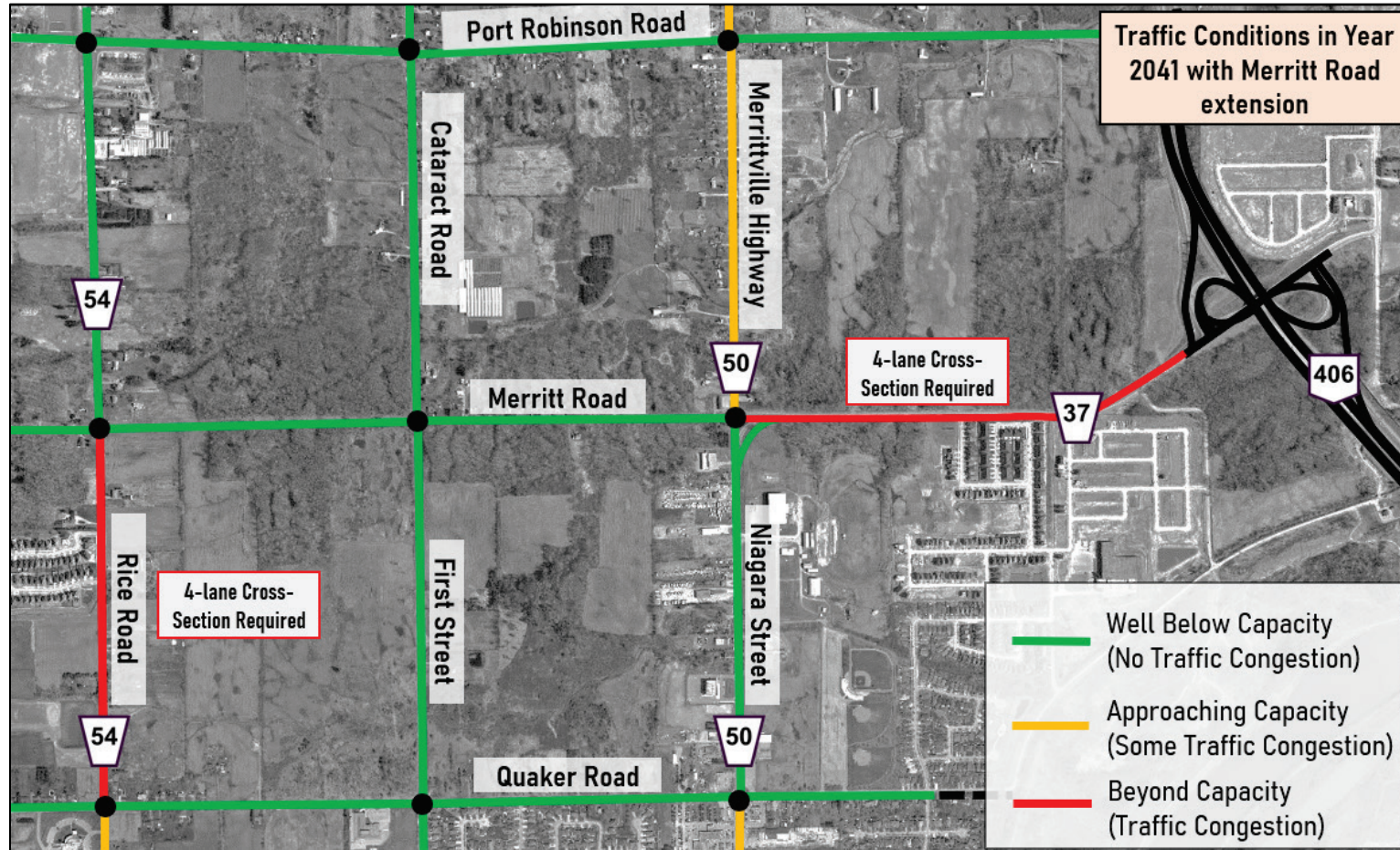
- By 2031, 4-lane cross section also required on Merritt Road west of Highway 406 to accommodate future traffic
- With Merritt Road opened between Rice Road and Cataract Road, a significant amount of traffic using Rice Road north of Merritt Road, Niagara Street and Quaker Road will be diverted away to Merritt Road
- Rice Road between Merritt Road and Quaker Road will experience an increase in traffic demand due to motorists choosing to use the new section of Merritt Road but can remain a two-lane roadway in 2031
- New route to Highway 406 will result in less traffic on Rice Road north of Merritt Road

Future Traffic Conditions (2041) – Without Merritt Road Extension



- By 2041, traffic on Niagara Street will approach capacity for a four-lane roadway
- Significant congestion will occur at the Quaker Road intersections (Rice Road, First Street, Niagara Street)
- Significant improvements will be required at the intersection of Quaker Road / Niagara Street to accommodate increase in traffic
- Additional traffic congestion on Rice Road between Merritt Road and Highway 20 with widening to four lanes required

Future Traffic Conditions (2041) – With Merritt Road Extension



- By 2041, short section of Rice Road between Merritt Road and Quaker Road would need to be widened to a four-lane roadway to accommodate future traffic
- Further investigation will be undertaken to determine the need for localized intersection improvements (i.e., roundabouts, traffic signals and/or additional turn lanes)

Problem Statement

This study is building on the recommendations of the Niagara Region's Transportation Master Plan (2017), which included the following:

- Extension of Merritt Road between Regional Road 54 (Rice Road) and Cataract Road;
- Capacity improvements of Merritt Road from Cataract Road to Highway 406; and,
- Capacity improvements to Regional Road 54 (Rice Road) from 200 meters north of Merritt Road to Quaker Road.

As a result of the proposed development, significant congestion on the road network is expected, particularly on Merritt Road between the Merrittville Highway/Niagara Street and the Highway 406 interchange by 2041. With the Merritt Road extension remaining closed, Niagara Street between Merritt Road and Quaker Road and Quaker Road between Rice Road and Niagara Street will also experience a significant increase in traffic volumes given the need for motorists to take an **indirect route** between the Town of Pelham and the Highway 406 intersection, resulting in **congestion** and the need for **significant intersection improvements**. The traffic assessment confirmed the findings of the TMP regarding the need for improvements.

Alternative Solutions

Alternative 1 Do Nothing

Do not improve Merritt Road and Rice Road within the study area. This alternative maintains existing transportation conditions.

Alternative 2 Manage Transportation Demand

Transportation Demand Management would improve facilities for other modes of transportation, such as, walking, cycling and transit.

Alternative 3 Limit Growth and Development

Restrict development of adjacent lands.

Alternative 4 Improve Other North-south and East-west Roads

Improve other north-south and east-west roads.

Alternative 5 Improve Merritt Road and Rice Road

Extend Merritt Road between Rice Road and Cataract Road;
Improve Merritt Road between Cataract Road and Highway 406;
Improve Rice Road between 200m north of Merritt Road and Quaker Road;
Improve intersections and,
Provide active transportation facilities.

Evaluation Criteria



Transportation

- Alignment with Municipal and Provincial Planning Policies
- Potential to improve traffic congestion
- Potential to improve road safety
- Potential to incorporate active transportation facilities
- Potential to provide a direct route between Highway 406 and areas to the west (Town of Pelham)
- Potential to improve goods movement



Socio-economic Environment

- Potential for property requirements
- Supports future growth
- Opportunities to enhance streetscaping, landscaping, and public realm
- Opportunities to improve accessibility
- Potential impacts during construction
- Health benefits
- Noise impacts



Natural Environment

- Potential impacts to terrestrial resources and wildlife, fish and fish habitat, natural areas and air quality



Cultural Environment

- Potential impacts to cultural and archaeological resources



Technical

- Impacts to utilities, opportunities for stormwater management, and climate change resiliency, and impacts associated with project implementation



Cost

- Cost to construct, operate and maintain

Evaluation of Alternatives (Transportation)

Evaluation Criteria	Do Nothing	Manage Transportation Demand	Limit Growth and Development	Improve Other North-south and East-west Roads	Improve Merritt Road and Rice Road
Municipal Planning Policies	○	◐	◐	○	●
Provincial Planning Policies	○	◐	○	◐	●
Capacity and Level of Service	○	◐	◑	○	●
Safety	○	◐	○	◐	◑
Active Transportation	○	◐	○	○	●
Network Connectivity	○	○	○	○	●
Goods Movement	○	◐	○	◐	●
Summary	Does not comply with municipal and provincial policies. Does not address existing and future congestion.	May reduce traffic demand to some degree, however, this solution alone will not accommodate future traffic capacity.	Does not comply with municipal and provincial policies. Does not provide transportation and active transportation network connectivity.	Does not provide transportation and active transportation network connectivity.	Complies with municipal and provincial planning policies; addresses existing and future traffic congestion and provide network connectivity.

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○	◐	◐	◑	●
Highest negative impacts or lowest benefits	Higher negative impacts or lower benefits	Moderate negative impacts and benefits	Lower negative impacts or greater benefits	Lowest negative impacts or greatest benefits

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Evaluation of Alternatives (Socio-economic Environment)

Evaluation Criteria	Do Nothing	Manage Transportation Demand	Limit Growth and Development	Improve Other North-south and East-west Roads	Improve Merritt Road and Rice Road
Private Property	●	●	●	◐	◐
Economic Development	○	◑	○	○	●
Public Realm	○	○	○	○	●
Accessibility	○	○	○	◐	●
Construction Impacts	●	●	●	◑	◑
Health	○	◑	○	○	●
Noise	●	●	●	◑	◑
Summary	Does not provide opportunities to improve economic development, public realm, accessibility and health.	Does not provide opportunities to improve public realm, and accessibility. It provides opportunities to improve economic development and health to some extent.	Does not provide opportunities to improve economic development, public realm, accessibility and health.	Private property will be required. This alternative does not provide opportunities to improve economic development, public realm, and health.	Private property will be required. This alternative provides opportunities to improve economic development, public realm, accessibility and health.

○	◑	◐	◑	●
Highest negative impacts or lowest benefits	Higher negative impacts or lower benefits	Moderate negative impacts and benefits	Lower negative impacts or greater benefits	Lowest negative impacts or greatest benefits

Evaluation of Alternatives (Natural and Cultural Environment)

Evaluation Criteria	Do Nothing	Manage Transportation Demand	Limit Growth and Development	Improve Other North-south and East-west Roads	Improve Merritt Road and Rice Road
Terrestrial Environment	●	●	●	◐	◑
Aquatic Environment	●	●	●	◐	◑
Natural Heritage	●	●	●	◐	◐
Air Quality	●	◐	●	◐	◐
Archaeological Resources	●	●	●	◐	◐
Cultural Heritage Resources	●	●	●	◐	◐
Summary	Does not impact natural and cultural environment.	Does not impact natural and cultural environment.	Does not impact natural and cultural environment.	Likely impacts on natural environment and potential impacts on cultural environment, which can be addressed through proper mitigation measures.	Likely impacts on natural environment and potential impacts on cultural environment, which can be addressed through proper mitigation measures.

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Highest negative impacts or lowest benefits	Higher negative impacts or lower benefits	Moderate negative impacts and benefits	Lower negative impacts or greater benefits	Lowest negative impacts or greatest benefits

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Evaluation of Alternatives (Engineering / Constructability and Cost)

Evaluation Criteria	Do Nothing	Manage Transportation Demand	Limit Growth and Development	Improve Other North-south and East-west Roads	Improve Merritt Road and Rice Road
Utilities	●	◐	●	◐	◐
Stormwater Management	○	○	○	○	●
Climate Change	○	○	○	◐	●
Implementation	●	◐	●	◐	◐
Implementation Cost	●	●	●	◐	◐
Operation and Maintenance Cost	●	●	●	◐	◐
Summary	No impacts to utilities, no implementation related challenges, and no cost to construct and maintain. No opportunities for stormwater management and improving resiliency to climate change.	Minimal impacts to utilities, low implementation challenges, and no construction and operation/maintenance costs. No opportunities for stormwater management.	No impacts to utilities, no implementation related challenges, and no cost to construct and maintain. No opportunities for stormwater management and improving resiliency to climate change.	Likely impacts to utilities, which can be addressed through coordination. No opportunities to incorporate stormwater management within the Study Area. High construction costs, and low operation and maintenance costs.	Likely impacts to utilities, which can be addressed through coordination. Opportunities to incorporate stormwater management within the Study Area. High construction costs and low operation and maintenance costs.

○	◐	◐	◐	●
Highest negative impacts or lowest benefits	Higher negative impacts or lower benefits	Moderate negative impacts and benefits	Lower negative impacts or greater benefits	Lowest negative impacts or greatest benefits

Preferred Solution

Evaluation Criteria	Do Nothing	Manage Transportation Demand	Limit Growth and Development	Improve Other North-south and East-west Roads	Improve Merritt Road and Rice Road
Overall Recommendation	Not Recommended 	Not Recommended 	Not Recommended 	Not Recommended 	Recommended 

Alternative 5 – Improve Merritt Road and Rice Road was identified as the **Preferred Solution**. This alternative would involve the following:

- Extension of Merritt Road between Rice Road and Cataract Road;
- Improvements to Merritt Road between Cataract Road and Highway 406;
- Improvements to Rice Road between 200m north of Merritt Road and Quaker Road;
- Localized intersection improvements, such as addition of dedicated turn lanes, and traffic signals/roundabouts and/or improvement of the timing of the existing traffic signal at Merritt Road and Niagara Street intersection to improve traffic operations; and
- Providing active transportation facilities on both Merritt Road and Rice Road.

The proposed improvements to these two roads will help address transportation capacity and active transportation connectivity issues. These improvements will also implement a **Complete Streets approach** which will improve safety for drivers; cyclists; and pedestrians of all ages and abilities, while providing opportunities for walking and cycling.

				
Highest negative impacts or lowest benefits	Higher negative impacts or lower benefits	Moderate negative impacts and benefits	Lower negative impacts or greater benefits	Lowest negative impacts or greatest benefits

Natural Environment Assessment

The natural features within the Study Area include:

- Potential Natural Heritage Corridor
- Provincially Significant Wetland
- Significant Woodland
- Area of Natural and Scientific Interest (ANSI)
- Fish Habitat

An **Environmental Impact Study** will be completed in accordance with the **Niagara Region Environmental Impact Study Guidelines** to document natural environmental features within the Study Area, potential project impacts, proposed mitigation measures, and permitting requirements. The following field investigations are planned as part of the natural environment assessment:

- Botanical/vegetation surveys
- Breeding bird surveys
- Amphibian surveys
- Incidental wildlife sightings and evidence or signs of wildlife
- Targeted investigations of the watercourses



The Niagara Region Official Plan Policy 7.B.1.14 permits projects like transportation routes within the Core Natural Heritage System where an environmental assessment for the proposed use has been completed.

Archaeological and Cultural Heritage Assessments

A **Stage 1 Archaeological Assessment** has been completed, which indicated that the study area has general archaeological potential and requires Stage 2 archaeological assessment. A Stage 2 Archaeological Assessment will be completed during detailed design phase of the project.

A **Cultural Heritage Assessment** has been completed, which identified built heritage resources and cultural heritage landscapes within, and adjacent to the Study Area. Project's potential impacts to these resources will be identified and mitigation measures will be developed as part of this study.

Draft reports have been shared with the relevant Indigenous Nations for review and comment. These reports will be finalized and submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries for review and approval.

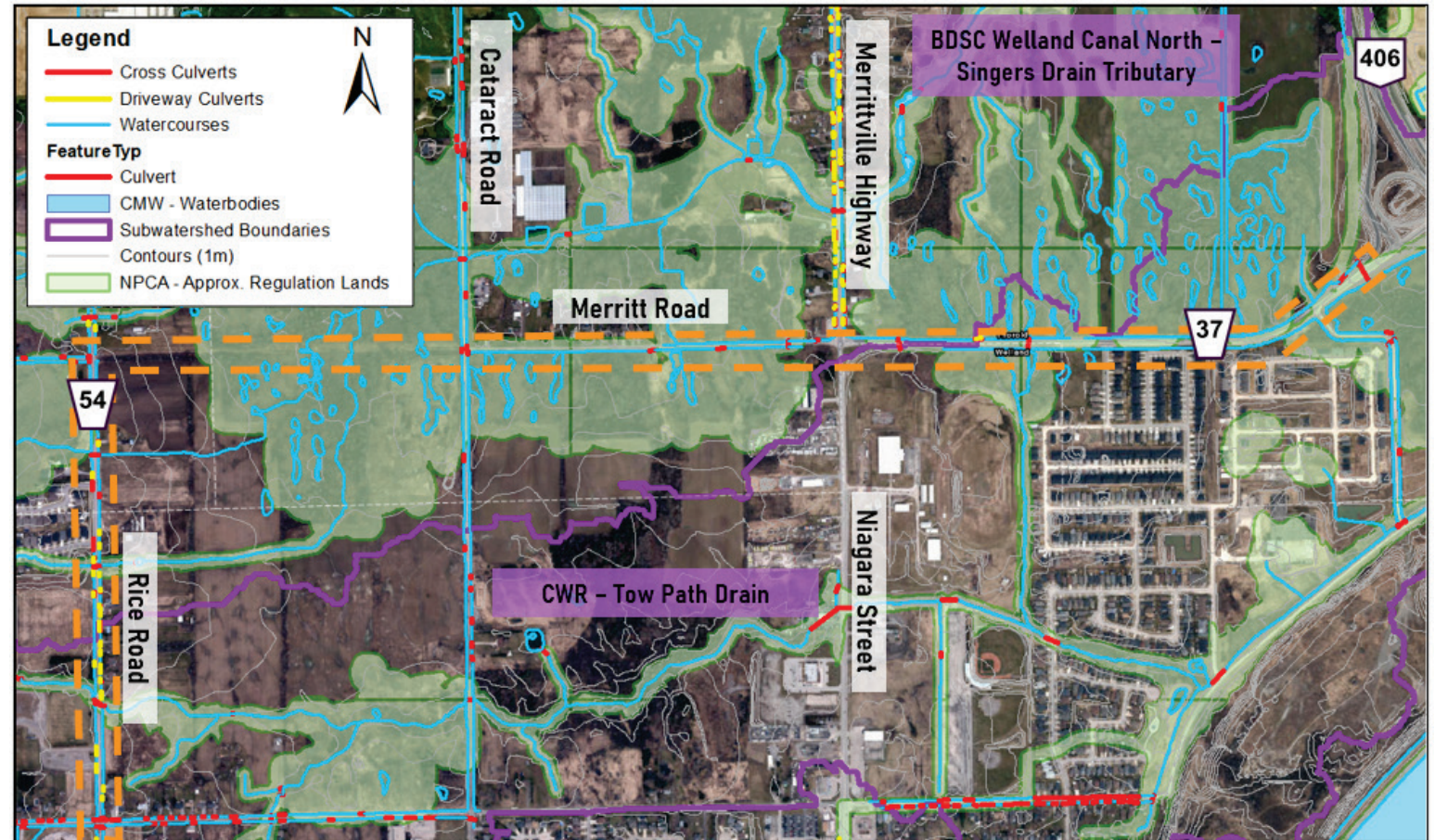


Stormwater Management Assessment

The Study Area is located within two (2) Subwatersheds:

- Beaverdams Shriners Creek (BDSC) Welland Canal North - Singers Drain Tributary
- Central Welland River (CWR) - Tow Path Drain

A **Stormwater Management Assessment** will be completed to develop an understanding of the existing drainage conditions using hydrologic / hydraulic modelling. The Stormwater Management Report will propose stormwater management measures for the subject road segments.

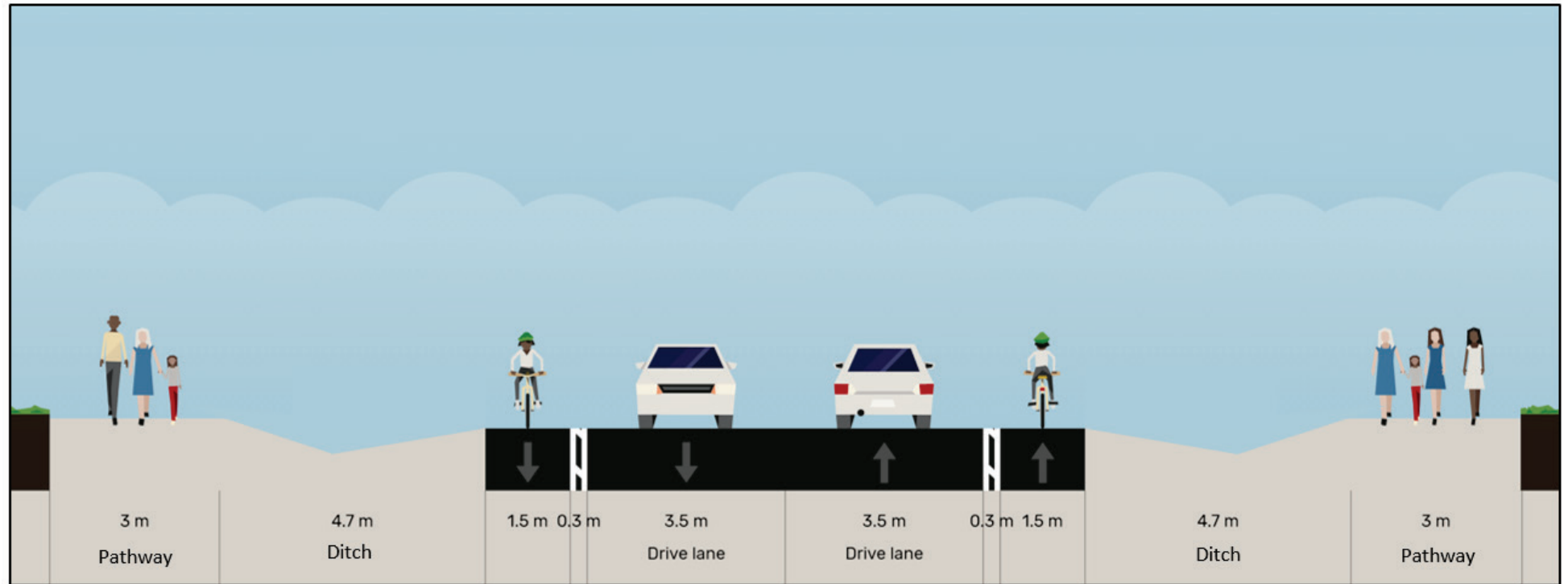


Segment 1 – Possible Cross-section (Merritt Road) – Rural Scenic

Based on the Niagara Region's Complete Streets Design Guidelines (2017) a possible cross-section for this segment would include the following Rural Scenic elements with a **20.0-26.0 metre** right of way width:

- Two lanes of vehicle traffic
- Paved shoulder for bicyclists on each side of roadway with a rumble strip*
- Pathway on one or both sides (subject to placement of utilities)

* Guidance in the new Complete Street Design Manual (currently underway) is to separate bicycle lanes from the vehicular traffic lanes.

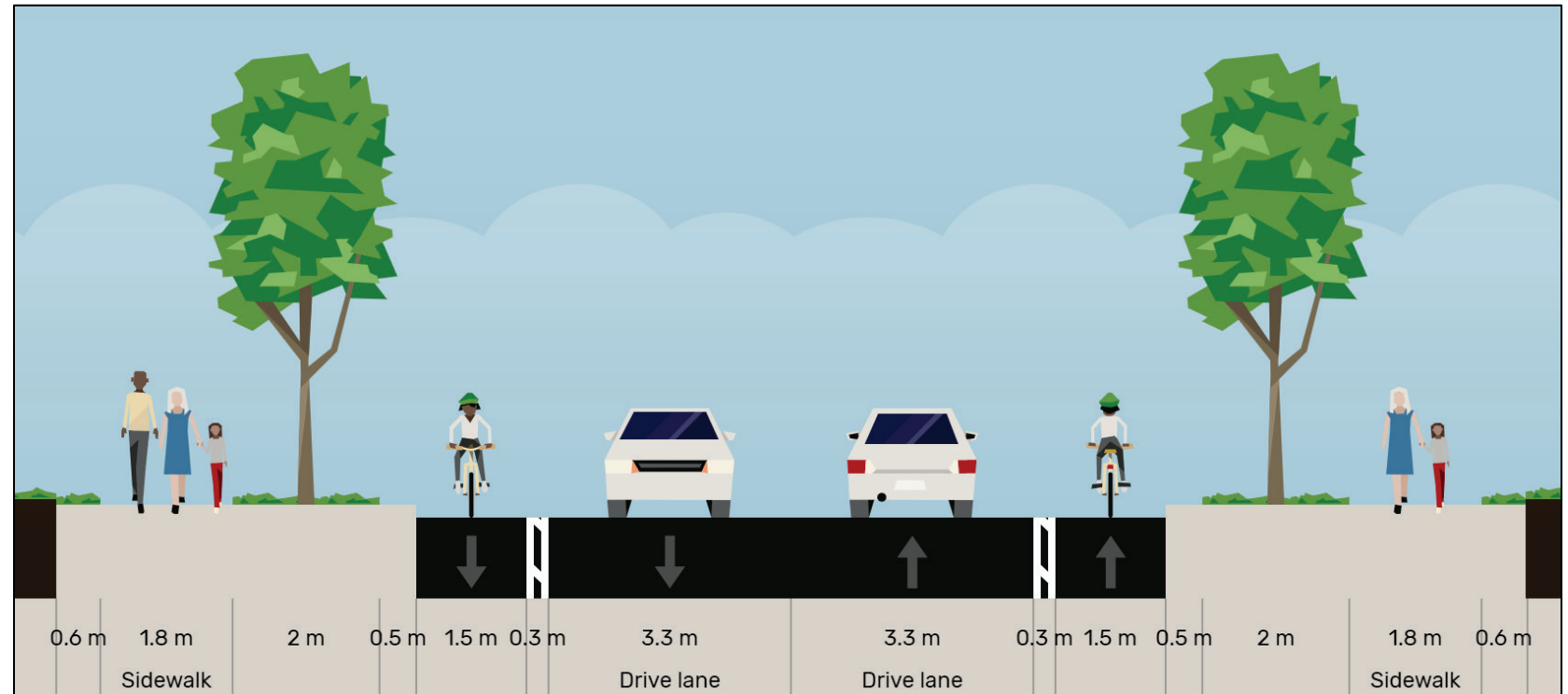


Segment 2 – Possible Cross-section (Merritt Road) – Urban General (Narrow)

Based on the Niagara Region's Complete Streets Design Guidelines (2017) a possible cross-section for this segment would include the following Urban General (Narrow) elements with a **20.0-26.0 metre** right of way width:

- Two lanes of vehicle traffic
- Bicycle lanes on each side of roadway with painted buffer*
- Separated pedestrian sidewalks on each side (subject to environmental constraints/placement of utilities)

* Guidance in the new Complete Street Design Manual (currently underway) is to separate bicycle lanes from the vehicular traffic lanes.

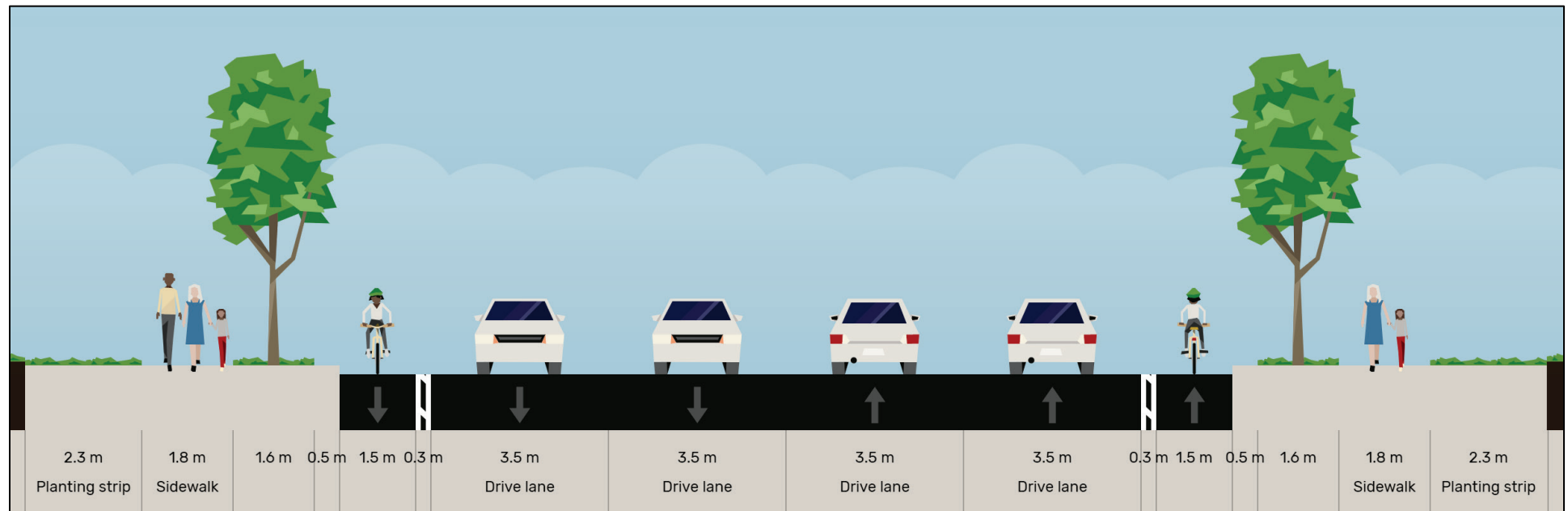


Segment 3 – Possible Cross-section (Merritt Road) – Urban General (Wide)

Based on the Niagara Region's Complete Streets Design Guidelines (2017) a possible cross-section for this segment would include the following Urban General (Wide) elements with a **26.0-36.0 metre** right of way width:

- A total of four travel lanes
- Bicycle lanes on both sides or a cycle track on the south side only (not shown)*
- Separated pedestrian sidewalks on both sides or on the south side only

* Guidance in the new Complete Street Design Manual (currently underway) is to separate bicycle lanes from the vehicular traffic lanes.

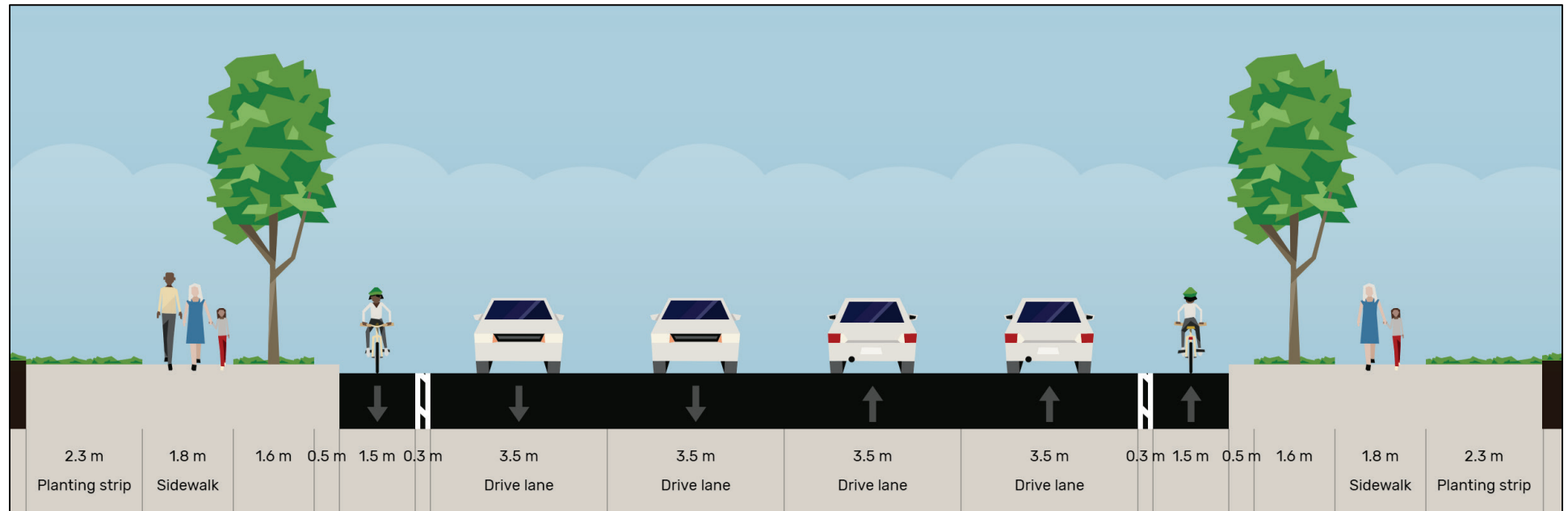


Segment 4 – Possible Cross-section (Rice Road) – Urban General (Wide)

Based on the Niagara Region's Complete Streets Design Guidelines (2017) a possible cross-section for this segment would include the following Urban General (Wide) elements with a **26.0-36.0 metre** right of way width:

- A total of four travel lanes
- Bicycle lanes on both sides*
- Separated pedestrian sidewalks on both sides

* Guidance in the new Complete Street Design Manual (currently underway) is to separate bicycle lanes from the vehicular traffic lanes.



Next Steps



Following this Public Information Centre, the Study Team will complete the following:

- Develop a PIC Summary to document results of this PIC. The Summary Report will be posted on the project webpage.
- Continue to complete technical studies to collect existing condition information for natural, socio-economic and cultural environment.
- Develop and evaluate alternative design concepts for the road improvements and identify a preliminary preferred design concepts using the Complete Streets approach
- Host PIC #3 to present the evaluation of alternatives process and the preliminary preferred solution



Questions?

Your feedback will be important to us. Your comments will be reviewed and considered, as the Study progresses. To submit questions/comments/suggestions, please use the online comment form available on the project webpage or contact one of the following Study Team Members:

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