



highway401cobourgcoborne.ca

Highway 401

Nagle Road Interchange

Planning, Preliminary Design, and Class
Environmental Assessment Study

GWP 4059-17-00





sign-in



chat
with the project team



accessibility
Let us know how
we can help



comment
Take a comment sheet
When you're done, drop it
in the comment box

Welcome to

Public Information Centre 2

January 18, 2023

This is the second Public Information Centre for the Highway 401
Nagle Road Interchange Study



The purpose of this PIC is to present
and gather your feedback on the :

- Study background and information presented to date
- Evaluation of interchange alternatives
- Preliminary design for the Preferred Plan
- Potential environmental impacts and proposed mitigation measures



About the Project

The Ontario Ministry of Transportation (MTO) and the Town of Cobourg have retained Stantec Consulting Ltd. to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study on Highway 401 for a new interchange near Nagle Road in the Town of Cobourg and the Township of Hamilton. The purpose of the study is to identify a Recommended Plan that addresses future transportation and planning needs in the study area. The interchange study is the Town of Cobourg's initiative.

As part of the interchange study, the existing Nagle Road bridge is also being assessed. The Nagle Road bridge was constructed in 1959. It is a concrete structure and carries two lanes of traffic over Highway 401. Due to its age, the bridge is approaching the end of its planned service life and will need to be rehabilitated or replaced. Ultimately, the bridge will need to accommodate the future Highway 401 eight lane footprint and a new possible interchange (depending on the preferred plan selected).

This study will include reviewing existing conditions, developing and evaluating interchange alternatives, identifying a preferred plan, and developing environmental protection/mitigation measures. At the completion of the study, a recommended plan will be confirmed and designated (i.e. protected).

Environmental Assessment Process

This study is being carried out under the requirements of the Class Environmental Assessment for Provincial Transportation Facilities (2000), which has been approved under the Ontario Environmental Assessment Act for provincial transportation projects of a defined scope and magnitude.

The MTO Class EA process is an approved process for highway planning, design, and construction projects. The study is following a Group 'B' process which is completed for major improvements to existing provincial transportation facilities.

At the end of the study, a Transportation Environmental Study Report (TESR) will be prepared and made available for public comment.

Class Environmental Assessment Process

for Group 'B' Projects

Ongoing Transportation Needs Assessment



Ongoing Public Consultation

Need Identified

Preliminary Design

Data collection

Review available background information and conduct field investigations as required to identify existing conditions in the study area

Generate & evaluate

Develop preliminary design alternatives to address structural needs, improve the highway safety and operations, and consider potential impacts to the existing natural, social, and cultural environment to identify a preferred plan

Select

Identify the preferred plan and mitigation measures to address potential impacts

Refine

Complete preliminary design of the preferred plan including a potential implementation strategy

Report

Document the process leading to the preferred plan

Clearance

The Class EA requirements are met and the project is cleared to proceed to detail design

Consultation during Preliminary Design



Notifications and project website



Municipal Advisory Committee Meeting 1 (November 18, 2019)



Public Information Centre 1 (September 18, 2019)



Municipal Advisory Committee Meeting 2 (April 20, 2020)



Municipal Advisory Committee Meeting 3 (December 6, 2022)



Public Information Centre 2 (January 18, 2023)

we are here

Future Stages

Detail Design



Consultation during Detail Design (Timing Unknown)

Construction



Consultation during Construction (Timing Unknown)

Public Information Centre 1—Summary

Purpose

Public Information Centre was held on September 18, 2019 to present and gather feedback on the:

- Project background and process being followed;
- Nagle Road interchange alternatives; and
- Existing study area conditions.

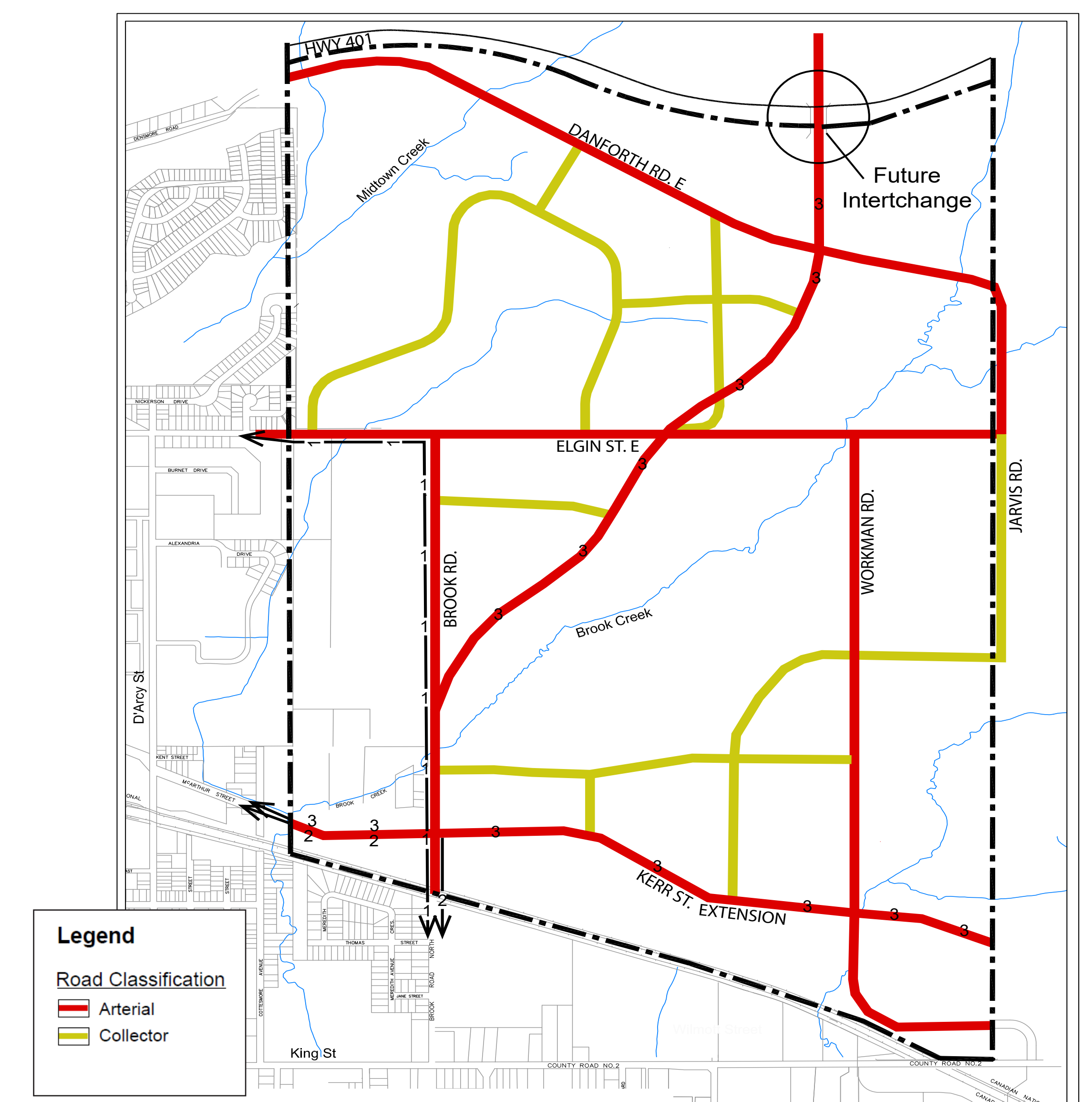
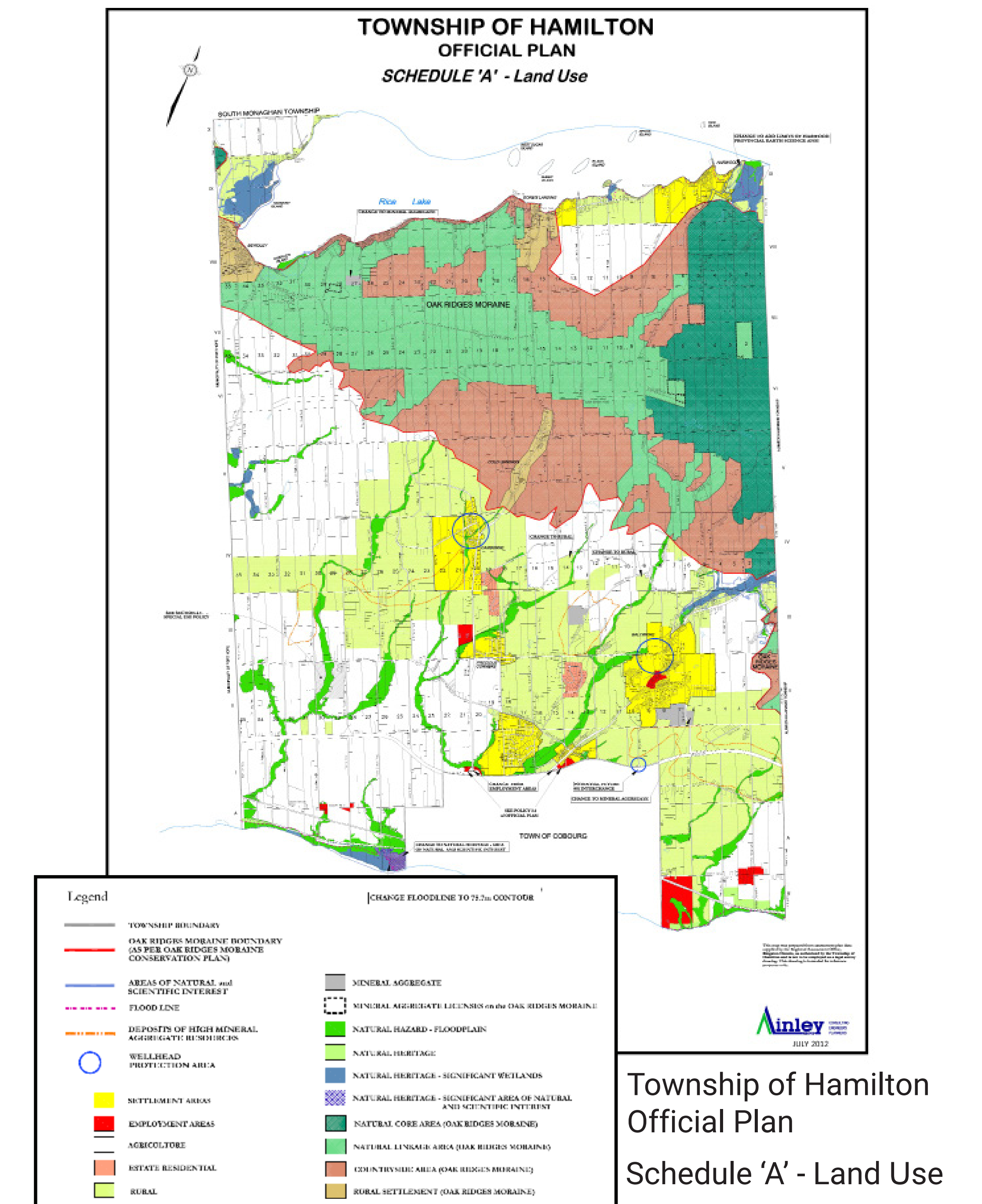
What did we hear?

- The bridge is a cycling route and should be bike friendly
- Protect agricultural land
- Avoid private property impacts
- Improve safety for school children (e.g., bus stops and shoulders)
- Accommodate pedestrians (e.g., streetlights and sidewalks)
- Avoid increases in traffic noise
- Avoid impacts to surface and groundwater
- Potential increases in traffic and/or large trucks within the residential area is a concern
- Potential impacts to fish populations and terrestrial species is a concern
- The Township of Hamilton and it's residences need to be consulted further

These comments were considered during the evaluation of alternatives.

Study Background

- The need for an interchange at Nagle Road/Highway 401 was identified within the Cobourg East Community Secondary Plan (approved by the Town of Cobourg Council in 2005).
- The proposed interchange supports the transportation objectives identified within the Town of Cobourg Official Plan.
- A 'potential future 401 interchange' was identified at Nagle Road as part of the Township of Hamilton's Official Plan.
- This is a long-range planning study. The Recommended Plan for the Nagle Road interchange will support future planning activities within the Cobourg East Community Secondary Plan Area.
- The timing of construction of the interchange ramps is dependent on the development of the Cobourg East community (approx. 20-30 years).
- The Nagle Road bridge over Highway 401 may be replaced in advance of the need for the proposed interchange.
- Upon study completion, additional studies may be carried out to confirm future municipal road network improvement needs.

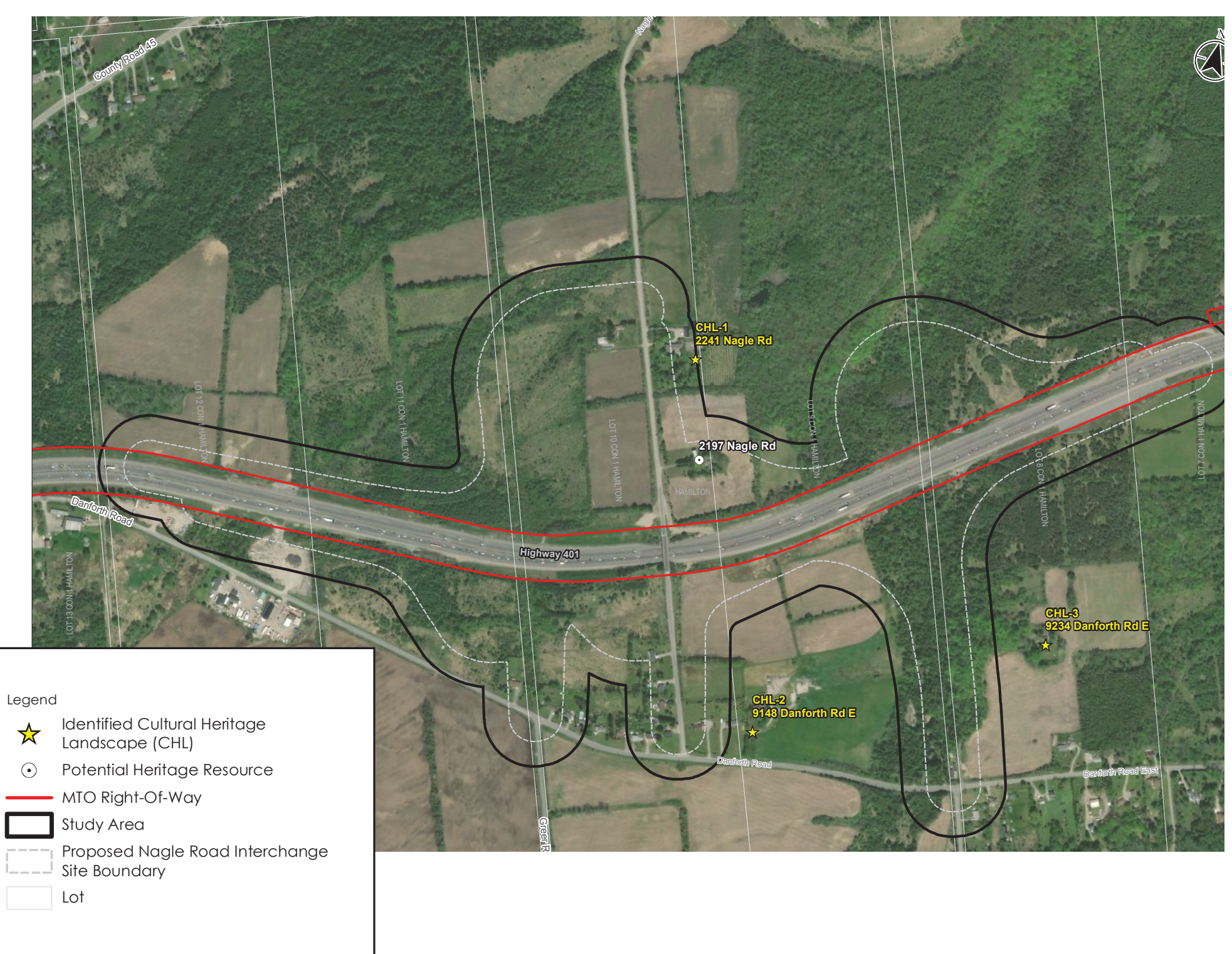


Existing Environment

Cultural and natural heritage investigations have been carried out as part of this study, the findings of which are documented within cultural heritage, archaeological and natural heritage reports, and will be documented within the Transportation Environmental Study Report.

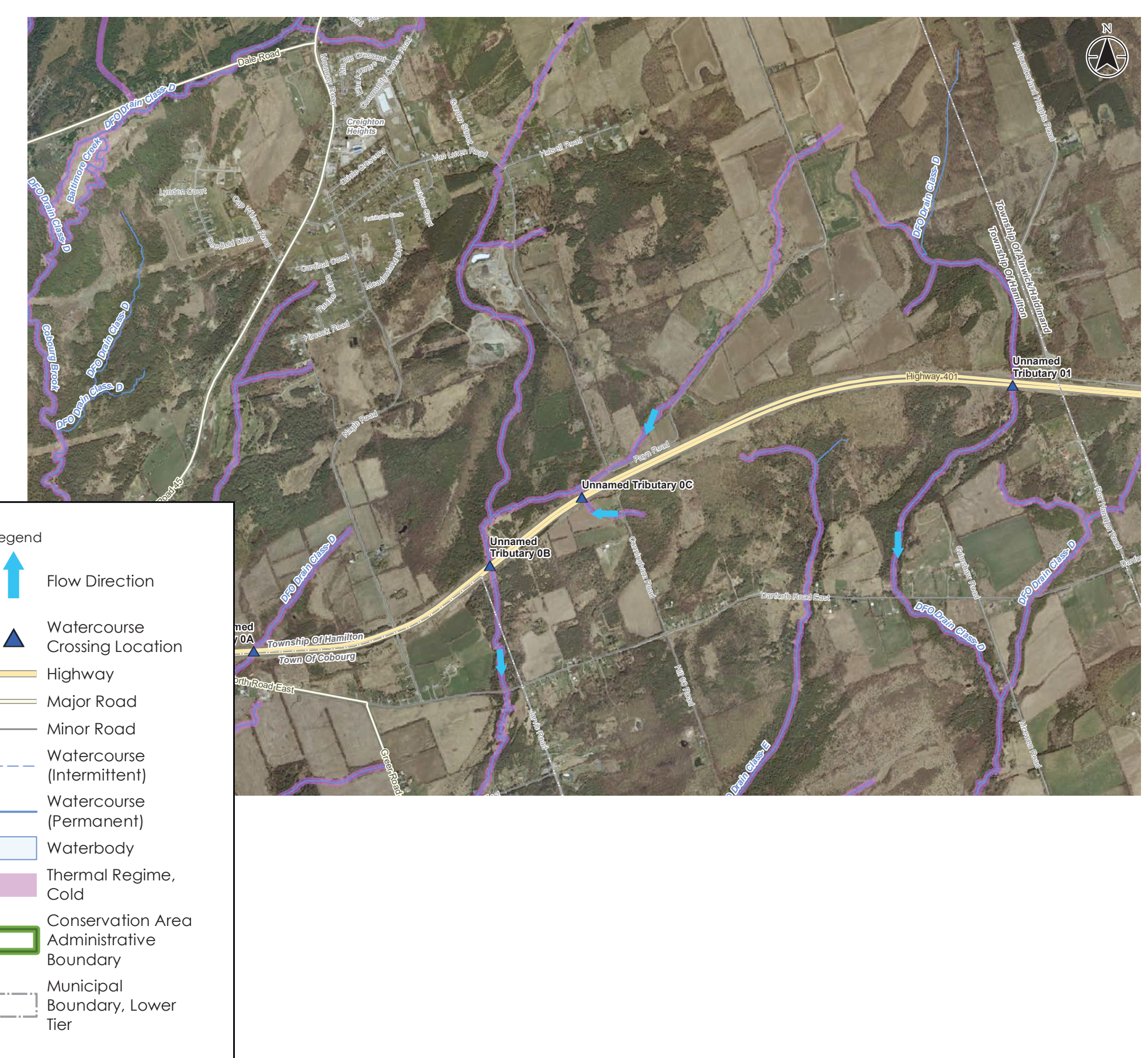
Cultural Heritage

- The potential presence of cultural heritage features within the study area was assessed in accordance with Provincial guidelines
- Construction of Highway 401 in the study area took place in the 1950s-1960s
- The existing Nagle Road bridge was constructed in the 1950s
- It is a common structure, built with typical materials, and therefore does not have any cultural heritage value or interest
- The surrounding landscape generally consists of agricultural fields, fallow fields, woodlots, and rural residences
- Four potential heritage properties are located within the study area



Natural Heritage

- Natural heritage features within the study area were characterized through field surveys and consultation with local and provincial authorities
- Significant Wildlife Habitat is present in the study area
- Terrestrial species at risk may be present in the study area
- Midtown Creek East and Brook Creek West are located within the east and west portions of the study area, respectively
- These are coldwater creeks that support fish/fish habitat
- No aquatic species at risk have been recorded in the study area



Evaluation Of Interchange Alternatives

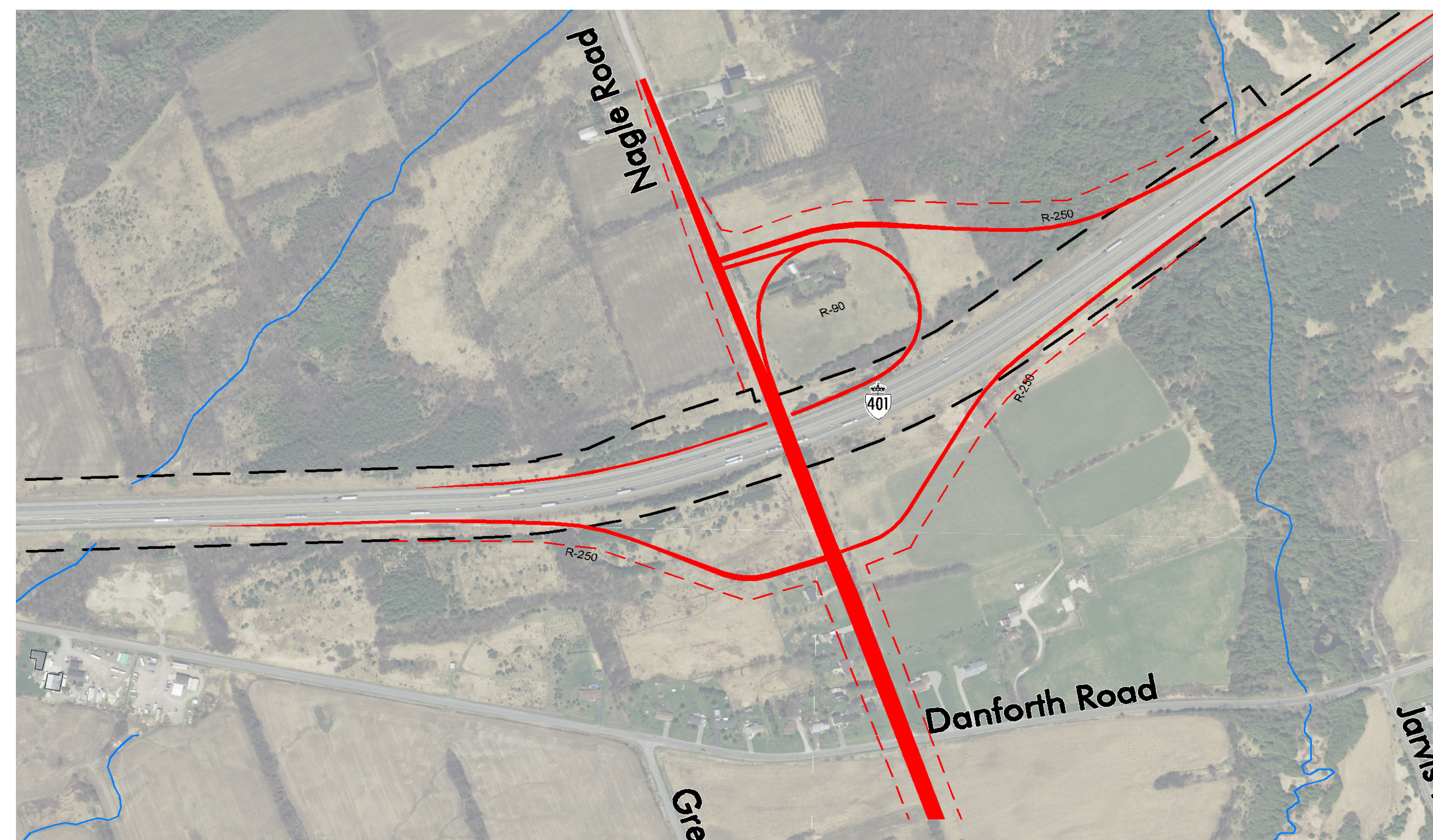
Interchange Alternatives

A Long List of 8 Interchange Alternatives were assessed and presented at PIC 1. Based on the results of screening assessment, the following Short List of Interchange Alternatives were carried forward for further evaluation:



Refinement to Short List of Interchange Alternatives:

Following PIC 1, a hybrid interchange alternative (Parclo A2/Diamond) was developed to minimize initial property impacts on the south side of the interchange and to provide implementation flexibility to accommodate the adjacent development timing. This alternative was also carried forward for more detailed evaluation.



A copy of the information presented at PIC 1 are available for review on the resource table

Evaluation criteria

Engineering

Traffic Operations

- ... consider projected future traffic from the Cobourg East Community Secondary Plan
- ... consider Level of Service (LOS) on Highway 401
- ... consider traffic flow and operations, including local access and out-of-way travel

Geometrics & Safety

- ... consider design standards for provincial highways and interchanges
- ... consider potential for collisions on Highway 401
- ... consider pedestrian and cyclists accommodations

Constructability

- ... consider construction techniques
- ... consider geotechnical and foundation conditions

Utilities

- ... consider impacts to utilities

Cost

- ... consider total cost including utility relocations and property acquisition

Community

Property

- ... consider impacts to private property

Noise & Air Quality

- ... consider noise impacts at Noise Sensitive Areas (NSAs)
- ... consider impacts to air quality

Land Use

- ... consider impacts to sensitive land uses
- ... consider existing and future development plans

Built & Cultural Heritage

- ... consider impacts to existing cultural and built heritage features within the study area

Archaeology

- ... consider impact on archaeological resources
- ... consider impacts on areas of archaeological potential

Contamination

- ... consider impact on potentially contaminated land

Environment

Terrestrial Ecosystem

- ... consider impacts on wildlife habitat
- ... consider impacts on significant trees or vegetation

Fish & Fish Habitat

- ... consider impacts to creeks and water bodies
- ... consider impacts to fish and fish habitat

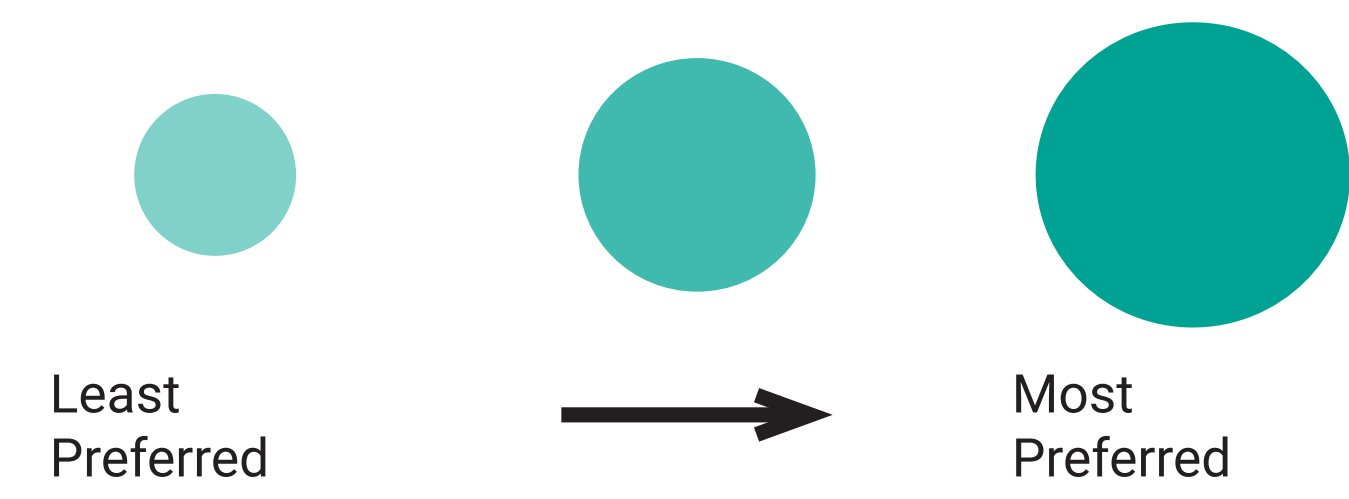
Species of Conservation Concern

- ... consider impacts to Species-at-Risk or habitat associated with Species-at-Risk

Environmentally Sensitive Areas, Designated Areas

- ... consider impacts to the Brook Creek Environmental Constraint Area
- ... consider impacts to Sourcewater Protection Areas

Evaluation Of Interchange Alternatives



Factor / Criteria	Parclo A2/ Diamond (Existing)	Parclo A4 (Existing)	Parclo AB (Existing)	Parclo A4 (East)	Parclo BA (East)
Highway Engineering <ul style="list-style-type: none"> Traffic Operations Geometrics & Safety Constructability Utilities Total Cost 	<ul style="list-style-type: none"> Performs at a good Level of Service Offers less traffic capacity than Parclo A4 Maintains existing alignment of Nagle Road Lower construction cost than most alternatives 	<ul style="list-style-type: none"> Performs at good Level of Service Offers best traffic capacity Maintains existing alignment of Nagle Road Higher construction cost than other alternatives 	<ul style="list-style-type: none"> Performs at excellent Level of Service Offers less traffic capacity than Parclo A4 and Parclo A2/Diamond Maintains existing alignment of Nagle Road Lowest construction cost 	<ul style="list-style-type: none"> Performs at excellent Level of Service Offers more traffic capacity than other alternatives Requires an alignment shift of Nagle Road Highest construction cost 	<ul style="list-style-type: none"> Performs at excellent Level of Service Offers less traffic capacity than Parclo A4 and Parclo A2/Diamond Requires an alignment shift of Nagle Road Higher construction cost than other alternatives
Social & Cultural Environment Property <ul style="list-style-type: none"> Air/Noise Cultivated Lands Cultural Heritage Archaeology Contamination 	<ul style="list-style-type: none"> Impacts smaller area of private property, and higher number of properties, than Parclo AB (Existing) and Parclo BA (East) Impacts smallest area of agricultural land Impacts smallest area of land having archaeological potential 	<ul style="list-style-type: none"> Impacts smaller area of private property, and higher number of properties, than Parclo AB (Existing) and Parclo BA (East) Impacts smaller area of agricultural land than most other alternatives Impacts smaller area of land having archaeological potential than most other alternatives 	<ul style="list-style-type: none"> Impacts greater area of private property than most other alternatives, and higher number of private properties than Parclo A4 (East) and Parclo BA (East) Impacts greater area of agricultural land than Parclo A2/Diamond (Existing) and Parclo A4 (Existing) Impacts greater area of land having archaeological potential than most other alternatives 	<ul style="list-style-type: none"> Impacts smallest area of private property, and lowest number of properties compared to other alternatives Impacts greater area of agricultural land than most other alternatives Impacts moderate area of land having archaeological potential than most other alternatives 	<ul style="list-style-type: none"> Impacts greatest area of private property, and lowest number of properties compared to other alternatives Impacts greatest area of agricultural land Impacts greatest area of land having archaeological potential
Natural Environment <ul style="list-style-type: none"> Terrestrial Ecosystem Species of Special Concern Environmentally Sensitive Areas Fish & Fish Habitat 	<ul style="list-style-type: none"> Impacts smaller area of wildlife habitat than most other alternatives Avoids Environmental Protection Area Requires the lowest number of watercourse crossings (1) 	<ul style="list-style-type: none"> Impacts greater area of wildlife habitat than most other alternatives Avoids Environmental Protection Area Requires a lower number of watercourse crossings (2) than other alternatives 	<ul style="list-style-type: none"> Impacts smallest area of wildlife habitat Impacts small area of Environmental Protection Area Requires a higher number of watercourse crossings (3) 	<ul style="list-style-type: none"> Impacts greatest area of wildlife habitat Impacts greatest area of Environmental Protection Area Requires a higher number of watercourse crossings (2) 	<ul style="list-style-type: none"> Impacts greater area of wildlife habitat than Parclo A2/Diamond (Existing) and Parclo AB (Existing) Impacts greater area of Environmental Protection Area than most other alternatives Requires the highest number of watercourse crossings (4)
Overall Summary					

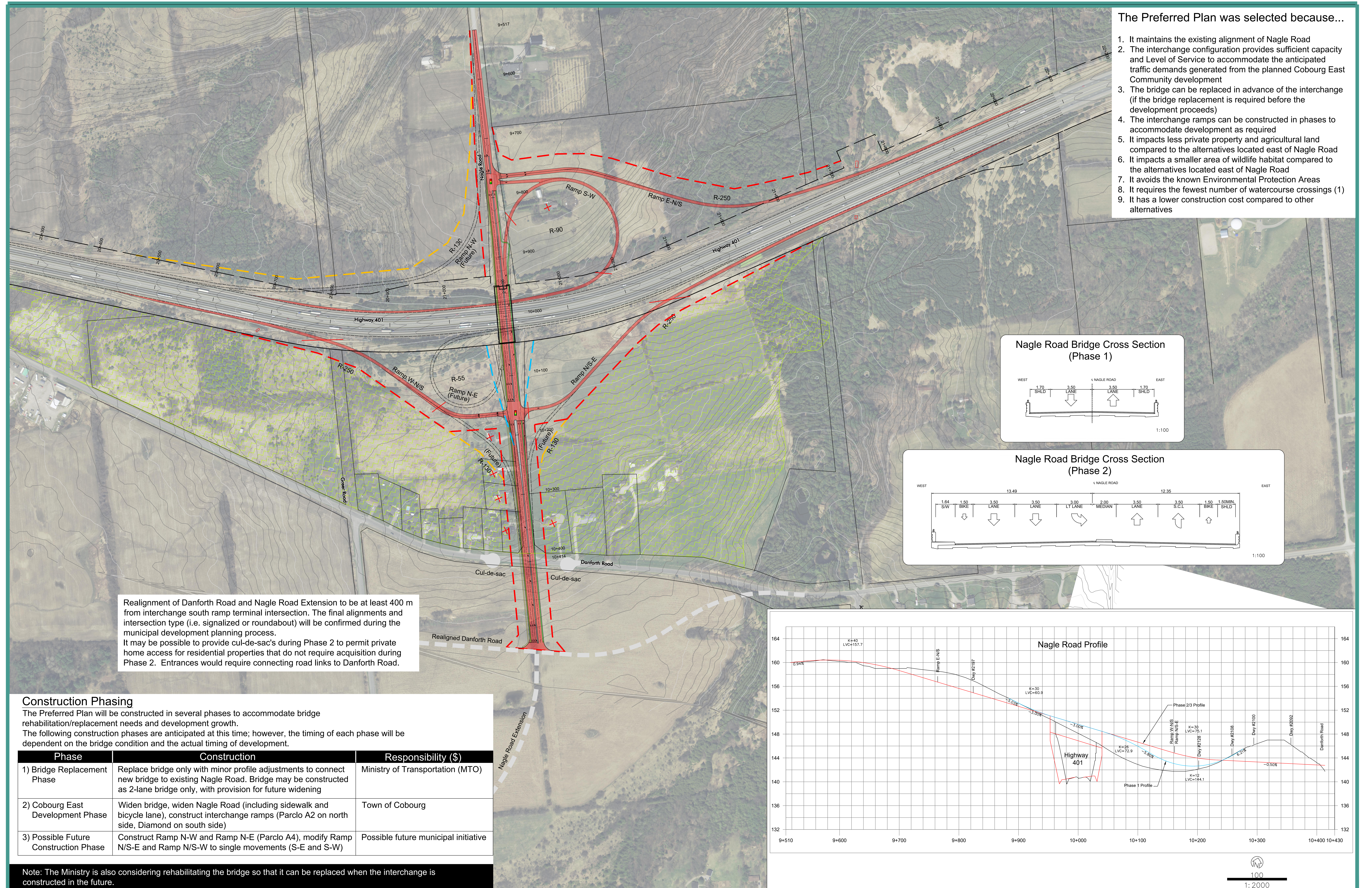
A copy of the detailed evaluation is available for review on the resource table

Nagle Road - Preferred Plan

GWP 4059-17-00

LEGEND

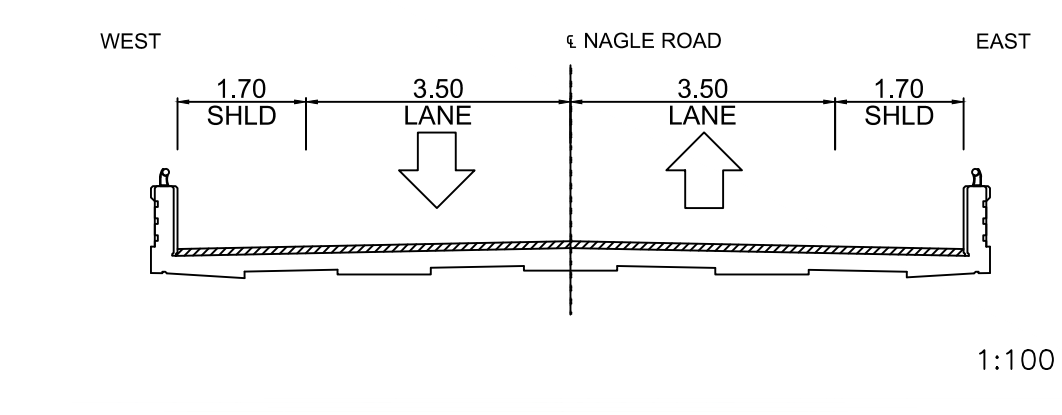
- NEW ROADWAY
- NEW BIKE LANE
- NEW SIDEWALK
- - - - - FUTURE ROADWAY
- - - - - POSSIBLE ROAD CONNECTION BY THE TOWN OF COBOURG
- - - - - PROPERTY REQUIRED - Phase 1
- - - - - PROPERTY REQUIRED - Phase 2
- - - - - PROPERTY REQUIRED - Phase 3
- X PROPERTY ACQUISITION - Phase 2
- Cobourg East Community Secondary Plan designates this area as "Business Park"



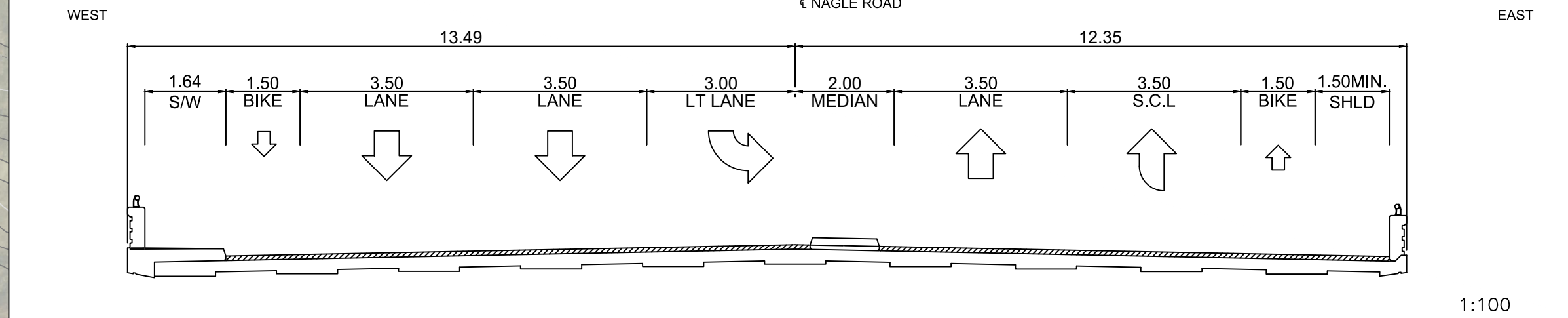
The Preferred Plan was selected because...

1. It maintains the existing alignment of Nagle Road
2. The interchange configuration provides sufficient capacity and Level of Service to accommodate the anticipated traffic demands generated from the planned Cobourg East Community development
3. The bridge can be replaced in advance of the interchange (if the bridge replacement is required before the development proceeds)
4. The interchange ramps can be constructed in phases to accommodate development as required
5. It impacts less private property and agricultural land compared to the alternatives located east of Nagle Road
6. It impacts a smaller area of wildlife habitat compared to the alternatives located east of Nagle Road
7. It avoids the known Environmental Protection Areas
8. It requires the fewest number of watercourse crossings (1)
9. It has a lower construction cost compared to other alternatives

Nagle Road Bridge Cross Section (Phase 1)



Nagle Road Bridge Cross Section (Phase 2)



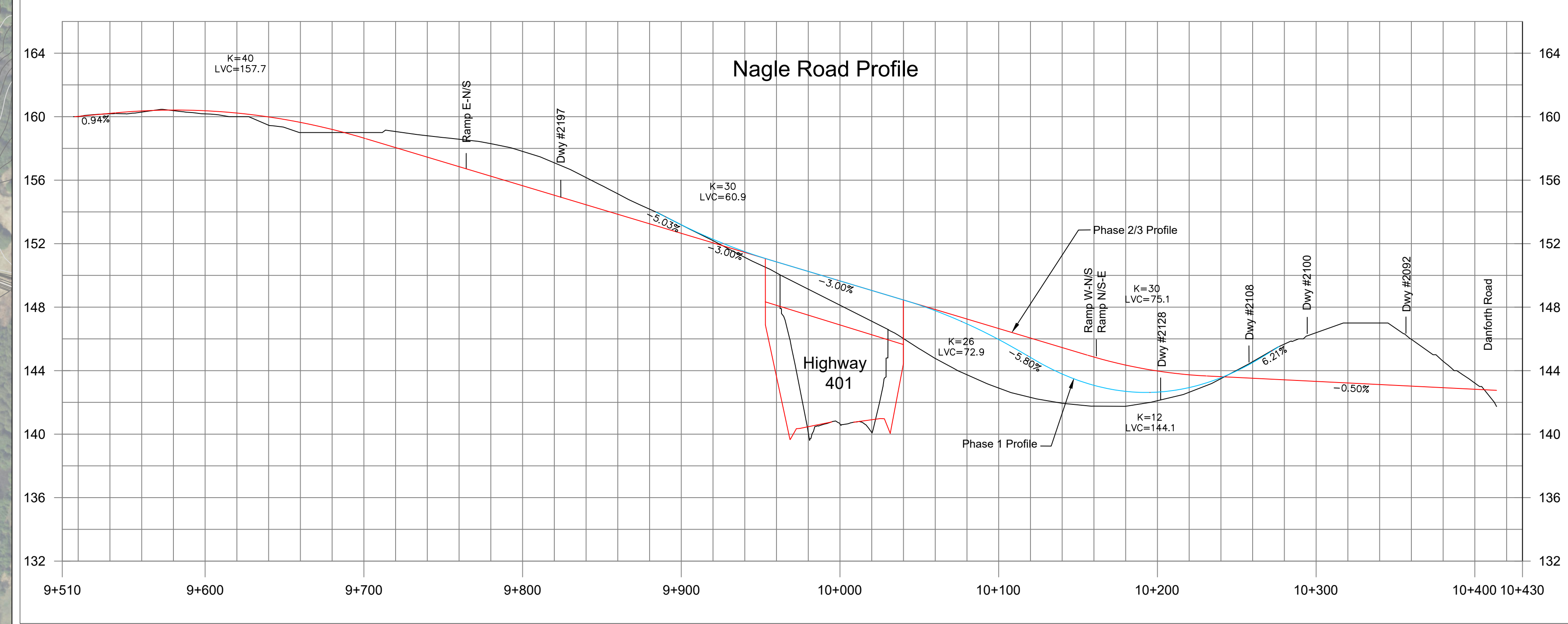
Realignment of Danforth Road and Nagle Road Extension to be at least 400 m from interchange south ramp terminal intersection. The final alignments and intersection type (i.e. signalized or roundabout) will be confirmed during the municipal development planning process. It may be possible to provide cul-de-sac's during Phase 2 to permit private home access for residential properties that do not require acquisition during Phase 2. Entrances would require connecting road links to Danforth Road.

Construction Phasing

The Preferred Plan will be constructed in several phases to accommodate bridge rehabilitation/replacement needs and development growth. The following construction phases are anticipated at this time; however, the timing of each phase will be dependent on the bridge condition and the actual timing of development.

Phase	Construction	Responsibility (\$)
1) Bridge Replacement Phase	Replace bridge only with minor profile adjustments to connect new bridge to existing Nagle Road. Bridge may be constructed as 2-lane bridge only, with provision for future widening	Ministry of Transportation (MTO)
2) Cobourg East Development Phase	Widen bridge, widen Nagle Road (including sidewalk and bicycle lane), construct interchange ramps (Parclo A2 on north side, Diamond on south side)	Town of Cobourg
3) Possible Future Construction Phase	Construct Ramp N-W and Ramp N-E (Parclo A4), modify Ramp N/S-E and Ramp N/S-W to single movements (S-E and S-W)	Possible future municipal initiative

Note: The Ministry is also considering rehabilitating the bridge so that it can be replaced when the interchange is constructed in the future.






Potential Impacts and Mitigation Measures

Environmental Factor	Proposed Mitigation Measure
Fish and Fish Habitat	Sediment and erosion control measures will be designed and installed, prior to construction.
Trees/Vegetation	Vegetation and tree removals will be minimized to the extent possible.
Wildlife/Habitat	Opportunities to enhance wildlife connectivity and reduce risks associated with the highway will be reviewed during detail design. Targeted species surveys will be carried out for species that have the potential to be present based on the availability of suitable habitat.
Cultural Heritage	A Heritage Impact Assessment will be completed to confirm impacts and identify appropriate mitigation measures, if required. Additional Archaeological Assessment activities will be carried out during detail design.
Landscape/Views	Visual screening measures will be explored during detailed design, in consultation with affected property owners. MTO will continue to consult with the Highway of Heroes Tree Campaign during detail design to explore opportunities for commemorative tree plantings in the study area.
Property	Property impacts will be confirmed during detail design, in consultation with affected property owners.
Air Quality	The project is expected to improve future traffic flow in the local road network and minimize the impact on future air quality. Measures to minimize impacts on air quality include incorporating vegetative barriers in the landscape design.
Noise	Based on the findings of the Noise Impact Assessment completed as part of this study, noise mitigation is not recommended for this project.
Traffic Operations	Advanced notification will be provided in advance of construction activities. The Staging and Detour Plans will be finalized during detail design.

Thank you for attending

Your input is important

3 ways to provide your comments:

-  Fill out a comment sheet and place it in the box
-  Email comments@highway401cobourgcoborne.ca
-  Or, mail your comments to:






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next steps:

The following will be completed following this PIC:

-  Review, consider and respond to the comments received
-  Confirm the Recommended Plan and complete the Preliminary Design
-  Confirm the potential impacts and mitigation measures
-  Prepare the Transportation Environmental Study Report (TESR)
-  Issue Notice of Study Completion and File the TESR for a 30-day comment period (2023)

We would appreciate receiving your comments by February 17, 2023



Freedom of Information and Protection of Privacy Act
Comments and information regarding this study are being collected to satisfy the requirements of the Ontario Environmental Assessment Act, and 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.



Ontario



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