Oxtongue Lake Narrows Bridge
& Oxtongue River Bridge,
Highway 60
Township of Algonquin Highlands,
County of Haliburton

WELCOME TO THE PUBLIC INFORMATION CENTRE

Replacement of Oxtongue Lake Narrows Bridge & Oxtongue River Bridge, Highway 60

(G.W.P. 93-89-00 & G.W.P. 5550-04-00)

Class Environmental Assessment (Group B)

Please Sign In

Members of the Project Team are available to discuss any questions that you may have regarding this project.

July 10th, 2008

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PURPOSE AND BACKGROUND OF THIS PUBLIC INFORMATION CENTRE

The purpose of this Public Information Centre (PIC) is to present:

- Study Background & Purpose
- Study Process
- Need for Replacement of the Oxtongue Narrows and Oxtongue River Bridges
- Existing Conditions within the Project Limits
- Bridge Replacement Alternatives
- Advantages and Disadvantages of Bridge Replacement Alternatives
- Timing of Study Activities
- What's Next

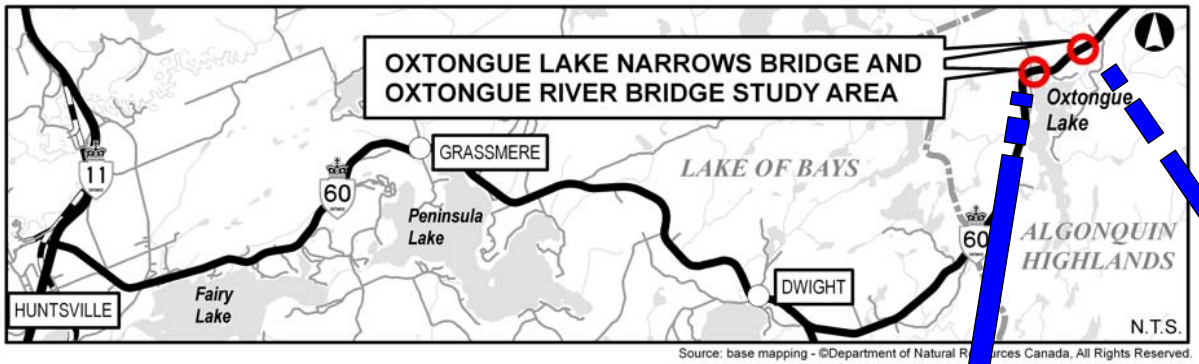
Study Background:

- URS Canada Inc. has been retained by the Ministry of Transportation (MTO) to undertake the Preliminary Design for the Highway 60 bridge over the Oxtongue Lake Narrows (G.W.P. 93-89-00) and to undertake the Preliminary Design and Detail Design for the Highway 60 bridge over the Oxtongue River (G.W.P. 5550-04-00).

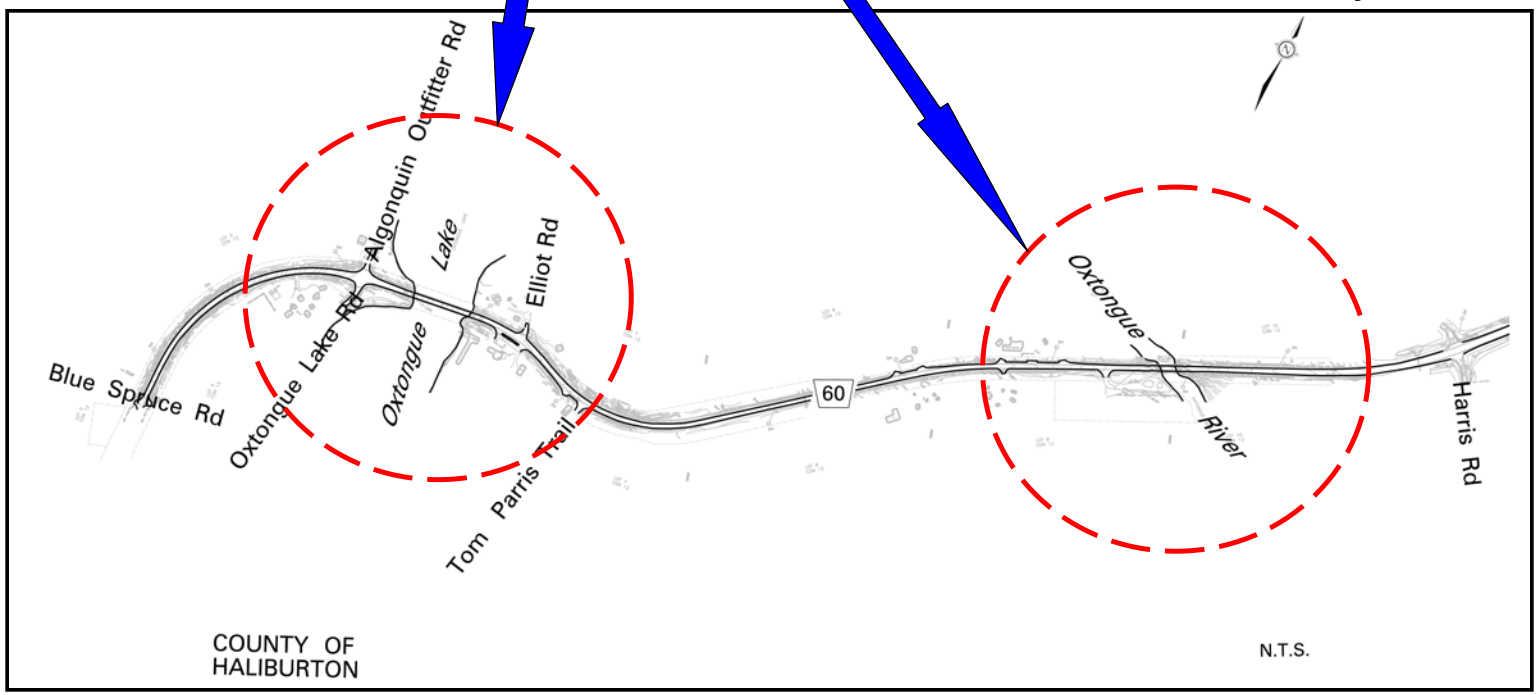
- The two Oxtongue bridges are approaching the end of their service life. This study has been initiated to examine a range of alternatives for each of the two bridges to address the need for structural improvements.

STUDY AREA – REGIONAL CONTEXT

Regional Context



Study Limits



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OVERALL STUDY PROCESS

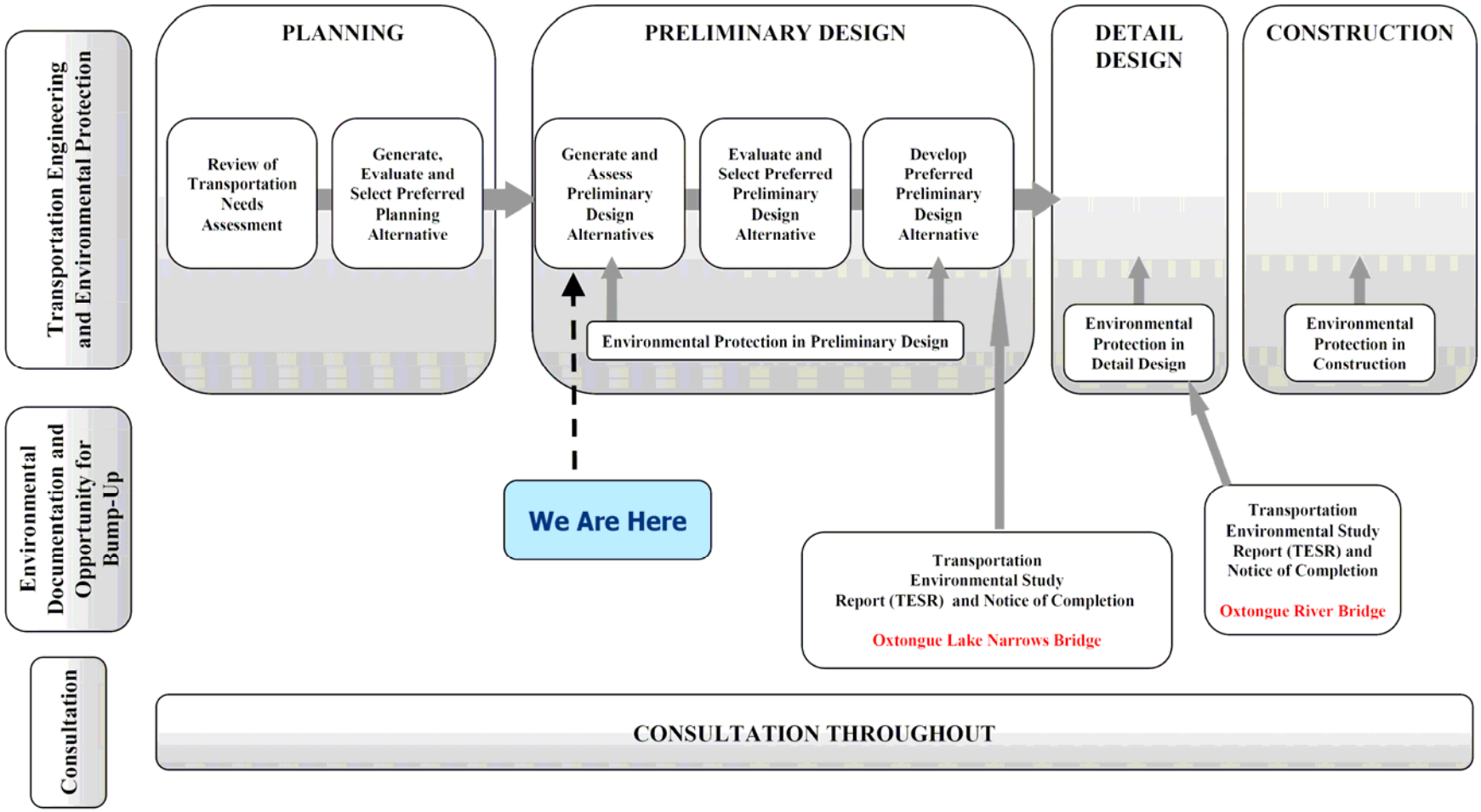
- This study is following the requirements for a Group "B" project under the *MTO Class EA for Provincial Transportation Facilities (2000)*. The Class EA defines groups of projects and activities, and the associated environmental assessment process required for each group of projects. Provided that this process is followed, projects and activities included under the Class EA do not require formal review and approval under the *Ontario Environmental Assessment Act*. The steps involved in the Class EA process are shown in the next display.

- At the end of this study, a Transportation Environmental Study Report (TESR) will be prepared to document the planning process and details of the preferred alternative for each of the bridge replacement projects. The TESRs will be made available for public and agency review at the completion of the study.

- Each TESR will also document the following:
  - **The need for bridge replacement**
  - **The generation, assessment and evaluation of alternatives considered**
  - **The recommended plan**
  - **A summary of environmental issues and proposed mitigation measures, and**
  - **A summary of consultation undertaken throughout the study.**

- Each TESR will be placed on the public record and will be available for public review and comment for a period of 30-days.

OVERVIEW OF THE CLASS EA PROCESS FOR GROUP 'B' PROJECTS



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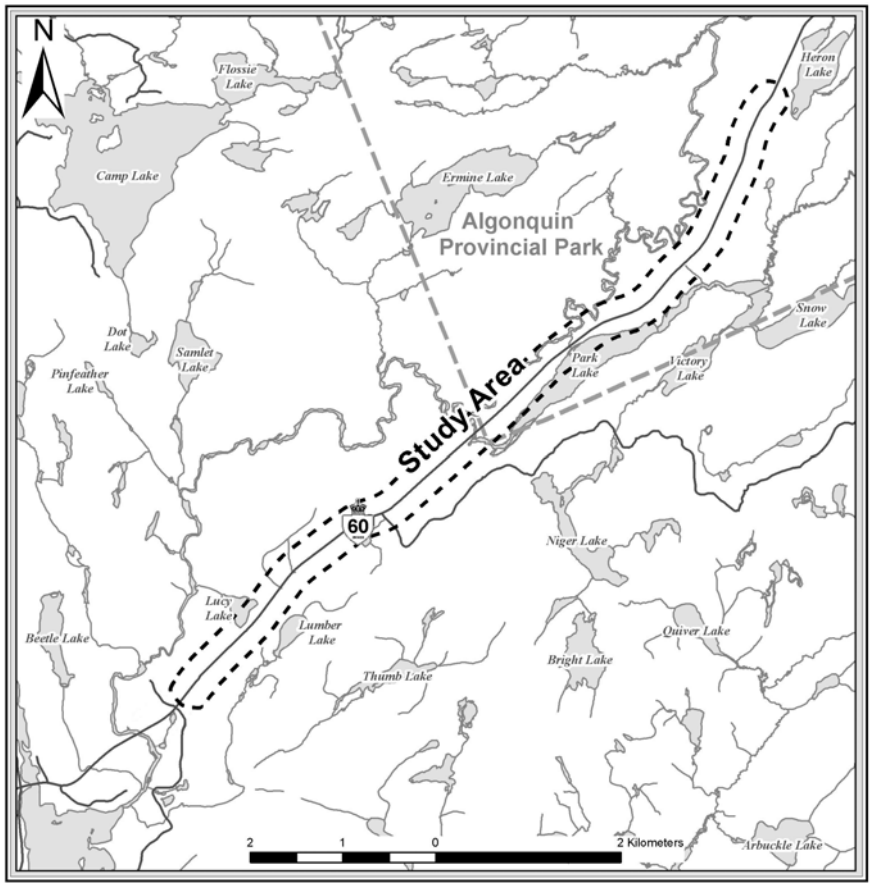
RELATED STUDIES

The Ministry of Transportation is currently undertaking a second separate study in the Oxtongue area (east of the limits of this study):

- Highway 60, from 0.6 km East of the Oxtongue River Bridge Easterly 9.6 km to 0.4 km East of the Algonquin Park New West Gate (GWP 5552-04-00). This project will focus on resurfacing and rehabilitation of the existing pavement including drainage improvements, guide rail replacement and other safety and operational related improvements.

- This project does not include the Oxtongue River Bridge. The westerly limit of this project has been moved to just north of Harris Road.

- Earth Tech Canada Inc. is undertaking this project. Inquiries regarding this assignment should be directed to Al Rose (Consultant Project Manager, telephone 705-472-6803 or e-mail al.rose@earthtech.ca).



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NEED FOR BRIDGE REPLACEMENT

Oxtongue Lake Narrows Bridge

The need for the replacement of Oxtongue Lake Narrows Bridge is based on the following:

- The original bridge was constructed in 1962 (44 years old) and is at the end of its service life.
- Several components such as the deck, expansion joints and abutments are in poor condition.
- Concrete piers and steel piles have deteriorated below the waterline.
- Repairs to the structure are not cost effective.

Oxtongue River Bridge

The need for the replacement of Oxtongue River Bridge is based on the following:

- The bridge was constructed in 1949 (59 years old).
- The timber piles are deteriorating and are reaching the end of their service life.
- Repairs to the existing structure are not cost effective.
- Due to the age and overall condition of the bridge, the structure needs to be replaced.
- In 1997, the deck of this structure was rehabilitated. In January 2003, emergency timber pile repair was performed to correct the failure of several structural timber piles.

EXISTING CONDITIONS – OXTONGUE LAKE NARROWS

- Highway 60 is a rural collector two-lane undivided road with a design speed of 100 km/h.
- The Oxtongue Lake Narrows Bridge structure consists of 11 spans comprised of cast-in-place and steel I-beam girders.
- MNR considers Oxtongue Lake as a coldwater system which includes lake trout, lake whitefish, lake herring, white sucker, yellow perch, smallmouth bass and forage species.
- Mixed forest communities are located at the northeast and northwest quadrants.
- Within the study area there are several cottages and resorts that reside along the shoreline in close proximity to the existing bridge.

Northwest and southwest quadrants.

Northwest quadrant.

Northeast quadrant.

Southeast quadrant.

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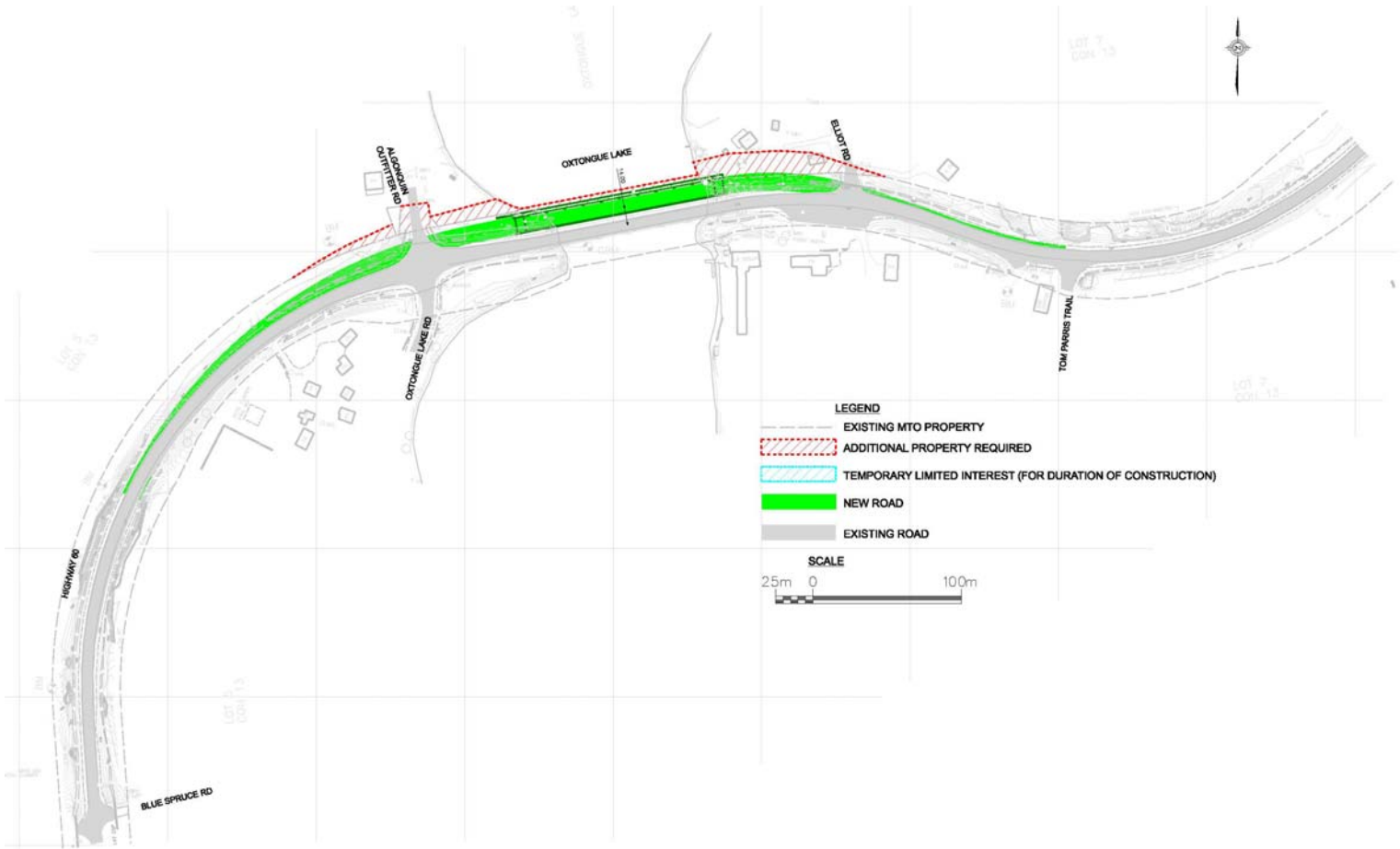
BRIDGE REPLACEMENT ALTERNATIVES – OXTONGUE LAKE NARROWS

- **Alternative 1N**: Replacement bridge on a new horizontal alignment north of the existing bridge with two-lane traffic on the existing bridge during construction. No temporary detour is required.
- **Alternative 1S:** Replacement bridge on a new horizontal alignment south of the existing bridge with two-lane traffic on the existing bridge during construction. No temporary detour is required.
- **Alternative 2N**: Replacement bridge on the existing alignment and single-lane temporary detour structure north of the existing bridge.
- **Alternative 2S:** Replacement bridge on the existing alignment and single-lane temporary detour structure south of the existing bridge.
- **Alternative 3N/S:** Replacement bridge on a new horizontal alignment north or south of the existing bridge utilizing staged construction of the new bridge. The existing bridge will be removed after construction of one lane of the new bridge and the remaining section of the new bridge will be constricted.
- **Alternative 4N/S:** Replacement bridge on a new horizontal alignment north or south of the existing bridge utilizing stage removal of the existing bridge. Part of the existing bridge will remain in place to serve as a single-lane detour; the remaining part of the bridge will be removed, and the new bridge constructed adjacent to the existing bridge.

The above alternatives are graphically illustrated on the following displays.

OXTONGUE LAKE NARROWS

ALTERNATIVE 1N – Bridge on a New Alignment to the North



Advantages

- No impacts to commercial properties.
- Provides two-lane traffic on the existing bridge during construction.
- Avoids timber piles from a former bridge.
- Low construction cost.

Disadvantages

- Impacts to fish habitat (3 sets of piers) and vegetation.
- High property impacts, displaces one (potentially two) residences.
- Increases the "S" curve east of the crossing.
- Requires the longest bridge structure.
- Requires the relocation of utilities.

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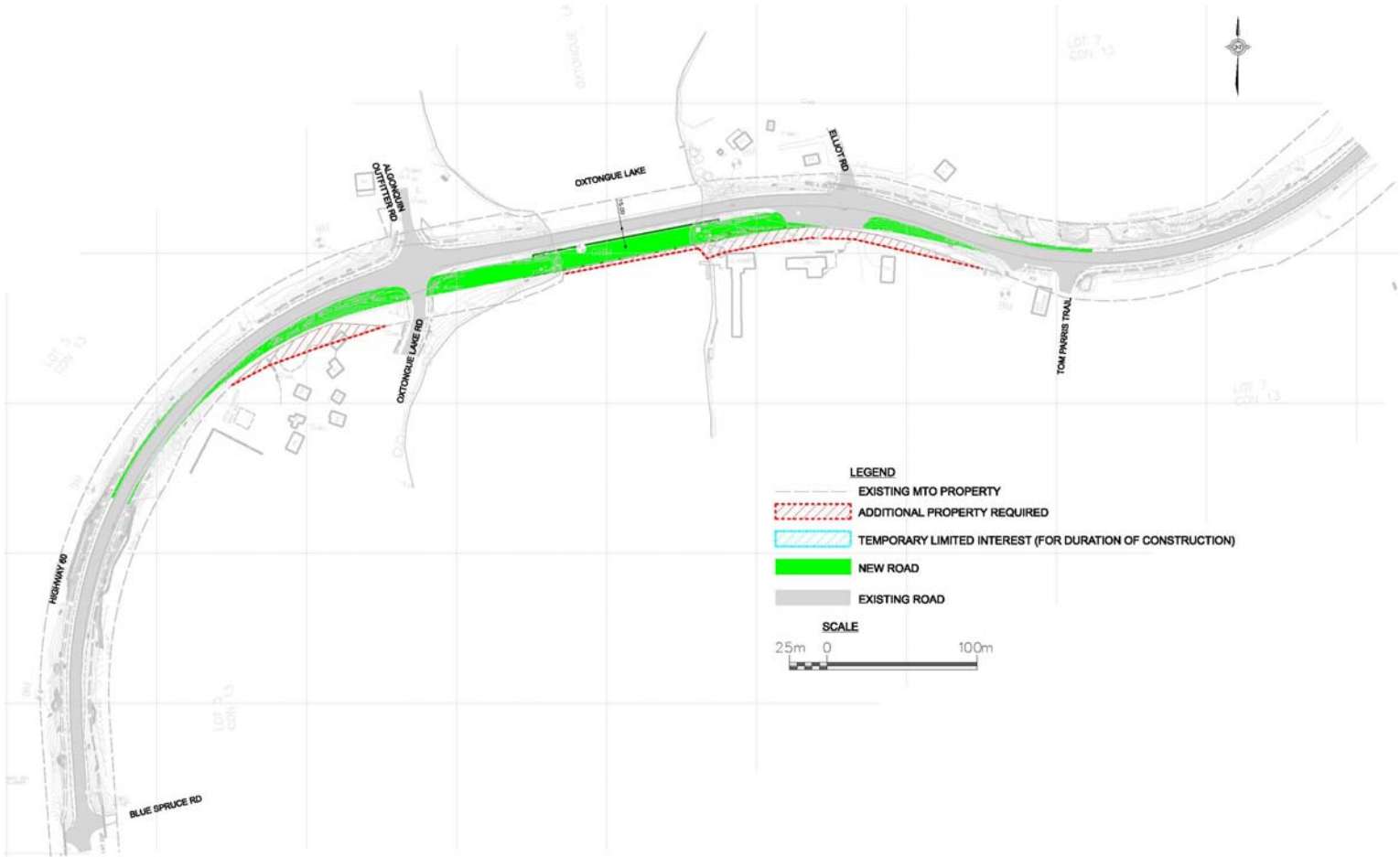
OXTONGUE LAKE NARROWS

ALTERNATIVE 1S – Bridge on a New Alignment to the South



Advantages

- Minimal impacts to vegetation.
- Provides two-lane traffic on the existing bridge during construction.
- No residential property impacts.
- Creates a gentler horizontal curve east of the crossing.
- Lowest construction cost.

Disadvantages

- Impacts to fish habitat (2 sets of piers).
- Displacement of resort buildings and commercial property impacts.
- Displaces timber piles from a former bridge.
- Creates a tighter horizontal curve west of the crossing.
- High construction complexity associated with timber piles from a former bridge.
- Requires the relocation of utilities.

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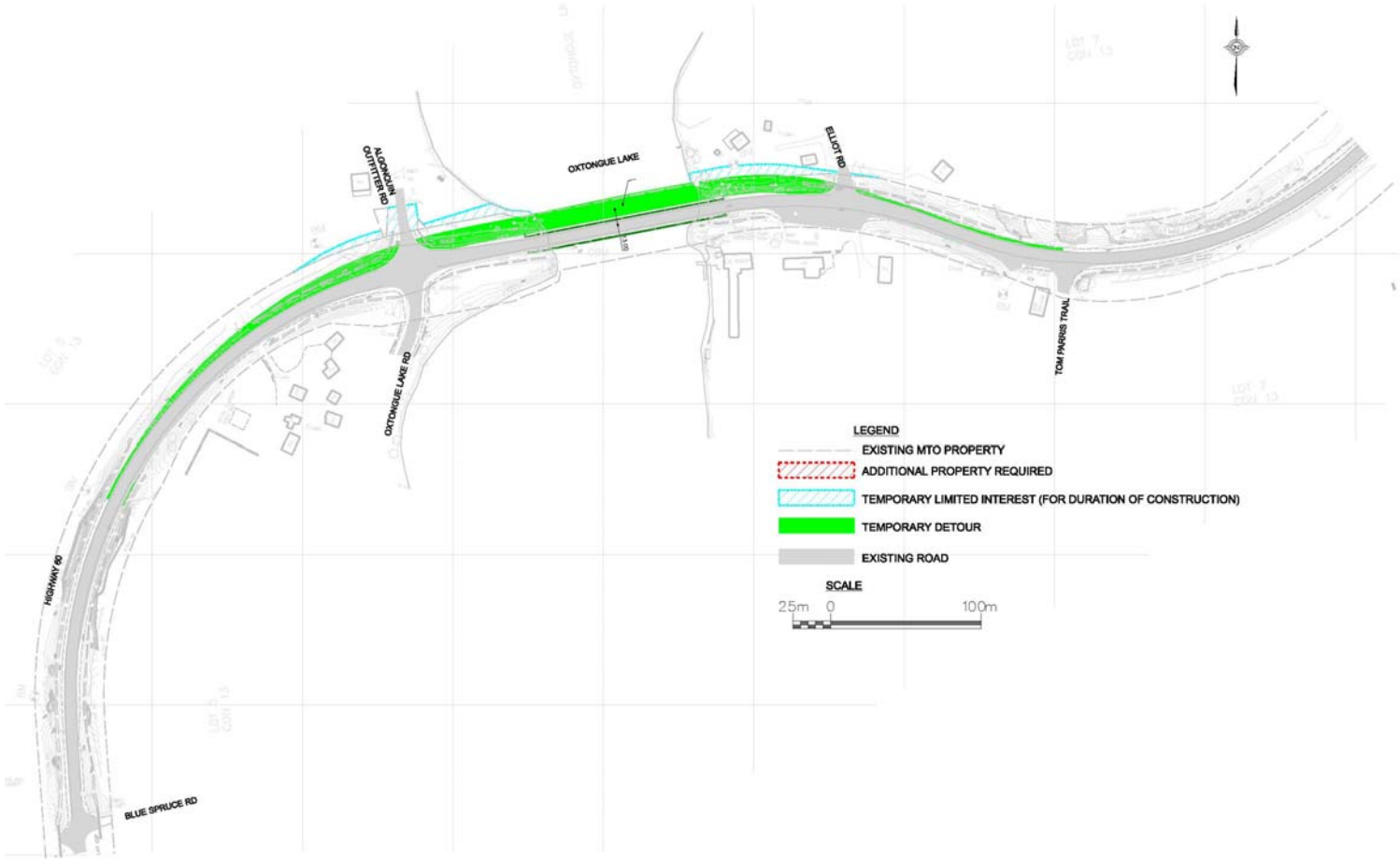
OXTONGUE LAKE NARROWS

ALTERNATIVE 2N – Bridge on the Existing Alignment with a One-lane Detour to the North



Advantages

- Maintains existing highway alignment.
- Avoids timber piles from a former bridge.

Disadvantages

- Impacts to fish habitat (2 sets of piers) and vegetation.
- Minor residential property impacts (temporary property taking required).
- Requires the relocation of utilities.
- High construction cost.

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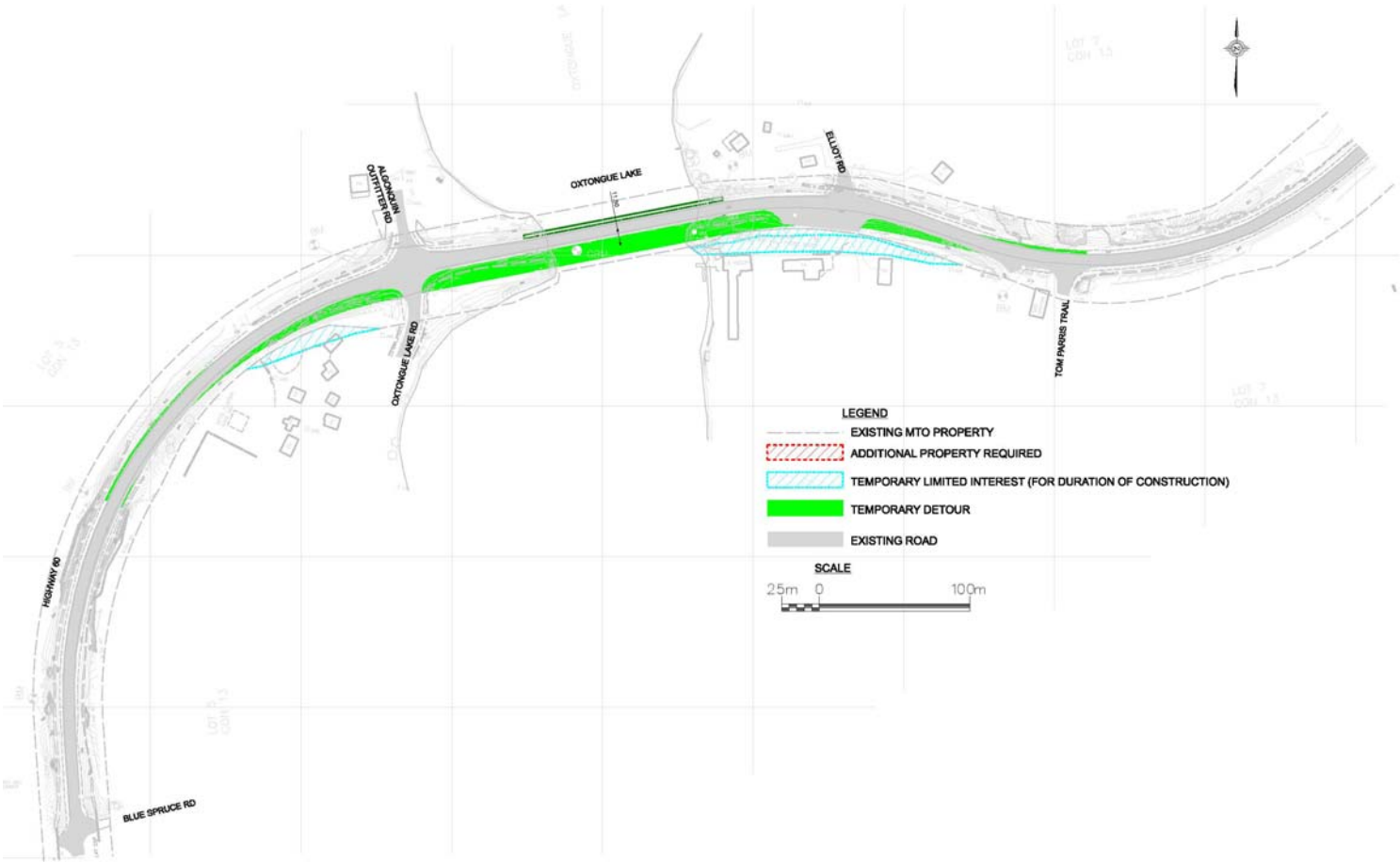
OXTONGUE LAKE NARROWS

ALTERNATIVE 2S – Bridge on the Existing Alignment with a One-lane Detour to the South



Advantages

- Minimal impacts to vegetation.
- No residential property impacts.
- Maintains existing highway alignment.
- Potentially avoids timber piles from a former bridge.

Disadvantages

- Impacts to fish habitat (2 sets of piers).
- Minor commercial property impacts (temporary property taking required).
- High construction complexity associated with timber piles from former bridge.
- Requires the relocation of utilities.
- High construction cost.

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OXTONGUE LAKE NARROWS

ALTERNATIVE 3N – Staged Construction (North Alignment)

Advantages

- No impacts to commercial properties.
- Avoids timber piles from a former bridge.

Disadvantages

- Impacts to fish habitat (2 sets of piers) and vegetation removals.
- Minor impacts to residential property.
- Increases the "S" curve east of the crossing.
- Extended construction schedule.
- Less durable structure (higher maintenance).
- High cost.

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OXTONGUE LAKE NARROWS

ALTERNATIVE 3S – Staged Construction (South Alignment)

Advantages

- No impacts to commercial properties.

Disadvantages

- Impacts to fish habitat (2 sets of piers).
- Displacement of resort buildings and commercial property impacts.
- Displaces timber piles from a former bridge.
- Creates a tighter horizontal curve west of the crossing.
- Extended construction schedule.
- Less durable structure (higher maintenance).
- Moderate construction cost.

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OXTONGUE LAKE NARROWS

ALTERNATIVE 4N – Staged Removal (North Alignment)

Advantages

- No impacts to commercial properties.
- Avoids timber piles from a former bridge.

Disadvantages

- Impacts to fish habitat (2 sets of piers).
- Minor impacts to residential property.
- Increases the "S" curve east of the crossing.

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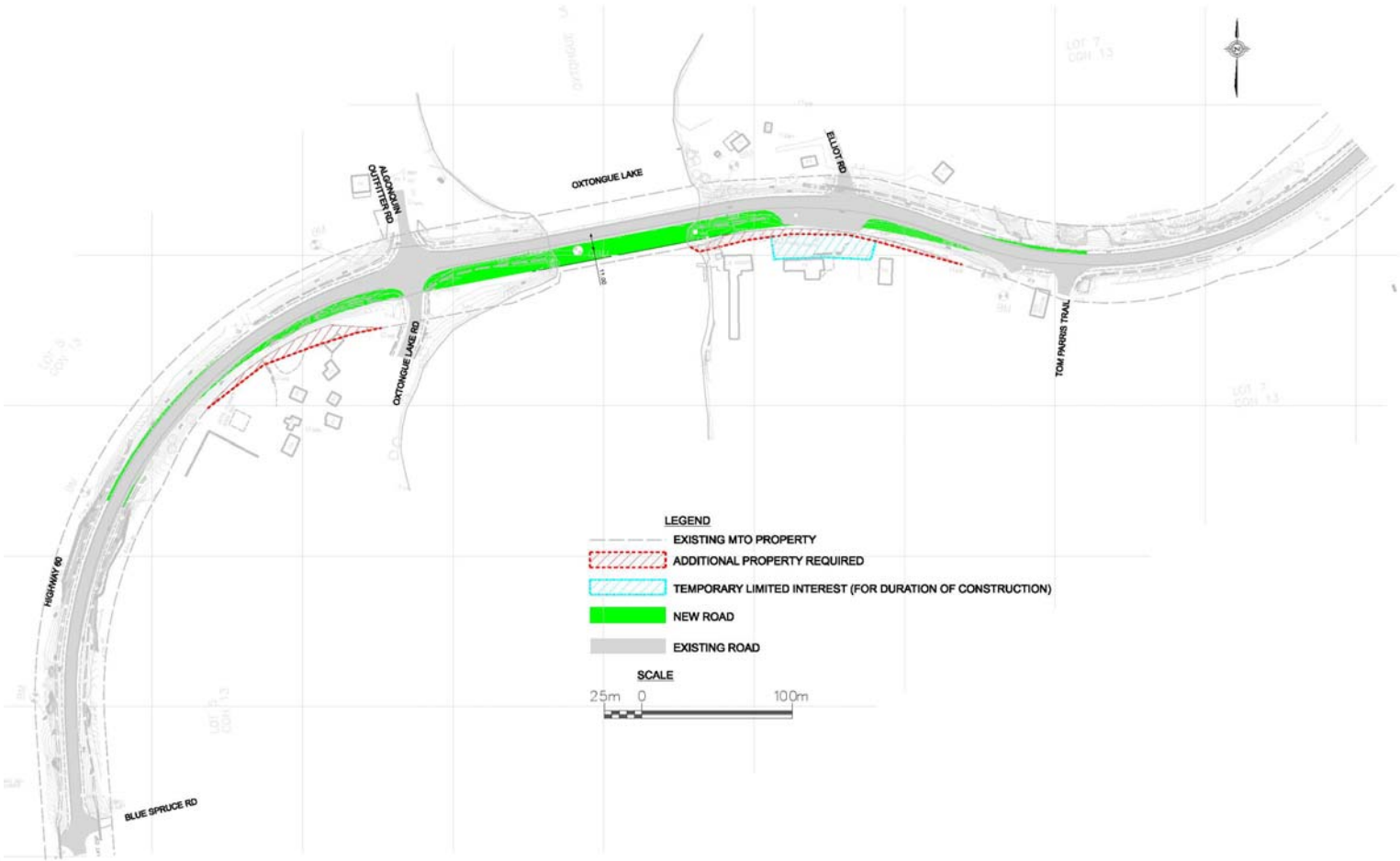
OXTONGUE LAKE NARROWS

ALTERNATIVE 4S – Staged Removal (South Alignment)



Advantages

- Minimal impacts to vegetation.
- No residential property impacts.
- Maintains the existing highway alignment.
- Low construction cost.

Disadvantages

- Impacts to fish habitat (2 sets of piers).
- Displacement of resort buildings and commercial property impacts.
- Potentially displaces timber piles from a former bridge.
- Creates a tighter horizontal curve west of the crossing.
- High construction complexity associated with timber piles from former bridge.
- Requires the relocation of utilities.

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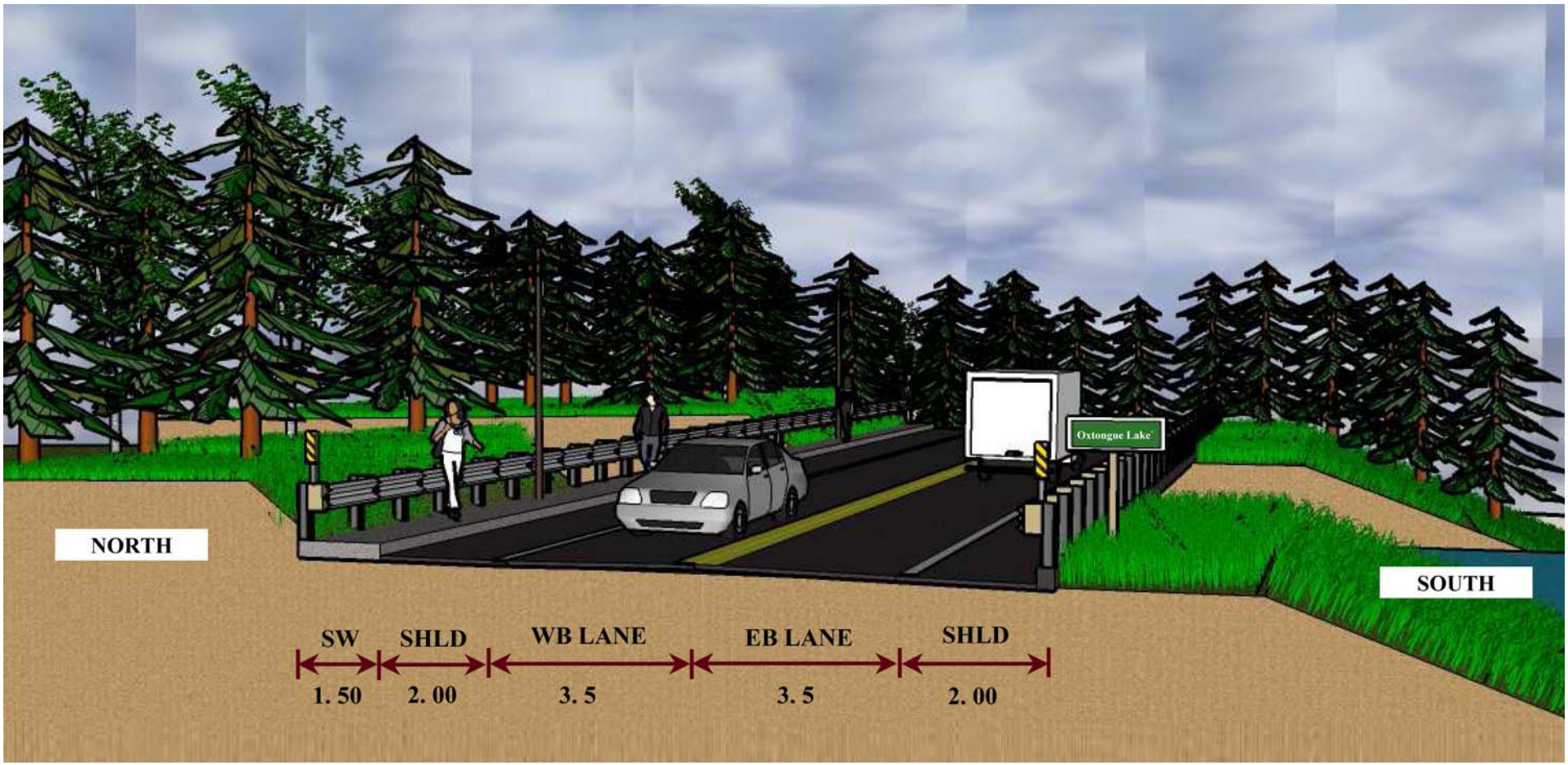
CROSS SECTION



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EXISTING CONDITIONS – OXTONGUE RIVER

- This seven span structure is constructed primarily from cast-in-place concrete, steel I-beams, timber piles and abutment walls.
- MNR considers the Oxtongue River a coldwater system which includes brook trout, white sucker, smallmouth bass and forage species.
- An MTO Parkette is located in the southwest quadrant with two picnic tables and outhouses.
- The general composition of land use within the study area is a mix of vegetation, rock outcrops and two resorts west of the bridge.
- Located on the northeast side of the Oxtongue River Bridge is Ragged Falls Provincial Park.

Northeast and west quadrants.

Southeast and west quadrants.

Bridge and southeast quadrant.

Bridge and southwest quadrant.

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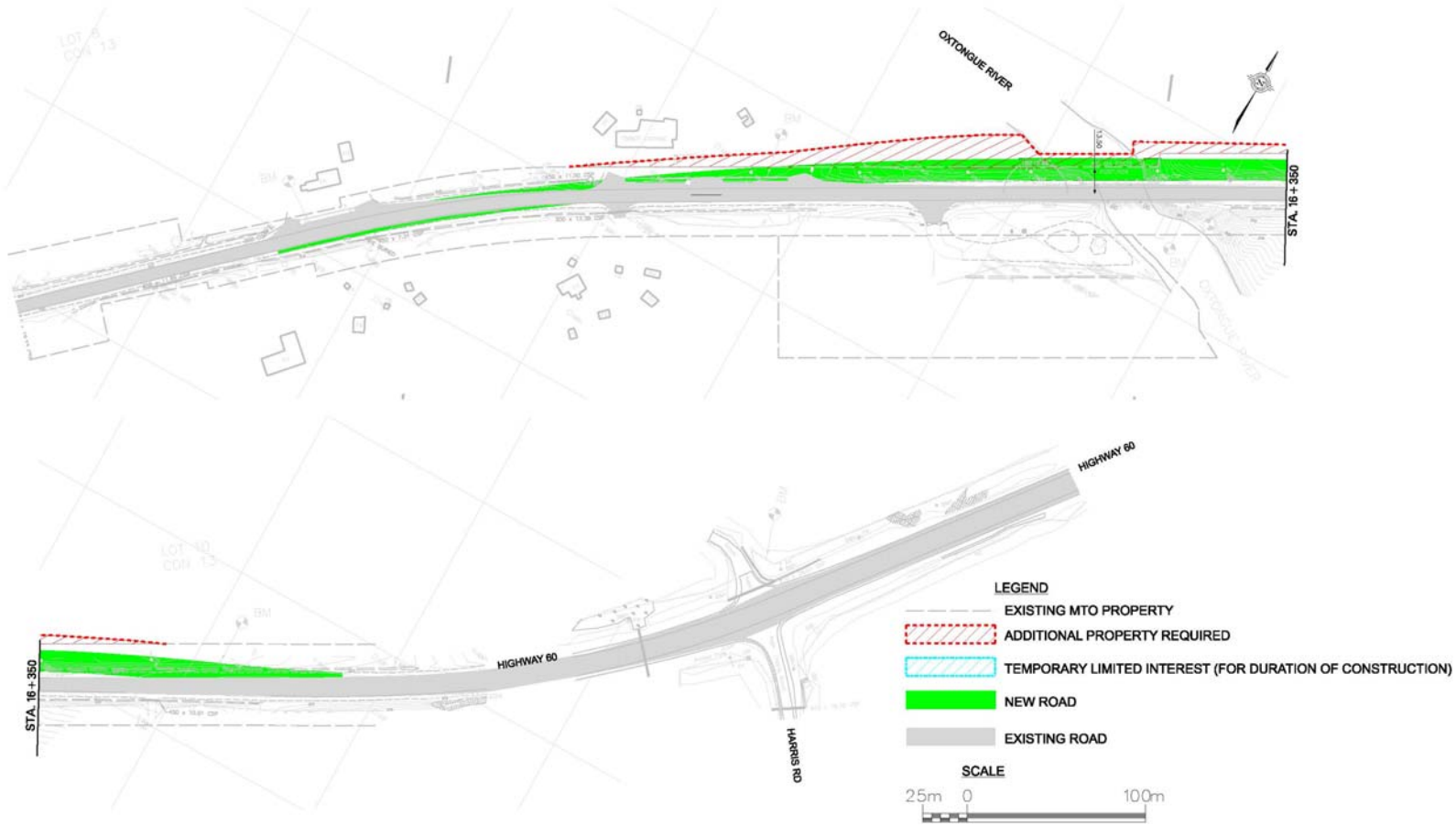
OXTONGUE RIVER
BRIDGE REPLACEMENT ALTERNATIVES

- **Alternative 1S:** Replacement structure on a new alignment south of the existing bridge with two-lane traffic on the existing bridge during construction.
- **Alternative 1N:** Replacement structure on a new alignment north of the existing bridge with two-lane traffic on the existing bridge during construction.
- **Alternative 2S:** Replacement structure on the existing alignment and single-lane temporary detour structure south of the existing bridge to carry traffic during construction.
- **Alternative 2N:** Replacement structure on the existing alignment and single-lane temporary detour structure north of the existing bridge to carry traffic during construction.
- **Alternative 3S:** Replacement structure on a new alignment south of the existing bridge utilizing staged construction of the new bridge. The existing bridge will be removed after constructing one lane of the new bridge south of the existing bridge and construction of the new bridge will be completed.
- **Alternative 3N:** Replacement structure on a new alignment north of the existing bridge utilizing staged construction of the new bridge. The existing bridge will be removed after constructing one lane of the new bridge north of the existing bridge and construction of the new bridge will be completed.

OXTONGUE RIVER

ALTERNATIVE 1N – Bridge on a New Alignment to the North



Advantages

- No impact to the Parkette.
- Provides two lanes of traffic during construction.
- Low construction cost.

Disadvantages

- Requires one permanent in-water pier (impacts to fish habitat).
- Extensive vegetation removals.
- High property impacts.
- Impacts to the south edge of Ragged Falls Provincial Park.
- Requires the relocation of overhead utilities.
- Introduces an 'S' curve in the highway alignment.

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OXTONGUE RIVER

ALTERNATIVE 1S – Bridge on a New Alignment to the South

Advantages

- Minor impacts to vegetation.
- No impacts to utilities.
- No commercial property impacts.
- No impact to Ragged Falls Provincial Park.
- Provides two lanes of traffic during construction.
- Lowest construction cost.

Disadvantages

- Requires one permanent in-water pier (impacts to fish habitat).
- Displaces a substantial portion of the Parkette.
- Minor impact to property in the southeast quadrant.
- Introduces an ‘S’ curve in the highway alignment.

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OXTONGUE RIVER:

ALTERNATIVE 2N – Bridge on the Existing Alignment with a North Detour

Advantages

- Temporary disruption of fish habitat (in-water pier for temporary detour bridge).
- No impact to the Parkette.
- Maintains the existing highway alignment.

Disadvantages

- Extensive vegetation removals.
- Commercial property required (temporary property taking).
- Impacts to the south edge of Ragged Falls Provincial Park.
- Requires the relocation of overhead utilities.
- Potential construction challenges associated with existing bridge piles.
- High construction cost.

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OXTONGUE RIVER:

ALTERNATIVE 2S – Bridge on the Existing Alignment with a South Detour

Advantages

- Temporary disruption of fish habitat (in-water pier for temporary detour bridge).
- Minor impacts to vegetation.
- Maintains the existing highway alignment.
- Minor property impacts.
- No impacts to utilities.
- No impact to Ragged Falls Provincial Park.

Disadvantages

- Potential construction challenges associated with existing bridge piles.
- Temporary impacts to the Parkette during construction.
- High construction cost.

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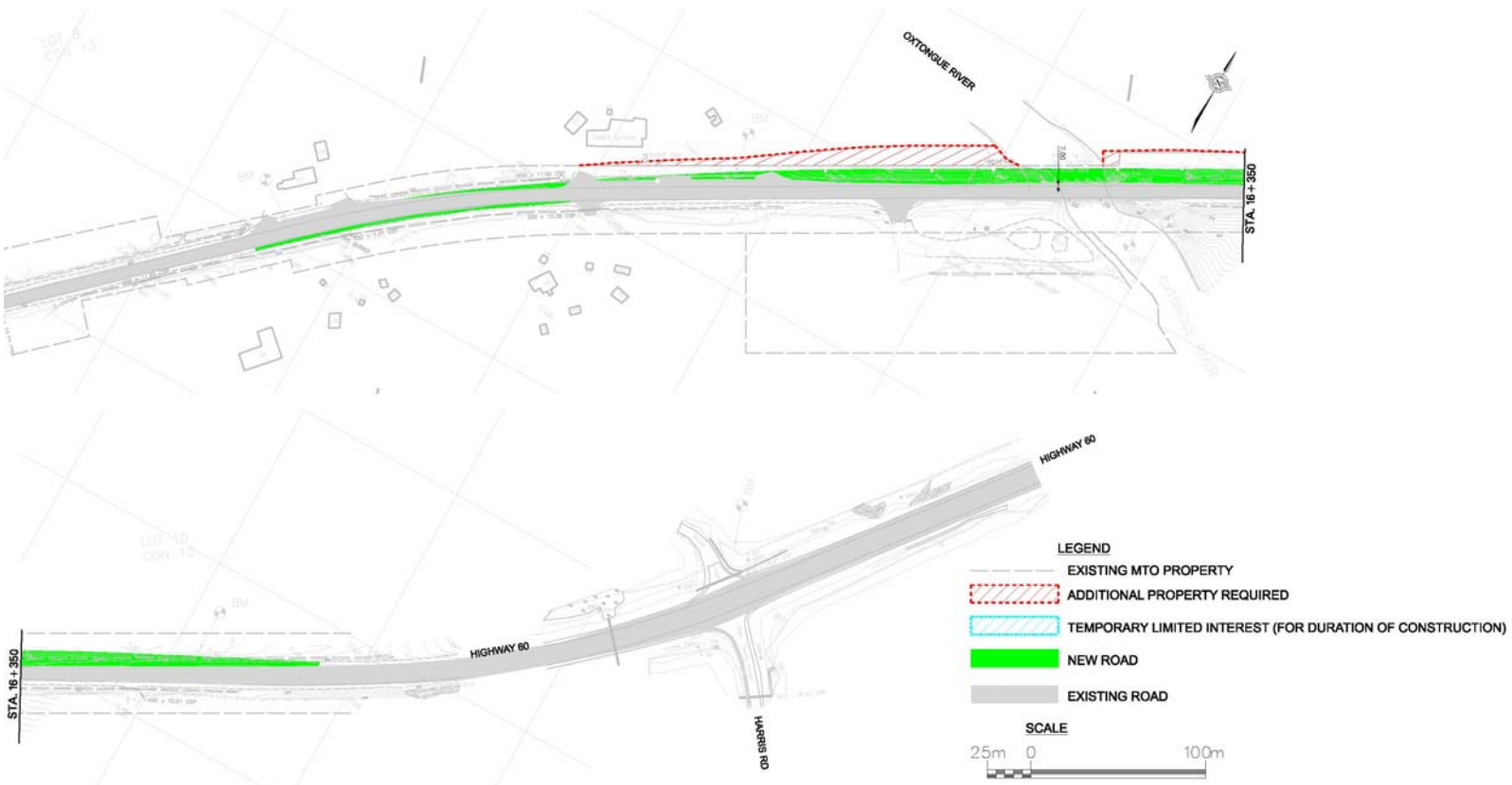
OXTONGUE RIVER:

ALTERNATIVE 3N – Staged Construction (North Alignment)



Advantages

- No impact to the Parkette.

Disadvantages

- High impacts to fish habitat (in-water backfilling).
- Moderate vegetation removals.
- Impacts to Ragged Falls Provincial Park.
- Requires the relocation of overhead utilities.
- Introduces a minor 'S' curve in the highway alignment.
- Extended construction schedule.
- Less durable structure / high maintenance requirements.
- Potential construction challenges associated with existing bridge piles.
- High construction cost.

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OXTONGUE RIVER:

ALTERNATIVE 3S – Staged Construction (South Alignment)

Advantages

- Minimal impacts to vegetation.
- No impact to Ragged Falls Provincial Park.
- No property impacts.
- Displaces a small section of the Parkette.
- No utility impacts.

Disadvantages

- High impacts to fish habitat (in-water backfilling).
- Introduces a minor 'S' curve in the highway alignment.
- Extended construction schedule.
- Less durable structure / high maintenance requirements.
- Potential construction challenges associated with existing bridge piles.

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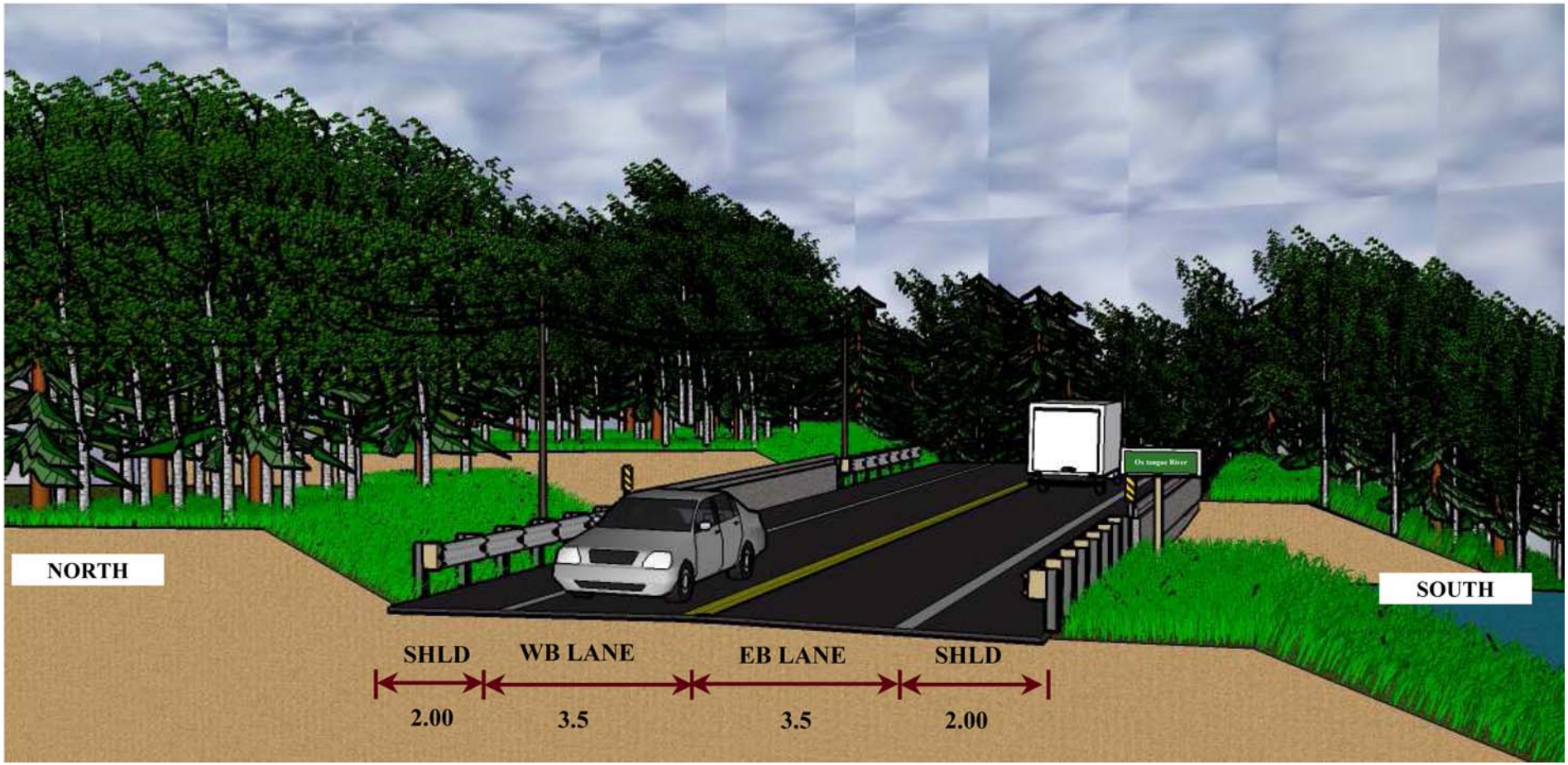
CROSS SECTION



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BRIDGE REPLACEMENT TYPES

Bridge replacement alternatives will be evaluated in two ways:

- Alternative locations for a new bridge (as presented on the previous displays)
- Alternative structure types/configurations for each bridge (refer to the following examples)

Example of a precast concrete girder bridge at Highway 17 over the Serpent River.

Example of a haunch steel girder bridge over the Frederickhouse River.

APPROACH FOR EVALUATING ALTERNATIVES

Bridge replacement alternatives will be evaluated based on the following criteria:

- A reasoned argument (trade-off) method of evaluation is used to identify the relative advantages and disadvantages of alternatives considered and select a preferred alternative.
- The following table lists the criteria to be used to assess and evaluate the bridge replacement alternatives.

FACTOR	CRITERIA
Natural Environment	• Fisheries and Aquatic Habitat • Terrestrial Habitat and Vegetation • Naturally Significant Areas • Wetlands • Groundwater
Social Environment	• Aesthetics • Community Effects / Property Impacts • Commercial Uses
Economic Environment	• Commercial /Industrial Uses • Agricultural Operations • Property Waste and Contamination
Cultural Environment	• Archaeological Resources • Built Heritage Resources
Transportation Considerations	• Highway Geometrics • Utilities • Constructability / Maintenance
Cost	• Construction Costs • Property Requirements

COMMUNITY ISSUES AND CONCERNS

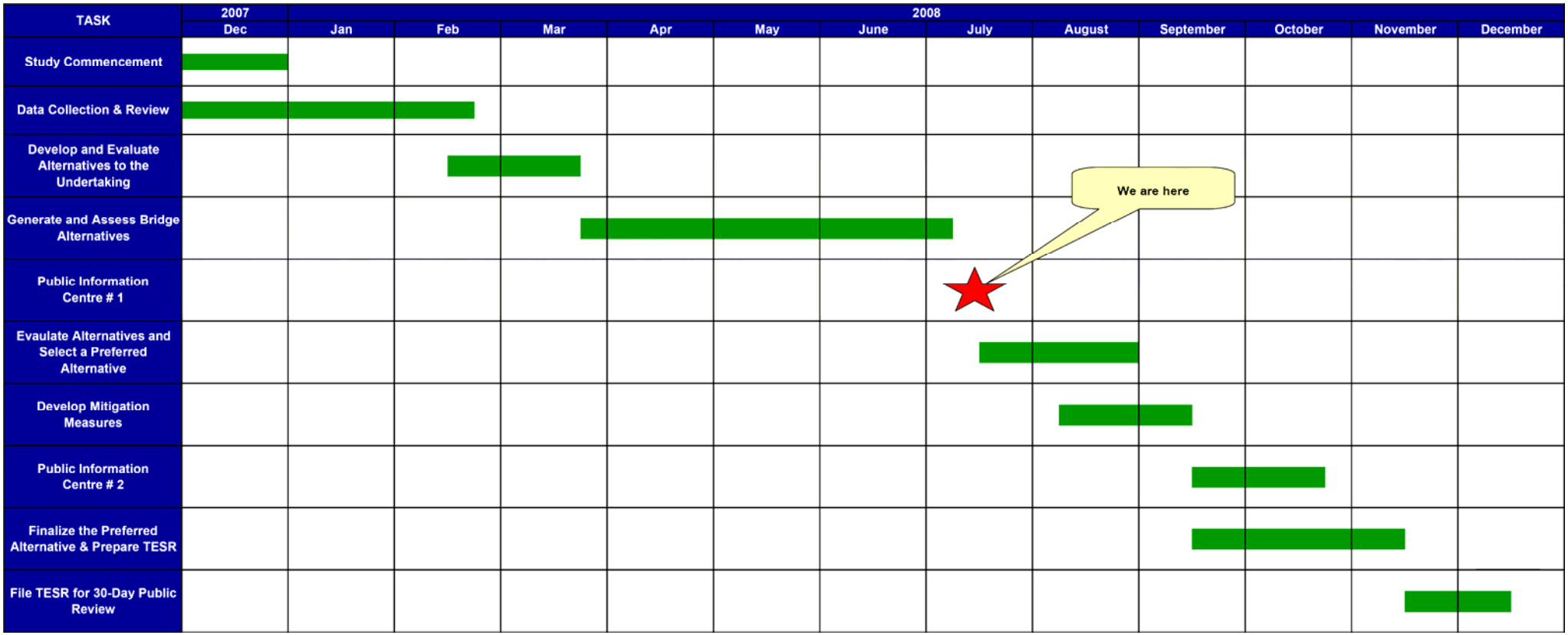
The following outlines the key community issues and concerns expressed to the Project Team to date:

- Avoiding impacts to local businesses, residential homes, seasonal residents and cottages during construction and after completion.
- Preserving the natural terrain with the trees and natural growth wherever possible.
- Safety of those throughout the community who travel through the Oxtongue area by car, boat, bicycle, walking, ATV, etc.).
- Concerns with safety and sightlines at Algonquin Outfitters Road and Oxtongue Lake Road.
- Safety concerns at the entrance to Harris Road and Ragged Falls Park.
- Demolition of both bridges should include the removal of all piers that are no longer required.

If you have any issues or concerns please let us know by filling out a comment sheet

~ Your input is important to us! ~

TIMING OF STUDY ACTIVITIES



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WHAT'S NEXT

The following activities will be undertaken following the PIC:

- Respond to comments received at the PIC.
- Evaluate bridge replacement alternatives and select preferred alternatives.
- Hold PIC # 2 in Fall 2008 to present the evaluation of alternatives and the selection of preferred alternatives.
- Develop mitigation measures to minimize or avoid environmental impacts and determine future work required.
- Prepare Transportation Environmental Study Reports (TESR) for each bridge replacement project.
- Place the TESRs on the public record for a 30-day review period.

Thank you for attending!

Please feel free to ask questions
and fill out a comment sheet before you leave.

FREEDOM OF INFORMATION AND PRIVACY ACT

- Comments and information regarding this study are being collected to assist the Ministry of Transportation and URS Canada Inc. in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file for use during the study and may be included in 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.

You are encouraged to contact members of the Project Team if you have questions or concerns regarding the above information.