



Ministry of Transportation

Highway 7&8 Transportation Corridor Planning and Class EA Study

Greater Stratford to New Hamburg Area
MTO Group Work Project # 13-00-00

Report F (Part 2): Working Paper – Environmental
Conditions and Constraints

DRAFT

July, 2009

www.7and8corridorstudy.ca

This report is presented in draft format in order to obtain information and comments from stakeholders. Your input is requested by September 30, 2009 so the report can be finalized.

 **AECOM**

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Appendices:

- Appendix A – Breeding Birds List
- Appendix B – Plant Species List

1.0 INTRODUCTION

1.1 Overview of the Highway 7&8 Transportation Corridor Study

The Ministry of Transportation (MTO) is undertaking the Highway 7&8 Transportation Corridor Planning and Class Environmental Assessment (Class EA) Study, from Greater Stratford to New Hamburg area. The purpose of the study is to:

- develop a plan that addresses:
 - capacity, operation and safety needs along the 2-lane and 4-lane sections of Highway 7&8 between Stratford and the New Hamburg area and through the urban centres (Stratford, Shakespeare and New Hamburg) along Highway 7&8 for the movement of people and goods; and
 - linkage needs between the analysis area and transportation corridors serving other regions in the province.
- prepare a preliminary design for the provincial roadway components of that plan.

This study is being carried out as a Group 'A' project, in accordance with the Class Environmental Assessment for Provincial Transportation Facilities.

A major component of the study is an outreach and consultation program structured around six key points of decision-making, each of which will be supported by:

- the release of a newsletter;
- the release of draft reports for review and comment;
- a round of Public Information Centres (PICs);
- posting of information on the study web site; and
- newspaper notices announcing the above.

At the completion of the study, the filing of a Transportation Environmental Study Report (TESR) will be announced through newspaper notices. Decisions on funding and timing of detail design and construction are based upon environmental clearance of the TESR, since it determines the type of transportation facilities and their location.

1.2 The Preferred Corridor and its Study Area

MTO presented an initial and revised "long list" of corridor alternatives; the screening of this long list, which resulted in an initial and expanded "short list" of corridor alternatives; and the process and criteria to be used to evaluate this short list. The revision and expansion to these lists were made in response to input received from stakeholders.

The evaluation of the short list of corridor alternatives resulted in the selection of the preferred corridor, which, from west to east, generally includes:

- geometric improvements to existing 2-lane highway and municipal roads - Highway 8, Perth Road 125, Perth Line 32/Lorne Avenue, plus potential widening of Erie Street / Highway 7 (from 4 to 5 lanes) southerly to Gibb Road / Perth Line 29;

- widen (from 2 to 4/5 lanes) Lorne Avenue / Perth Line 33 from Erie Street to east of Romeo Street;
- new highway route (4/5 lanes) within a broad corridor between Perth Line 33 east of Romeo Street and Highway 7&8 in the vicinity of Perth Road 110;
- widen (from 2 to 4/5 lanes) Highway 7&8 from the vicinity of Perth Road 110 through Shakespeare to west of Regional Road 1 and Wilmot-Easthope Road;
- new median barrier on Highway 7&8 through New Hamburg, including modification and/or closure of intersections, plus possible local segments of service road; and
- numerous intersection improvements associated with the above.

The study area developed to support the study of the preferred corridor is provided in **Exhibit 1-1**.

Exhibit 1-1: Map of Study Area for Preferred Corridor

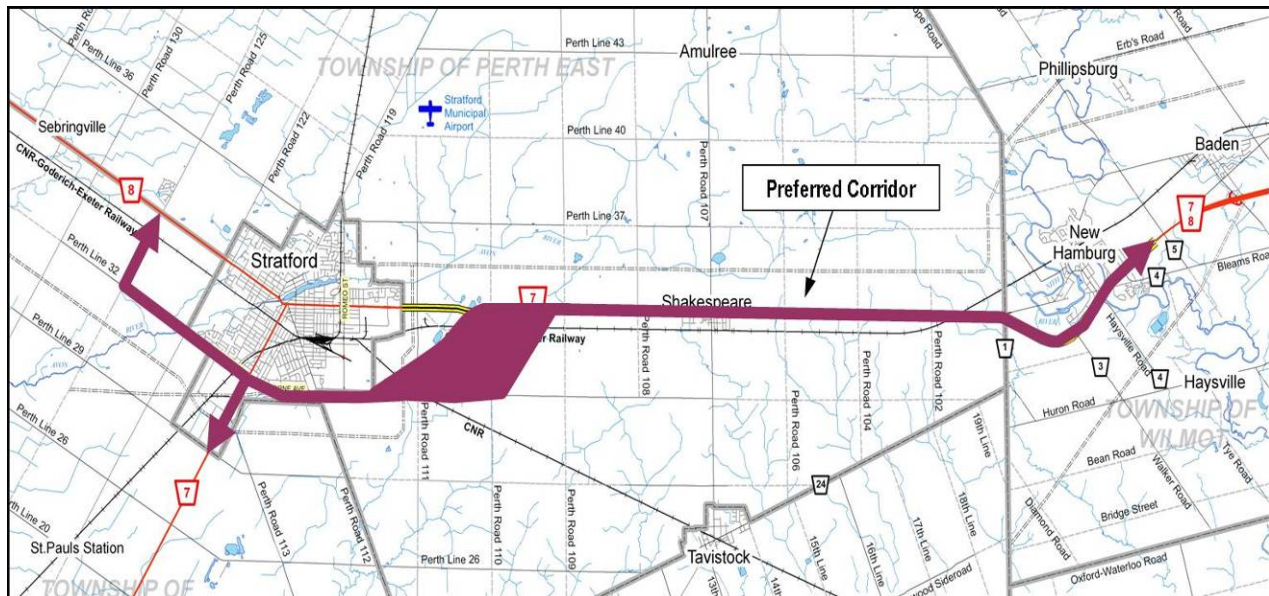
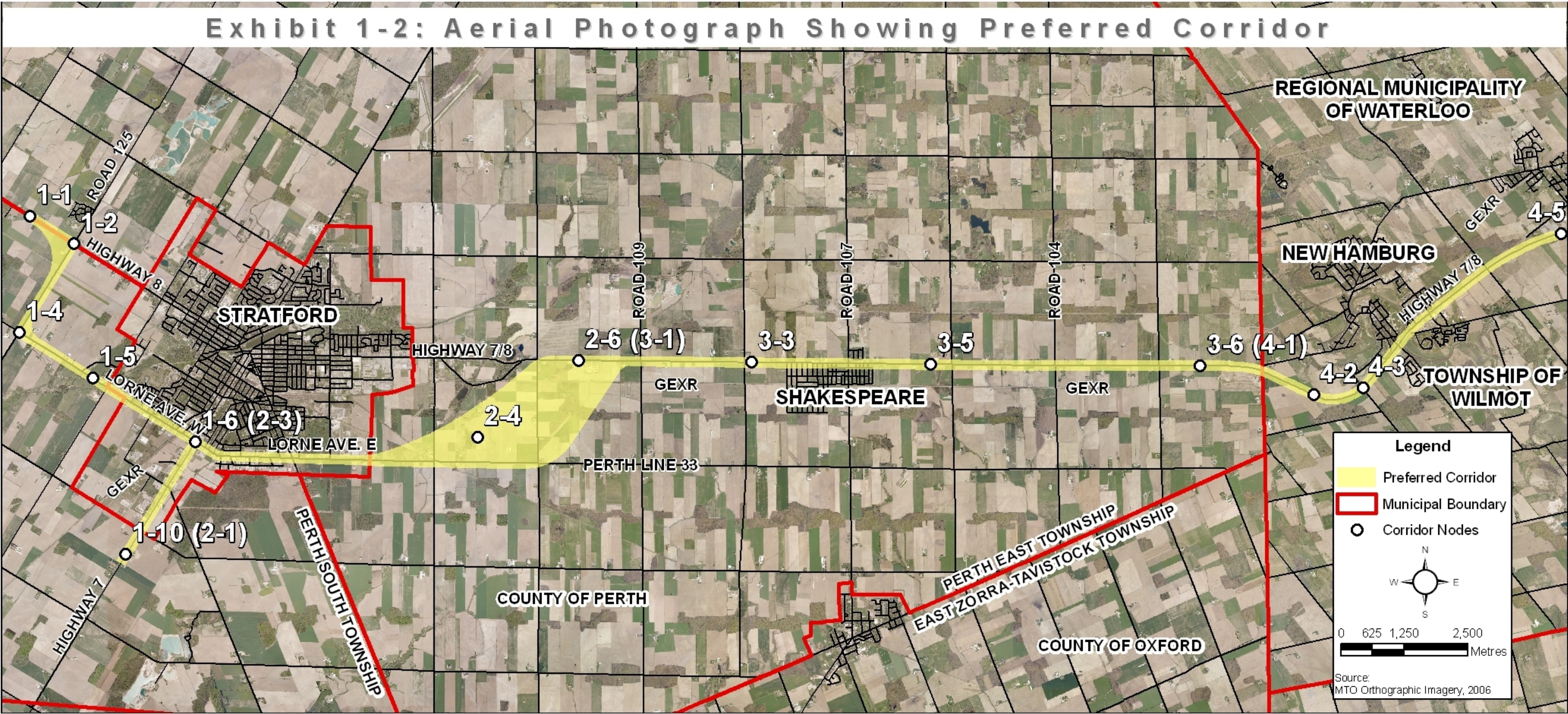


Exhibit 1-2 shows the preferred corridor overlaid on an aerial photograph. This exhibit shows the “node” numbers that were referenced during the selection of the corridor, that are referenced in some chapters of this report.

1.3 Purpose, Relevance and Position of Report F (Part 2) within the Study Process

The purpose of Report F is to document the existing environmental conditions and identify sensitivities and constraints. Report F is comprised of two parts. Report F, Part 1 provides an environmental overview within the Analysis Area based on secondary source information. It was completed in June 2008. Report F, Part 2 continues with the investigations documented in Report F1. It documents the field investigations of the Study Area of the preferred corridor. If any additional secondary source information became available or was required, it is also provided and referenced in Report F Part 2.



For highlights of the report, readers are referred to the exhibits which are all identified in the table of contents of this report.

As can be seen in **Exhibit 1-3**, Report F Part 2 is the seventh of 11 reports to be prepared for this study and the first report of Phase 4, Detailed Planning for Provincial Roadways.

Exhibit 1-3: Summary of Reports Highway 7&8 Transportation Corridor Planning and Class EA Study	
STUDY PHASE 1: STUDY PLAN	
<ul style="list-style-type: none"> Report "A": Study Plan For Technical Work, Outreach And Consultation 	
STUDY PHASE 2: AREA TRANSPORTATION SYSTEM PLANNING	
<ul style="list-style-type: none"> Report "B": Working Paper – Overview of Transportation, Land Use and Economic Conditions Within the Analysis Area 	
<ul style="list-style-type: none"> Report "F" -1st Part: Working Paper - Environmental Conditions And Constraints 	
<ul style="list-style-type: none"> Report "C": Working Paper – 'Area Transportation System' Problems and Opportunities 	
<ul style="list-style-type: none"> Report "D": Working Paper – Area Transportation System Alternatives 	
STUDY PHASE 3: PRELIMINARY PLANNING	
<ul style="list-style-type: none"> Report "E": Milestone Report – Highway 7&8 Transportation Corridor Needs Assessment 	
STUDY PHASE 4: DETAILED PLANNING FOR PROVINCIAL ROADWAYS	
<ul style="list-style-type: none"> Report "F" 2nd Part: Working Paper - Environmental Conditions And Constraints 	
<ul style="list-style-type: none"> Report "G": Working Paper – Generation of Detailed Planning Alternatives for Provincial Roadways 	
<ul style="list-style-type: none"> Report "H": Milestone Report - Selection of Detailed Planning Alternatives for Provincial Roadways 	
STUDY PHASE 5: PRELIMINARY DESIGN FOR PROVINCIAL ROADWAYS	
<ul style="list-style-type: none"> Report "I": Working Paper - Generation of Provincial Roadway Preliminary Design Alternatives 	
<ul style="list-style-type: none"> Report "J": Milestone Report - Selection of Preliminary Design Alternatives for Provincial Roadways 	
STUDY PHASE 6: TRANSPORTATION ENVIRONMENTAL STUDY REPORT	
<ul style="list-style-type: none"> Report "K": Transportation Environmental Study Report (documents overall study) 	

1.4 Environmental Factors, Sub-Factors, and Criteria

The factors, sub-factors and criteria to be considered in the generation, assessment and evaluation of alternatives were presented in *Report A: Study Plan for Technical Work, Outreach and Consultation* of this study, with some modification as a result of stakeholder input.

These factors, sub-factors and criteria are summarized in **Exhibit 1-4**. Most of them are discussed in the following sections of this report.

Exhibit 1-4 Highway 7&8 Transportation Corridor Planning and Class EA Study Preliminary Identification of Environmental Factors, Sub-Factors and Criteria to be Considered in the Generation, Assessment and Evaluation of Alternatives	
Factors/Sub-factors	Criteria
1. Natural Environmental Factors	
1.1 Fisheries and Aquatic Ecosystems	1.1.1 Fish Habitat
	1.1.2 Fish Community
1.2 Terrestrial Ecosystems	1.2.1 Wildlife
	1.2.2 Wetlands
	1.2.3 Forests
	1.2.4 Vegetation
	1.2.5 Designated/Special Areas (such as Environmentally Significant Areas, Environmentally Sensitive Policy Areas, and Areas of Natural and Scientific Interest)
1.3 Groundwater	1.3.1 Areas of Groundwater Recharge and Discharge
	1.3.2 Groundwater Source Areas and Wellhead Protection Areas
	1.3.3 Large Volume Wells
	1.3.4 Private Wells
	1.3.5 Groundwater-Dependent Commercial Enterprises
	1.3.6 Groundwater-Sensitive Ecosystems
1.4 Surface Water	1.4.1 Watershed/Subwatershed Drainage Features/Patterns
	1.4.2 Surface Water in Watercourses and Wetlands
2. Land Use/Socio-Economic Environmental Factors	
2.1 Land Use Planning Policies, Goals, Objectives	2.1.1 First Nation Land Claims
	2.1.2 Provincial/Federal Land Use Planning Policies/Goals/Objectives
	2.1.3 Municipal (local and regional) Land Use Planning Policies/Goals/Objectives
	2.1.4 Development Objectives of Private Property Owners
2.2 Land Use – Community	2.2.1 First Nations Reserves
	2.2.2 First Nations Sacred Grounds
	2.2.3 Urban and Rural Residential
	2.2.4 Commercial/Industrial
	2.2.5 Tourist Areas and Attractions
	2.2.6 Community Facilities/Institutions
2.3 Noise-Sensitive Areas	2.3.1 Transportation Noise
	2.3.2 Construction Noise
2.4 Agriculture	2.4.1 Agriculture - Canada Land Inventory Class 1,2,3 Land
	2.4.2 Agricultural Farm Infrastructure (field tile drainage systems/outlets, irrigation systems, barns/silos/structures, etc.)
	2.4.3 Agriculture – Operations on Individual Farms (planting, harvesting, grazing, nutrient management, etc.)
	2.4.4 Agriculture – Transportation Linkages between Multiple Farm Operations

Exhibit 1-4 Highway 7&8 Transportation Corridor Planning and Class EA Study Preliminary Identification of Environmental Factors, Sub-Factors and Criteria to be Considered in the Generation, Assessment and Evaluation of Alternatives	
Factors/Sub-factors	Criteria
	(equipment, materials, workers, etc)
2.5 Land Use - Resources	2.5.1 First Nations Treaty Rights or Use of Land and Resources for Traditional Purposes
	2.5.2 Parks and Recreational Areas
	2.5.3 Aggregates and Mineral Resources
2.6 Major Utility Transmission Corridors	
2.7 Contaminated Property and Waste Management	
2.8 Landscape	2.8.1 Scenic Composition
	2.8.2 Sensitive Viewer Groups
	2.8.3 Scenic Value of Views/Vistas from the Transportation Facility
	2.8.4 Specimen Trees
2.9 Air Quality	2.9.1 Local and Regional Air Quality
	2.9.2 Sensitive Receptors to Air Pollutants and Greenhouse Gases
3. Cultural Environmental Factors	
3.1 Cultural Heritage – Built Heritage and Cultural Landscapes	3.1.1 Buildings or ‘Standing’ Sites of Architectural or Heritage Significance or Ontario Heritage Foundation Easement Properties
	3.1.2 Heritage Bridges
	3.1.3 Areas of Historic 19 th Century Settlement
	3.1.4 Cultural Heritage Landscapes
	3.1.5 First Nations Burial Sites
	3.1.6 Cemeteries
3.2 Cultural Heritage – Archaeology	3.2.1 Pre-Historic and Historic First Nations’ Archaeological Sites
	3.2.2 Historic Euro-Canadian Archaeological Sites