

1. Introduction

1.1 STUDY BACKGROUND

In June 2001, the Premier of Ontario and the Minister of Transportation announced completion of the draft Niagara Peninsula Transportation Needs Assessment study. The needs assessment study was a technical study, involving a comprehensive examination of future transportation problems, opportunities and a range of transportation alternatives. These included road, transit, rail, ferry and other options. Various travel and growth scenarios were considered for a 30-year planning period.

The needs assessment study concluded that significant additional transportation capacity will be required through the Niagara Peninsula into the Greater Toronto Area (GTA) to accommodate future growth in the movement of people and goods. The needs assessment study proposed a broad multi-modal Transportation Development Strategy (TDS) to ensure adequate transportation network operations over the long-term.

On the basis of the technical recommendations from the needs assessment, the Ministry of Transportation (MTO) commenced the formal Environmental Assessment (EA) process, starting with an EA Terms of Reference (ToR), for the development of a new transportation corridor in the Niagara, Hamilton and Halton area (referred to at the time as the Mid-Peninsula Transportation Corridor). In support of the EA ToR process, MTO carried out municipal, agency, stakeholder and community consultation between March 2002 and May 2003.

Following the consultation program, MTO submitted the *Mid-Peninsula Transportation Corridor EA ToR* to the Minister of the Environment for approval in May 2003. In response to comments received from key stakeholders, MTO withdrew the EA ToR from the Ministry of Environment (MOE) consideration in the summer of 2003.

In 2005, MTO initiated the *Niagara to GTA Corridor Planning and Environmental Assessment Study (NGTA Study)* through the EA Terms of Reference process with a thorough consultation program. The EA ToR was completed in October 2005, amended in February 2006 and approved by MOE in June 2006. This approved EA ToR defines the planning process to be followed for this multi-phase and multi-modal transportation project, and provides the purpose of addressing existing and future anticipated transportation capacity deficiencies within the corridor to 2031 and beyond.

The first-phase of the process (this phase) is a robust, multi-year, multi-modal planning process that considers all modes of transportation and has no “pre-defined” outcome. This unprecedented approach is complimented by an extensive consultation program and will result in a multi-modal Transportation Development Strategy as opposed to a specific project.

At the same time as the EA ToR for this project was being prepared, submitted and approved, the Government of Ontario was undertaking a growth planning exercise referred to as *Places to Grow*. In June 2006, the Minister of Public Infrastructure Renewal (now the Ministry of Energy and Infrastructure) released *The Growth Plan for the Greater Golden Horseshoe (The Growth Plan)*. *The Growth Plan* outlines a set of policies for managing growth, development and guiding planning decisions in the Greater Golden Horseshoe (GGH). This plan represents a planning “vision” for the province. It is accompanied by the *Places to Grow Act* (2005) which requires that planning decisions made by the province, municipalities and other authorities conform to the policies contained in *The Growth Plan*.

The Growth Plan provides population and employment projections for each of the municipalities within the GGH for the ultimate 2031 planning horizon. In addition, *The Growth Plan* specifies land use intensification and density targets for each of the municipalities. *The Growth Plan* also depicts a “Future Transportation Corridor” connecting the Niagara border to the GTA. This Corridor is intended to schematically illustrate the need for additional transportation service in this area.

The province also established *The Greenbelt Plan* through the *Greenbelt Act* in 2005. Together, *The Greenbelt Plan* and *The Growth Plan* provide clarity and certainty about urban structure, where and how future growth should be accommodated and what must be protected for current and future generations in the GGH area.

In summary, past transportation needs assessment work undertaken by MTO has shown the need for additional transportation capacity in the NGTA Corridor. In addition, *The Growth Plan* also identifies the need for additional capacity in the corridor to support the long-term vision for the province. It is these two important bodies of work, together, that support the need to proceed with this important Corridor Planning and EA Study.

1.2 STUDY PURPOSE

MTO is working to provide for the efficient movement of people and goods within the context of the province’s policy framework. To support policy directions in *The Growth Plan*, MTO has commenced a planning study and the formal EA process for the NGTA Corridor. MTO is coordinating with Metrolinx (including GO Transit), other ministries and municipalities as the EA study moves forward. Similarly, MTO will work with other transportation service providers (rail, air and marine) as the study progresses.

The focus of this study is to examine long-term inter-regional transportation problems and opportunities and consider alternative solutions to address these issues. The study’s objective is to determine and suggest how to develop an integrated, multi-modal transportation system that enables the efficient movement of people and goods and provides better economic and transportation linkages between the Urban Growth Centres and the Gateway Economic Zone and Centre in the NGTA study area.

Phase 1 of the NGTA Corridor Planning and Environmental Assessment Study has been initiated as the next step in the process outlined in the ToR. This includes:

- Identifying the specific transportation problems and opportunities within the study area depicted in **Exhibit 1-1**;
- Developing, assessing and evaluating a range of Area Transportation System Alternatives to address the identified transportation problems and opportunities within the study area; and,
- Recommending a Transportation Development Strategy based on the Area Transportation System Alternatives carried forward from the evaluation.

The TDS will be documented in the *NGTA Corridor Transportation Needs Assessment Report*, and will make recommendations with respect to transportation improvements required throughout the study area. All of the recommendations that fall within the jurisdiction of MTO such as provincial highways and transitways will be reviewed, and the ministry will decide whether to proceed to Phase 2 of the study. Phase 2 of the study would involve the development, assessment, and evaluation of alternative methods of carrying out the selected Area Transportation System Alternatives. As some transportation modes lie outside of MTOs jurisdiction, such recommendations will be forwarded to the relevant agencies / authorities for further review and action.

The multi-modal alternatives identified to address the transportation problems and opportunities will be developed using a “building-block” approach that begins with optimizing the existing infrastructure, investing in transit as the first priority for moving people, and thorough consideration of other modes of transportation before decisions are made for new or expanded highway facilities.

1.3 PURPOSE, RELEVANCE AND POSITION OF REPORT WITHIN STUDY PROCESS

The purpose of this report is to summarize the process and methodology that was used to develop a broad range of the Area Transportation System Alternatives and to document the key findings of this work.

The *Area Transportation System Alternatives Report* will serve as a critical stage in the study providing a foundation for the further generation, evaluation, and selection of Preliminary Planning Alternatives that will be incorporated in the ultimate Transportation Development Strategy for this phase of the NGTA Study.

An overview of the transportation alternatives was presented at the third round of Public Information Centres (PICs), held in November and December 2009. This report on Area Transportation System Alternatives provides further detail and background to the information presented at the PICs.

1.4 STUDY AREA AND AREAS OF INFLUENCE

The study area can be seen in **Exhibit 1-1**. This area includes Niagara Region, the City of Hamilton and the Region of Halton and is characterized by a mix of urban and rural communities. Urban centres include Fort Erie, Welland, St. Catharines, Niagara Falls, Hamilton, Burlington, and Milton. This area falls within the area designated under *The Greenbelt Act* and *Greenbelt Plan*, February 2005.

It is recognized that transportation issues in the study area are related to and influenced by much broader “Areas of Influence”. Therefore, inter-regional travel demand analysis has been carried out in a much broader context including the consideration of major transportation infrastructure in proximity to the study area and linkages to and from other regional transportation services, hubs and gateways. This area includes most of southern Ontario and allows for consideration of transportation connectivity to the international borders and the GTA. **Exhibit 1-2** highlights this relationship.

Exhibit 1-1: Niagara to GTA Corridor Study Area

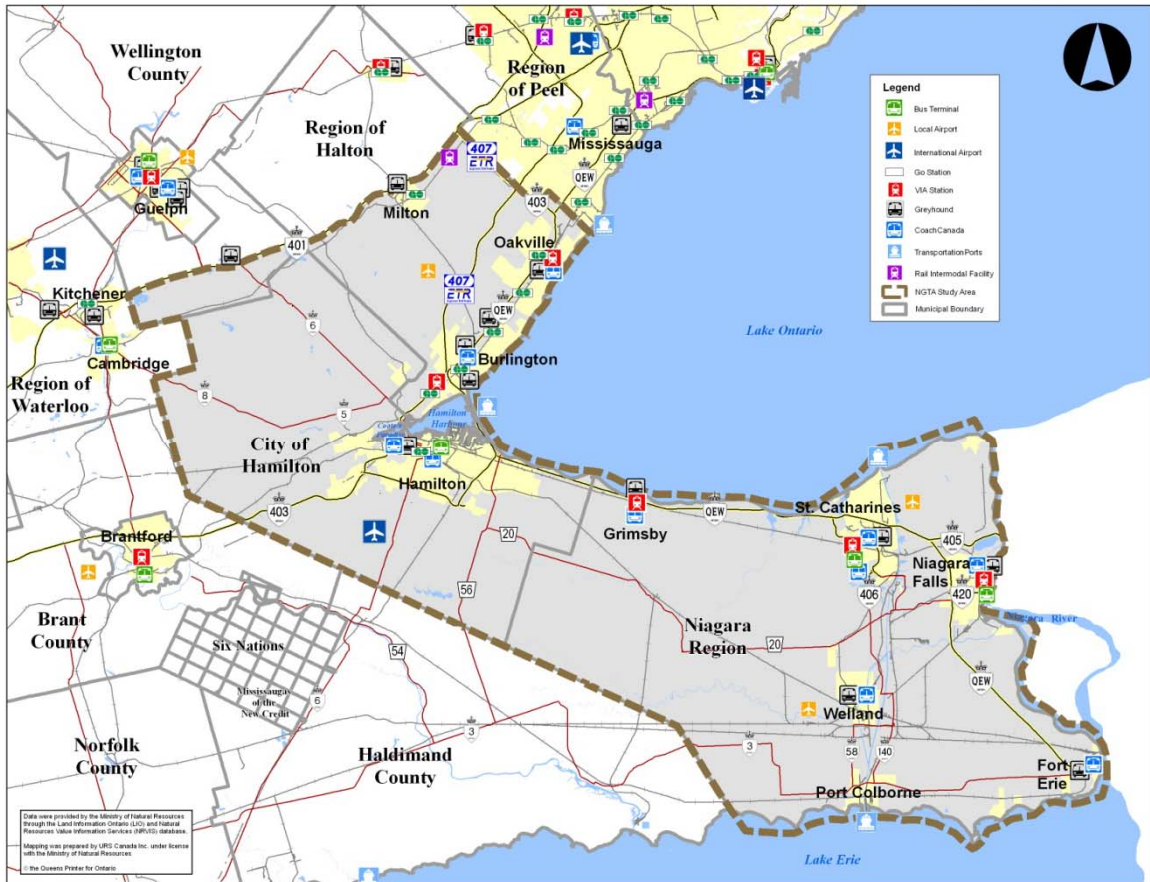
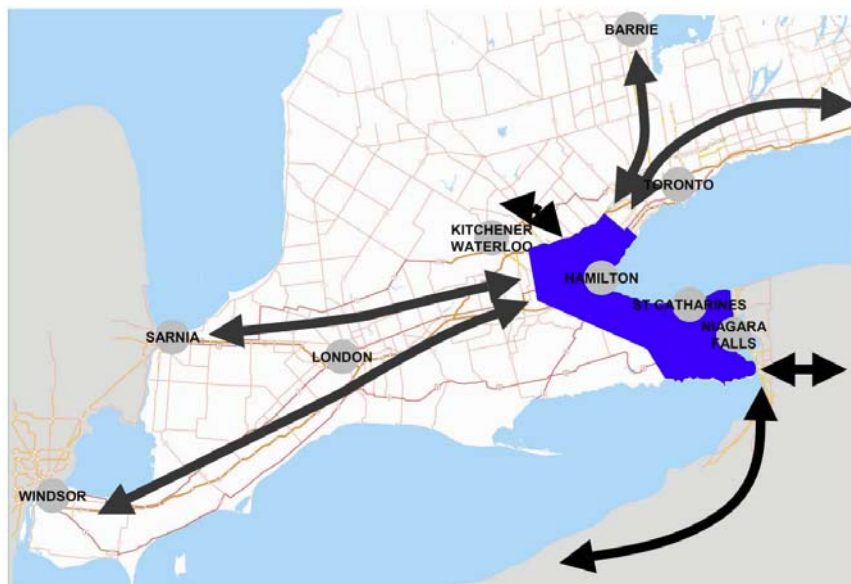


Exhibit 1-2: Areas of Influence



1.5 OVERVIEW OF PROBLEMS & OPPORTUNITIES IN THE TRANSPORTATION SYSTEM

The identification of future transportation problems and opportunities within the study area is a crucial stage for Phase 1 of the study. An understanding of the shortfalls of the transportation system and opportunities to improve its future performance provides a foundation for identifying sustainable transportation solutions. These solutions will become the basis for a technically, environmentally and economically sound, multi-modal Transportation Development Strategy.

Transportation in the study area is characterized by a high degree of reliance on the road network as the vast majority of trips in the NGTA Corridor are made by automobile and truck. The overarching problem for the inter-regional transportation system in 2031 relates to the road network. Much of the higher order road system such as highways and inter-regional roads is expected to be heavily congested during peak periods and increasingly congested throughout the day. Road congestion in the summer is higher due to the overlay of tourism and recreation travel. Inter-regional transit connections will remain limited in the study area, even with the implementation of the *Regional Transportation Plan (RTP)*. Transit services generally run along the lakeshore toward the GTA, with connections between the GTA, Hamilton and Niagara. Inter-regional transit connections linking communities and employment areas located away from the QEW lakeshore corridor are limited. In general, the limited choice of alternate travel modes in the study area increases reliance on the automobile. The fact that every mode connects to and relies on the road network creates significant issues for the efficient movement of people and goods in the future. Although the majority of problems identified relate to the road transportation network, all travel modes were considered in generating alternative transportation solutions to address the identified transportation problems.

Transportation service providers for rail, air and marine indicate that their systems generally have sufficient capacity to accommodate future travel growth. Enhancements to these individual modes to accommodate growth and / or changing travel markets for example, a further shift to containerization of goods, can generally be made within the existing lands / corridors of the railways, ports and airports. However, the Port of Hamilton requires better access to the highway system and pinch points exist along the rail network that will affect future expansion capabilities. The key transportation issues identified through modelling, forecasting, analysis, and by all of the transportation service providers relate to the following:

- Lack of capacity on the road network to handle growth;
- Need for improved connections between different travel modes;
- Significant daily congestion in the Hamilton / Halton area:
 - QEW through Halton and Hamilton;
 - Highway 403 through Hamilton;
 - Highways 403 / 407 / QEW Interchange (Freeman Interchange);
 - Burlington Skyway; and
 - Municipal road congestion.
- Significant weekend / summer congestion in Niagara area:
 - QEW Niagara; and
 - Garden City Skyway.

In addition to the transportation problems, there are also numerous transportation opportunities that can be achieved within the study area by providing an efficient multi-modal transportation system. These include:

- Improved multi-modal connections to the GTA and areas west of the Corridor;
- Improved access to Niagara Falls and the US border for tourism and trade;
- Improved access to inter-modal facilities such as Hamilton International Airport (HIA) and the Port of Hamilton;
- Support for municipal land use planning, such as Niagara's "Grow South" plan to protect the tender fruit lands, Hamilton's planned Airport Employment Growth District (AEGD), and Halton's planned employment growth lands in Milton, Oakville and Burlington; and,
- Minimized impacts to the natural, social, economic and cultural environments: through measures including optimizing existing transportation infrastructure.

1.6 PROCESS FOR GENERATING AND ASSESSING AREA TRANSPORTATION SYSTEM ALTERNATIVES

The process that has been used to generate and assess the Area Transportation System Alternatives is a two stage process, and is illustrated graphically in **Exhibit 1-3**. The first stage involves an assessment of each of the individual transportation alternatives such as transit, rail, marine, etc., on the basis of their ability to address the identified transportation problems and opportunities that are described briefly in **Section 1.5**.

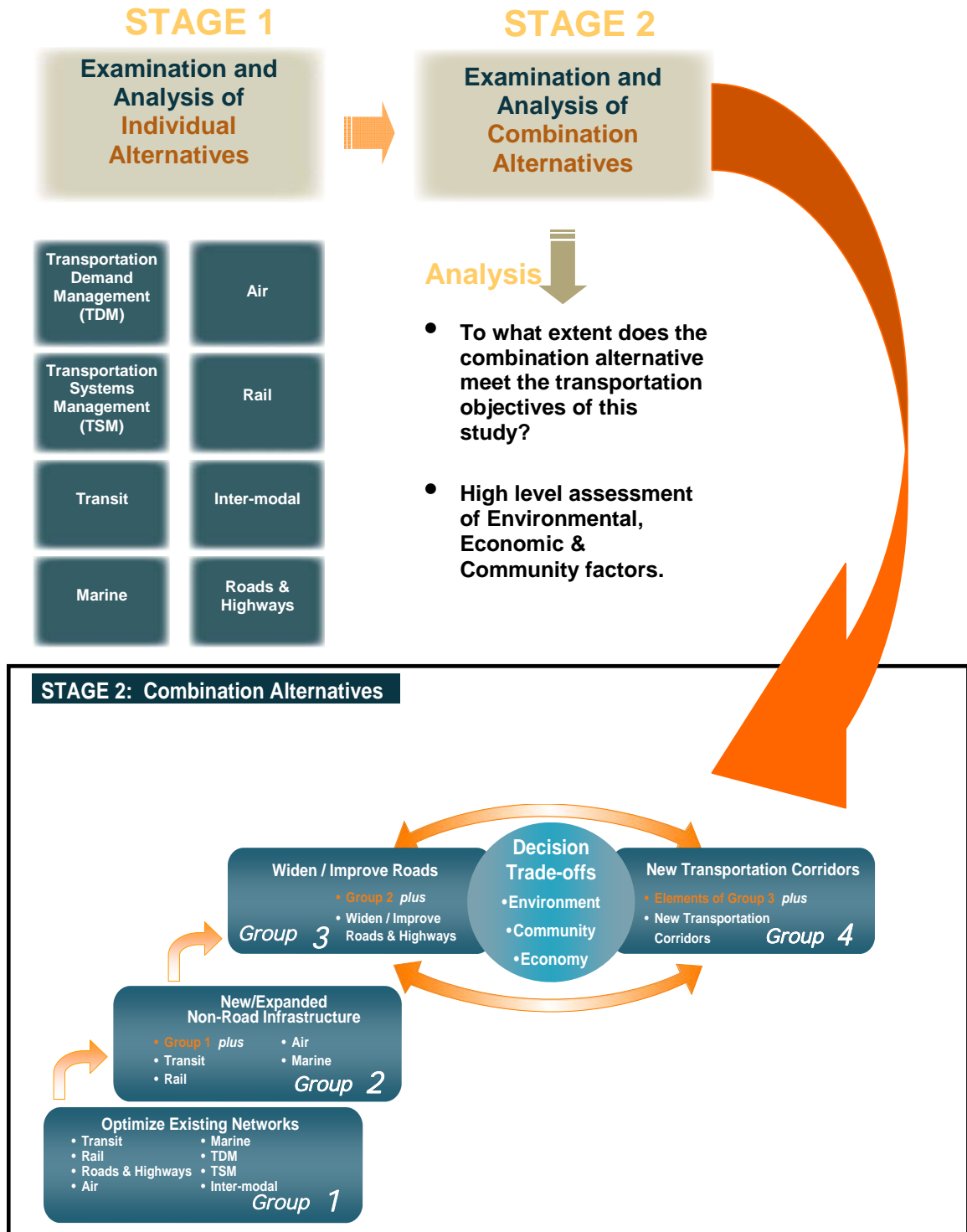
While no one alternative is able to fully address all of the transportation problems and opportunities, any alternatives that are able to substantively contribute to addressing the transportation problems and opportunities are carried forward to the second stage of the process.

As part of the first stage of the process, the study team reviewed relevant practices used in other jurisdictions for each of the individual transportation alternatives. This review is documented in **Appendix A** of this report and was used initially to inform a two day team working session that was attended by specialists representing all of the transportation modes.

The primary focus of the session was to generate a 'long list' of creative transportation alternatives to address the identified transportation problems and opportunities. To facilitate the creative process, attendees at the session were encouraged not to constrain their ideas on the basis of existing policies or other known constraints.

In addition to this session, numerous meetings with municipalities, regulatory agencies, members of the study team's Community Advisory Group (CAG), transportation service providers (e.g. Metrolinx, including GO Transit, CN and CP Railways, Port of Hamilton, Ontario Motor Coach Association, etc.), and other stakeholders were held throughout this phase of the project to supplement the 'long list'. In the end a 'long list' of more than 150 alternatives was developed. The reader is referred to **Chapter 2** for further information.

Exhibit 1-3: Two-Stage Process for Developing and Assessing Area Transportation System Alternatives



Following the development of the 'long list' of alternatives, study team specialists reviewed and assessed these alternatives based on their ability to address the transportation problems and opportunities that had been documented in the *Area Transportation System Problems and Opportunities Report*. All of the alternatives were initially categorized as to whether or not they could substantively contribute to addressing the transportation problems and opportunities. Alternatives that were considered to be able to substantively contribute were further categorized on the basis of whether they should be pursued by the study team or by another study / agency. Alternatives to be further considered as part of this study were carried forward to the second stage of the process. The study team's assessment of the alternatives is also summarized in **Appendix B**.

The second stage of the process involved assembling the alternatives carried forward into the various group alternatives. The results of this process are described in **Chapter 3** of this report. The process for undertaking the second stage is depicted in **Exhibit 1-3** and generally involves a building block approach. The first group includes all alternatives that would serve to optimize the existing transportation network for all modes of transportation: transit, rail, marine, TDM / TSM, etc. This "group alternative" was assessed to determine whether it could address the identified transportation problems and opportunities. In addition, a broad level assessment of the associated community, environmental and economic impacts of the group alternative was undertaken.

If Group #1 was found to not be capable of addressing the transportation problems and opportunities, the second group of alternatives (Group #2) was added to Group #1. The Group #2 alternatives correspond to new / improved non-roadway infrastructure (i.e. alternatives that support travel modes other than the single occupant automobile and trucks). Again, Group #2 was assessed based on broader community, environmental and economic impacts, and whether it could address the identified transportation problems and opportunities.

If Group #2 was found to not be capable of addressing the transportation problems and opportunities, it becomes necessary to introduce roadway alternatives. As shown in **Exhibit 1-3**, this involves comparing the advantages and disadvantages of widening existing provincial roadways, Group #3 versus the provision of a new transportation corridor, Group #4. This comparison focuses on the broader community, environmental and economic impacts associated with each alternative.