HOW WE GO

Niagara Region Transportation Master Plan

Niagara-Hamilton Trade Corridor Technical Paper

IBI Group in association with
Parsons and Brook McIlroy

NIAGARA 2041

Fostering an environment for Economic Prosperity

1. Purpose

In the report to Council on the Regional Council Strategic Priorities – Implementation Plan, pursuing Provincial commitment for the Niagara to Greater Toronto Area (NGTA) Corridor was identified as one of the key components of the Region's strategic priority to move people and goods. The Region is actively working with the City of Hamilton and Regions of Halton, Peel, and Waterloo, through a charter agreement with these municipalities, to advocate for the NGTA Corridor as an alternate route to QEW (Council Report, CAO 2-2015, January 30, 2015).

This background report provides a summary of the Niagara to GTA (NGTA) Corridor and its evolution to become the Niagara-Hamilton Trade Corridor, including the planning work completed to date, and the findings and recommendations for the corridor in the Niagara Region Transportation Master Plan.

2. Background

2.1 Inter-Regional Connectivity

The QEW is the only major provincial freeway that traverses Niagara Region and connects the Greater Toronto and Hamilton Area (GTHA) to the international border in south Niagara. Highway 405 and Highway 420 branch from the QEW to the Queenston-Lewiston Bridge and to the Rainbow Bridge international crossings, respectively.

Prior to 1998, Highway 20 was under provincial jurisdiction and functioned as an alternate provincial facility that crossed the whole of Niagara Region from Niagara Falls to Hamilton.

In the south part of Niagara, Highway 3, primarily a 2-lane rural highway, is a provincial facility that connects Fort Erie to Haldimand County.

2.2 Goods Movement

Given Niagara Region's strategic location between the GTHA and New York State, the NGTA Corridor would be a key corridor for the movement of people and goods between Ontario and US markets. An average of 36,000 trucks per week (2012) cross the Niagara-US border with an average total value of $1.58 billion (2012 CDN) per week, of which $1.1 billion crosses the Peace Bridge in Fort Erie and the remainder crosses the Queenston-Lewiston Bridge (Source: 2012 MTO Commercial Vehicle Survey). (Heavy truck traffic is not permitted on the Rainbow Bridge.)The previously proposed NGTA Corridor would become part of the Ontario-Quebec Continental Gateway Trade Corridor, a key Canada-US trade corridor that includes strategic ports, airports, intermodal facilities and border crossings and the linkages between them.

While goods movement is crucial to Niagara's economy, relatively few cross-border freight trips start or end in the region. In fact, the 2012 MTO Commercial Vehicle Survey found that only 15% of surveyed cross-border commercial vehicles were headed to or

from Niagara Region (with 39% of those starting or ending their trips in St. Catharines or Lincoln).

Between 2013 and 2015, Canadian-U.S. trade has begun to rise back toward pre-2001 levels. Niagara Region's recent designation as a Foreign Trade Zone Point will also promote the Region as an international trade hub with tariff and tax exemptions. By 2041, cross-border truck traffic is expected to increase as the Canadian and American economies grow; supporting infrastructure may be needed to enable the growth of Niagara businesses.

The QEW is the main link from Niagara Region to the GTHA, and is a significant constraint on trucking activities in Niagara. The vast majority of Niagara's truck traffic travels to or from the GTHA on the QEW. Trucks represent about 15% of weekday traffic volumes on the QEW, which is congested during weekday peak periods and off-peak tourist times. Increasing demands on the QEW will lead many truck drivers to look for alternatives.

2.3 Tourism

In addition to carrying goods, the QEW carries high volumes of recreational trips and tourism traffic to Niagara Region and through Niagara Region to the international border crossings. Cross-border traveller volumes peak during the summer months, and for the last 15 years demands have fluctuated with the strength of the Canadian dollar.

2.4 Commuter Traffic

The municipalities along the QEW – Niagara Region, City of Hamilton and City of Burlington – are expected to grow by 33% in population and 50% in employment between 2011 and 2041. In that same timeframe, travel demand forecasts indicate that travel across the Hamilton-Niagara boundary is expected to increase by 18% in the AM peak hour and 11% in the PM Peak hour. The existing freeway infrastructure, specifically the QEW, currently experiences heavy congestion and does not have available capacity to accommodate projected growth.

3. Other Transportation Studies

Over the past 15+ years, multiple studies have examined the existing road network and possible outcomes for the NGTA Corridor. Exhibit 1 shows a timeline of studies completed for the NGTA Corridor. In 2001, the Ministry of Transportation (MTO) completed a Needs Assessment Study that identified the need for additional transportation capacity in the Niagara to GTA corridor. The most recent study by MTO, the *Niagara to GTA Corridor Planning and EA Study Phase 1 Transportation Development Strategy (2013)*, analyzed the existing transportation network and examined highway recommendations in the area of influence of the potential corridor. The NGTA Corridor was assessed in three segments (West, Central and East) and evaluated against social, cultural, environmental, economic, cost, constructability, and transportation factors for each segment

In the *Planning and EA Study Phase 1*, MTO recommended a number of highway expansions in the NGTA Corridor influence area for the 2031 horizon year. The Phase 1 study recommended the widening of several highways including Highway 6, Highway 403, 407 Express Toll Route (ETR) and QEW as shown in Exhibit 2.

In addition to the widenings of existing corridors, the MTO study proposed a southerly extension of Highway 406 and a new corridor in east Niagara Region connecting the Highway 406 extension to the QEW near Fort Erie (also called NGTA East Corridor). The MTO study did not recommended a new freeway corridor connecting Niagara Region to the GTHA, but it concluded that an additional transportation corridor may be required beyond 2031 if current employment and population growth patterns continue beyond 2031.

Exhibit 1: Timeline of Transportation Studies on the NGTA Corridor

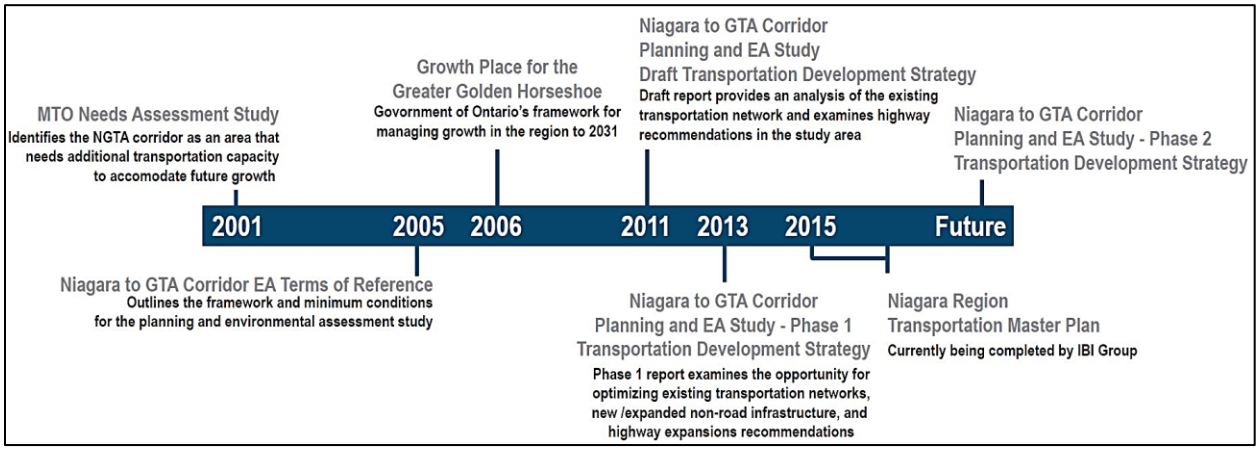
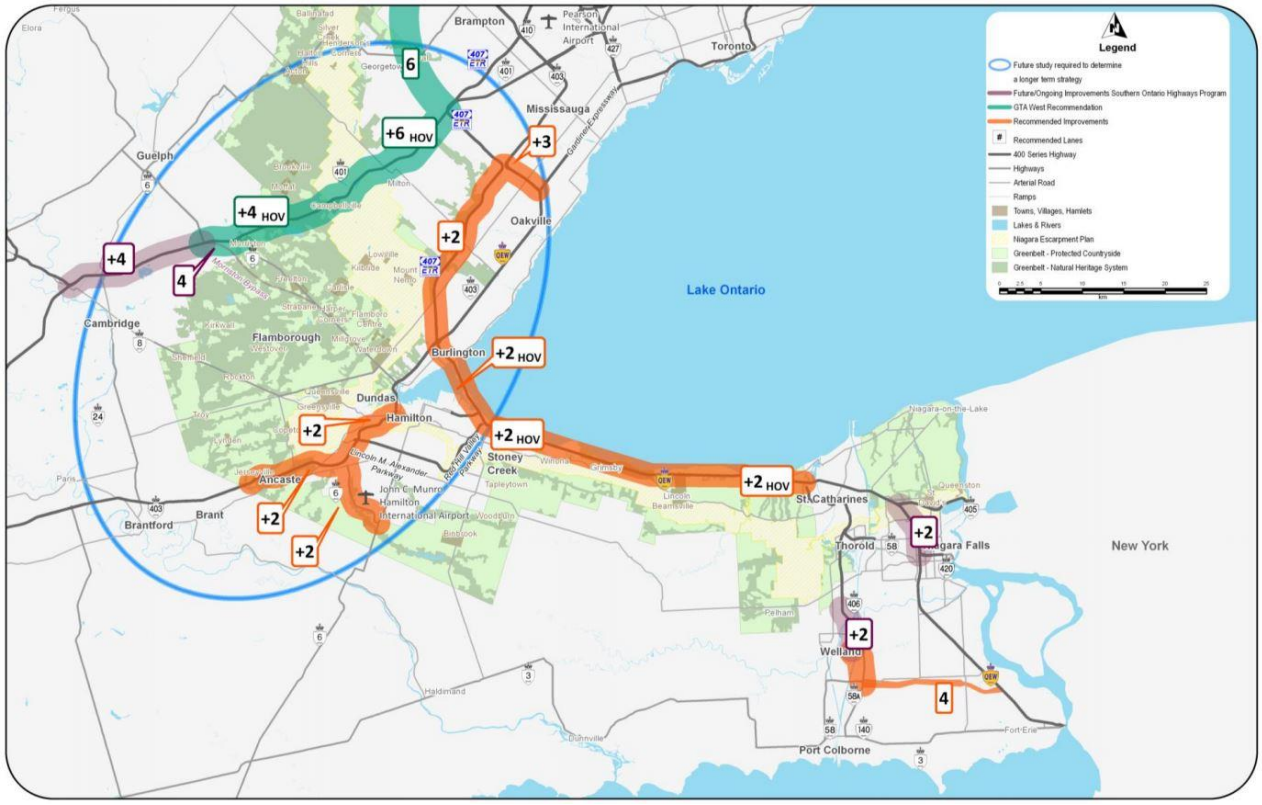


Exhibit 2: MTO Recommended Network



Source: Niagara to GTA Corridor Planning and Environmental Assessment Study – Phase 1, Transportation Development Strategy, September 2013, page 15

4. Niagara-Hamilton Trade Corridor

Based on the outcome of the *NGTA Corridor Planning and EA Study Phase 1*, MTO has recommended the NGTA East Corridor but is not actively planning for the central NGTA Corridor. However, the need for a trade corridor, as an alternate to the QEW, connecting Niagara to Hamilton is clear. A Niagara-Hamilton Trade Corridor that connects Niagara Region from the planned NGTA East Corridor at Highway 406 to the City of Hamilton in the vicinity of the Hamilton International Airport/Highway 403 would address the immediate demands of moving goods in and through Niagara Region in the absence of the full NGTA Corridor that extends beyond Hamilton to Halton Region and the rest of the GTA.

In July 2017, the federal government announced $2.1 billion of funding for the National Trade Corridors Fund, a program to improve the efficiency and reliability of national trade corridors. A Niagara-Hamilton Trade Corridor would support international trade by addressing vulnerabilities and congestion on QEW and could be eligible for federal funds.

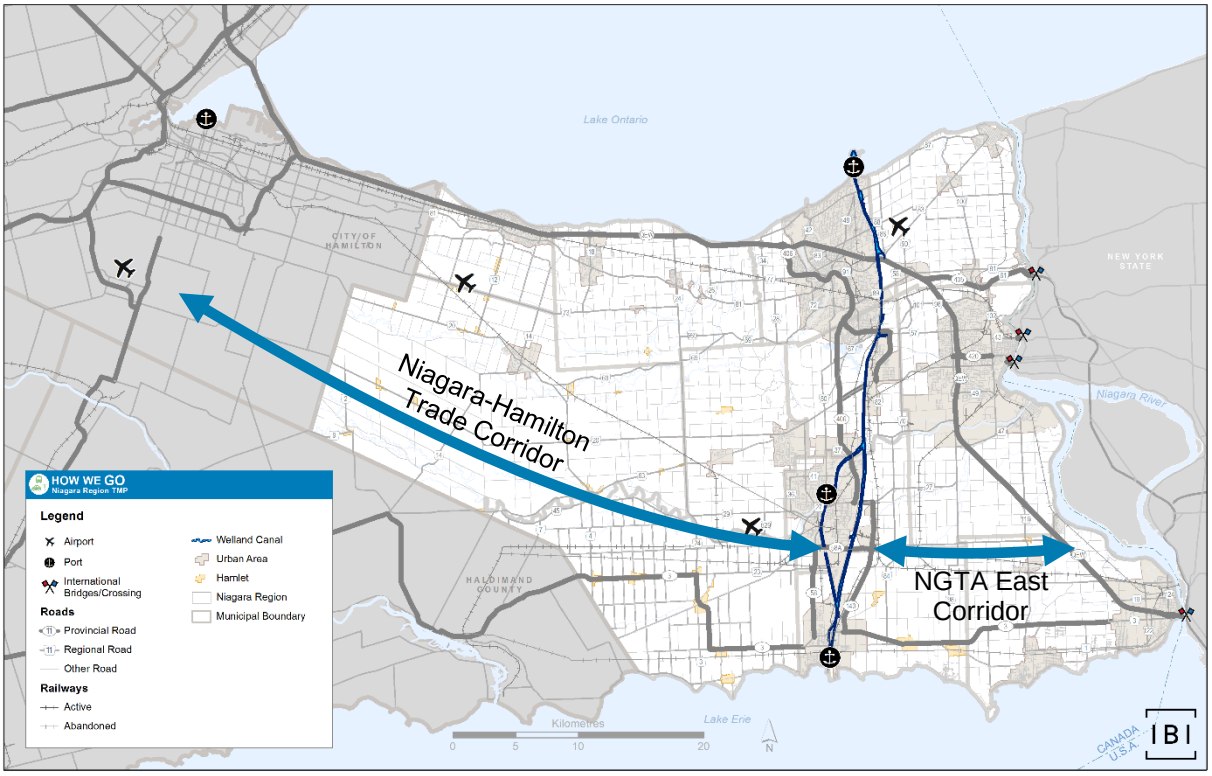
4.1 Corridor Analysis

As part of the TMP, a long term analysis of the Niagara-Hamilton Trade Corridor was conducted for the 2041 horizon year, 10 years beyond MTO's 2031 study horizon in the *Planning and EA Study*. The analysis involved an evaluation of a new transportation corridor connecting the QEW near Fort Erie to Highway 403 in Hamilton. The potential location of this transportation corridor is highlighted in Exhibit 3.

The key assumptions for the analysis of Niagara-Hamilton Trade Corridor include:

- A connection between Highway 403 in Hamilton and QEW in Niagara Region;
- A connection to Highway 406;
- A continuous four lane freeway;
- Approximately 17 interchanges (including highway connections); and
- A 2-lane widening of QEW for HOV lanes (from Burlington to Hwy 406) and a 2-lane widening of QEW (from Hwy 405 to Hwy 420) as identified in MTO's Planning and EA Study Phase 1 (see Exhibit 2).

Exhibit 3: Potential Location of the Niagara-Hamilton Trade Corridor



The Niagara TMP travel demand forecasts for 2041 shows the following PM peak hour volumes for the Niagara-Hamilton Trade Corridor:

- Peak volume of 2,900 passenger car equivalents (PCEs) in the peak direction within Niagara Region;

- Volumes range from 1,300 to 3,300 PCEs in the City of Hamilton;
- Approximately 1,050 PCE of traffic is diverted from the QEW to the new corridor (450 passenger vehicles and 600 truck PCEs)

In the scenario with the Niagara-Hamilton Trade Corridor, when compared to only the improvements identified in the MTO Recommended Network, a travel time savings of 355 veh-hrs travelled is recognized in the peak hour.

Exhibit 4 illustrates commercial vehicle and passenger vehicle volumes on the road network in the PM peak hour. QEW continues to carry the highest traffic volumes, but a significant proportion of traffic on the Niagara-Hamilton Trade Corridor are commercial vehicles. The Niagara-Hamilton Trade Corridor primarily serves longer-distance travel between the GTHA/elsewhere in Ontario and the Niagara Region/international border.

Exhibit 4: Commercial Vehicle (Blue) and Passenger Vehicle (Green) PCE Volumes (PM Peak Hour)

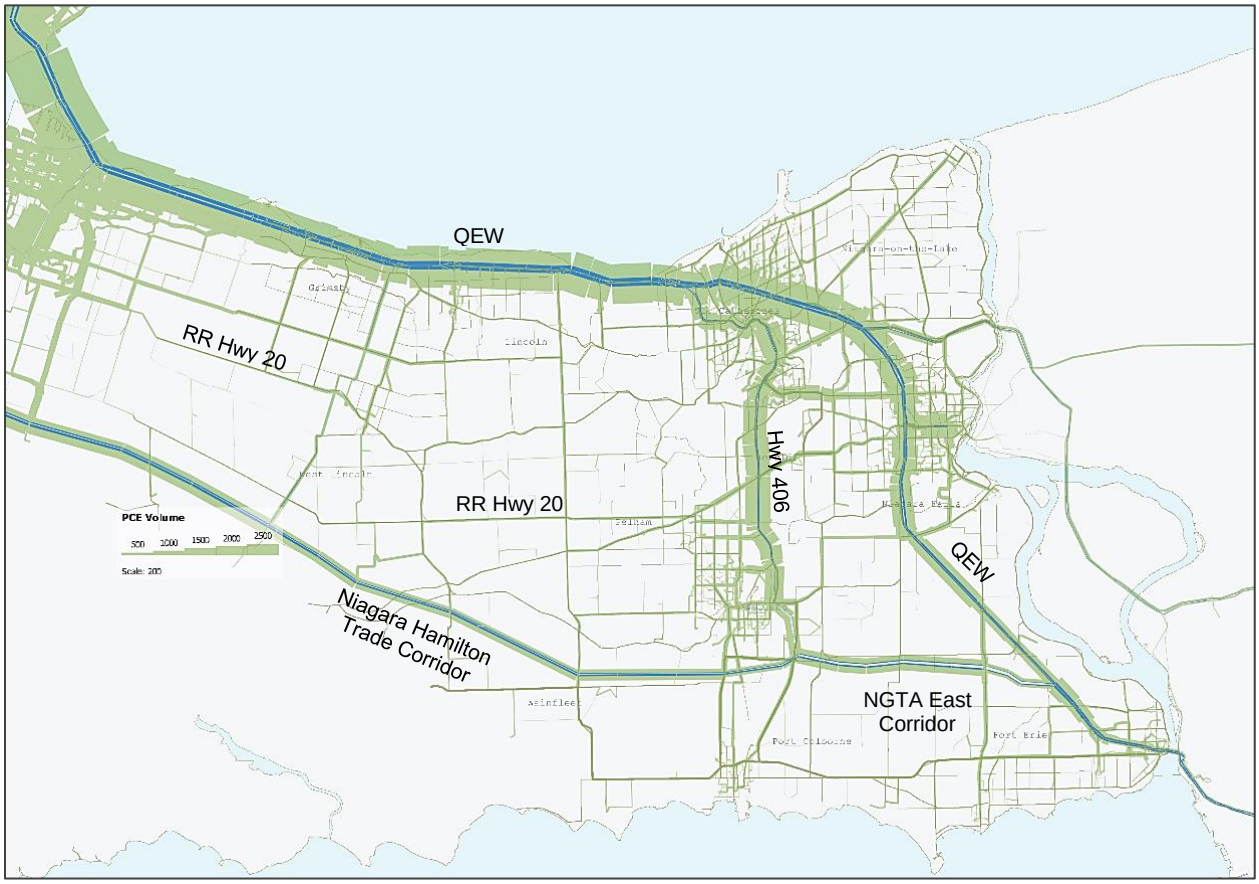
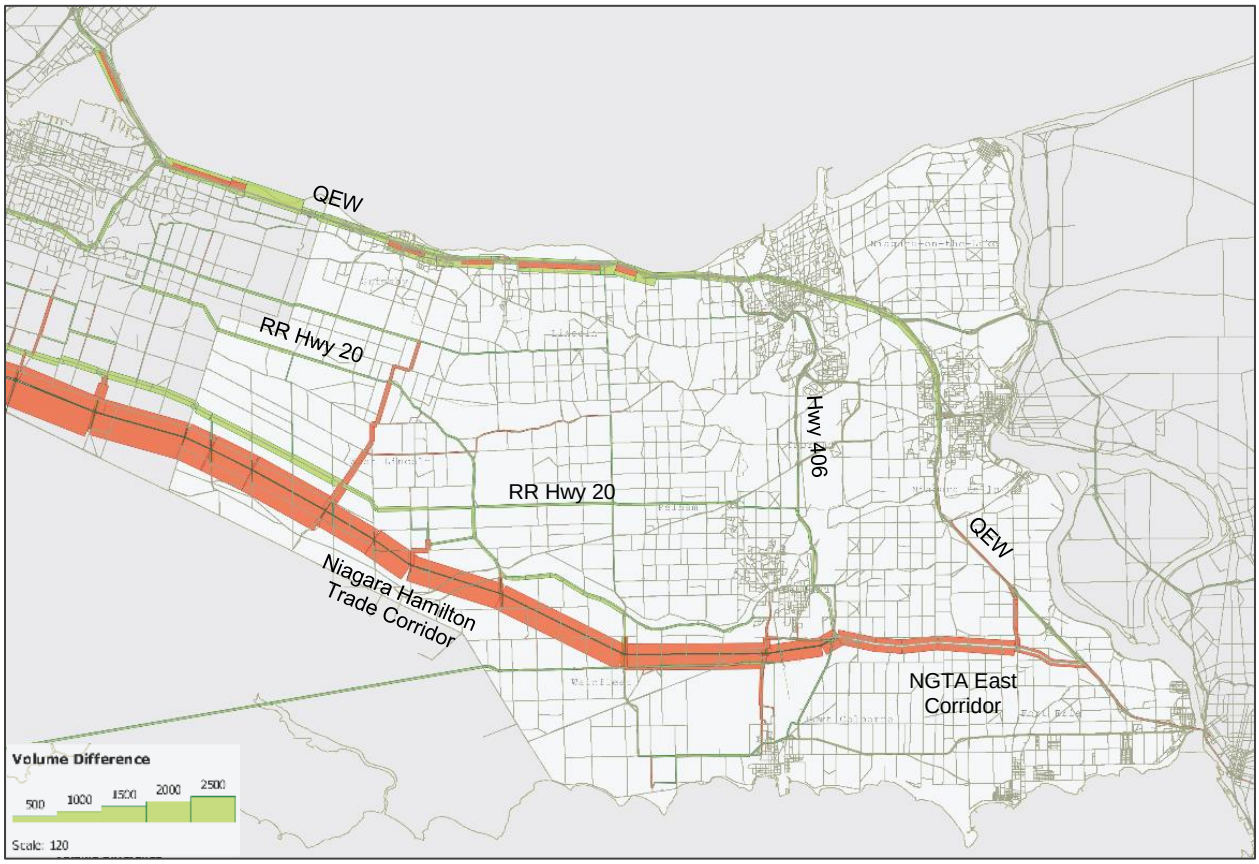


Exhibit 5 illustrates the diversion of traffic from other road facilities to the Niagara-Hamilton Trade Corridor (green indicates a decrease in traffic and red indicates an increase in traffic). With the Niagara-Hamilton Trade Corridor, traffic is diverted away from a number of parallel facilities including Regional Road 65 (Bismark Road), Regional Road 20 (Highway 20) and the QEW. Over 1,000 PCEs are diverted from the QEW in the PM peak hour.

This analysis indicates the need for the Niagara-Hamilton Trade Corridor to supply the necessary capacity and redundancy to the major highway system. Given this need, a

right-of-way should be designated as soon as possible and safeguarded for the future. The routes of Highways 403 and 407 in the GTHA were designated and protected by the Parkway Belt regulations more than 25 years before the highways themselves were built.

Exhibit 5: Commercial Vehicle and Passenger Vehicle PCE Volume Difference (PM Peak Hour)



5. Interim Period

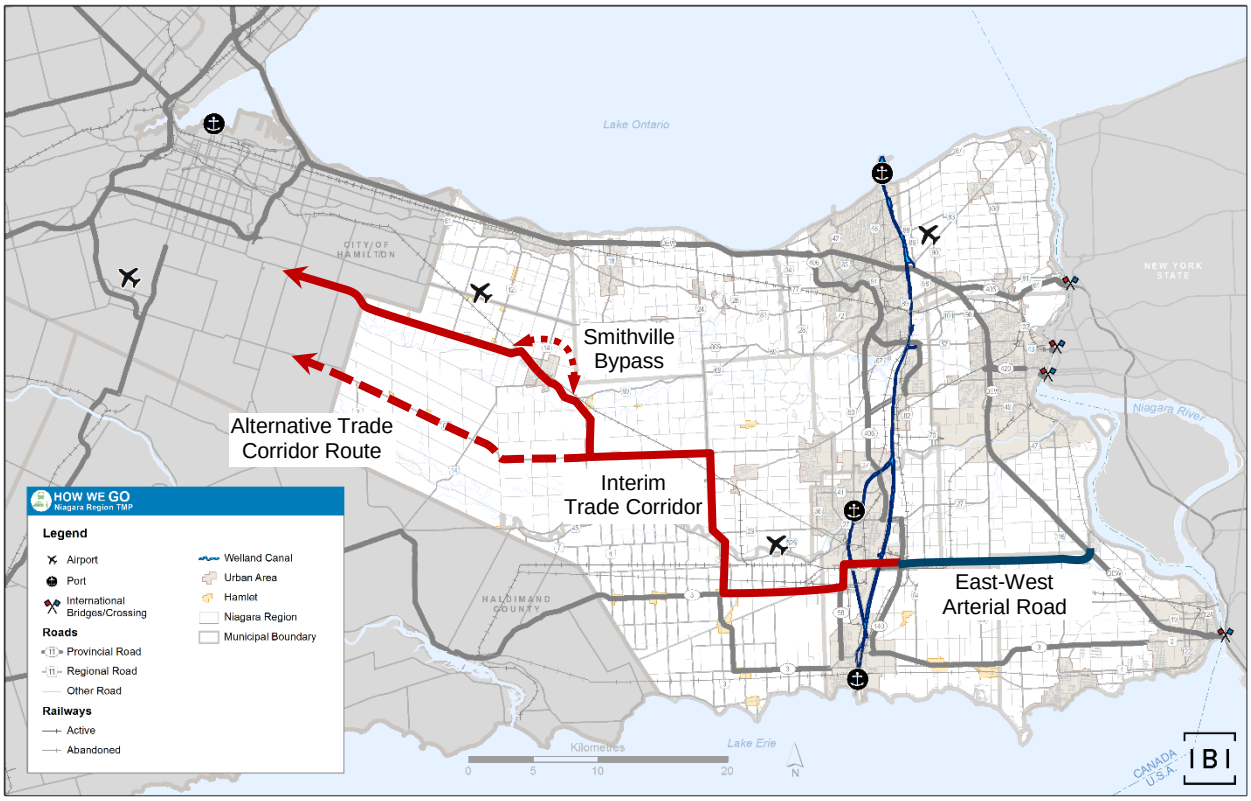
A major corridor such as the Niagara-Hamilton Trade Corridor will take a considerable time to be approved, for acquisition of the right-of-way and for construction. In the meantime Niagara Region will suffer from congestion and interruption on the QEW. The QEW is already operating close to capacity so that any perturbation in flows can cause considerable back-ups. At the present time there are no real alternative routes available to traffic seeking an alternative to the QEW. Former Highway 8 passes through the centre of many communities and has very little available capacity.

The Region should request, and work with, MTO to develop an alternative route paralleling the QEW. The potential interim route could include a combination of Highway 58, Forks Road (Regional Road 23), Victoria Road (Regional Road 24), Regional Road 65, and former Highway 20 as shown in Exhibit 6. At the west end, the interim corridor would connect to the major freeway network via the Alexander Lincoln Parkway, the Redhill Creek Expressway or Centennial Parkway in Hamilton. At the east end, the

interim corridor can connect to Highway 406/Highway 140 and QEW (via the East-West Arterial Road). A revitalized Highway 20 corridor could play a major role in providing relief when there are incidents on the QEW, as well as supporting trade and goods movement in Niagara Region.

It is recommended that the Region actively work with MTO to identify a short-term, solution to provide network redundancy through an alternate provincial trade corridor route, including a role and function study for Highway 20, including the Smithville Bypass, to assess its potential in accommodating longer-distance, inter-regional travel and goods movement.

Exhibit 6: Potential Interim Trade Corridor to be considered in Role and Function Study for Highway 20



6. Conclusion

The Niagara-Hamilton Trade Corridor provides a strategic link between Niagara Region and the GTHA. The QEW is at capacity and the planned widening of the QEW for HOV lanes will not provide sufficient capacity to accommodate projected passenger travel demands and goods movement. Additional east-west capacity for longer-distance inter-regional travel is needed to meet existing peak demands and future demands from growth.

With the increasing congestion and delays on QEW, the Niagara-Hamilton Trade Corridor provides a critical alternative to QEW and relieves traffic constraints on QEW and parallel corridors. This system redundancy is crucial in providing a resilient network that can continue to move people and goods, with the excess capacity required to

accommodate traffic incidents on QEW that would otherwise paralyse the transportation network.

There are significant challenges and considerations associated with building a new transportation corridor. The *Niagara to GTA Corridor Planning and Environmental Assessment Study Phase 1 – Transportation Development Strategy* highlights several important non-transportation considerations. These include the impacts to agricultural and fruit lands, the potential to negatively impact archeological sites in undisturbed areas, the environmental implications of new Greenbelt crossings, and major impacts on property including displacement of current residents and other land users. That being said, it is important that a route be designated and safeguarded as soon as possible before all reasonable routes are compromised.

The need for an alternate provincial facility in Niagara Region that connects the GTHA and the international border is also critical to supporting economic growth in the Region and beyond. This facility would support trade and tourism, improving access to the international border crossings and to other transportation facilities in Niagara Region.

This major corridor will require time for approval, land acquisition and construction, making it a long-term solution for the area. In the interim, while planning for the Niagara-Hamilton Trade Corridor proceeds, the Region should actively work with MTO to identify a short-term solution to provide network redundancy through an alternate provincial route, including a role and function study for Highway 20 to assess its potential in accommodating longer-distance, inter-regional travel and goods movement.