

# Niagara to GTA Corridor Planning and Environmental Assessment Study

## APPENDIX A: Individual Transportation Alternatives

*Draft for Consultation*

March 2010

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## A. Individual Transportation Alternatives

### A.1 OVERVIEW

Chapter 2 of the Area Transportation System Alternatives Report describes the existing transportation system corresponding to each mode of transportation and the alternatives that were generated by the study team and through consultation. Each of the following sections focus on each mode of transportation and includes a summary of the findings of the study team's review of relevant transportation practices in other jurisdictions, and policies and constraints that are applicable to the mode of transportation.

### A.2 TRANSPORTATION DEMAND MANAGEMENT (TDM) / TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

#### A.2.1 Relevant Initiatives in Other Jurisdictions

To facilitate the creative process, the study team's specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative 'long list' of alternatives that reflected elements of successful transportation practices used in other jurisdictions.

#### **TDM**

##### **Washington State, US – Commuter Trip Reduction (CTR)**

(Source: <http://www.wsdot.wa.gov/TDM/CTR/CTRworks.htm>)

This is a state-wide program that helps develop and promote commuting options in Washington State. The goals of the CTR Program are to reduce traffic congestion, air pollution, and fuel consumption by working with local jurisdictions and major employers to reduce drive-alone commuting. Nearly 1,100 worksites in Washington State participate in the program. The Washington State Legislature passed the CTR Law in 1991, incorporating it into the Washington Clean Air Act.

The CTR program works in collaboration with local jurisdictions, employers and the Washington State Department of Transportation (WSDOT) to reduce the number of single occupant vehicle (SOV) trips made by encouraging transit use, vanpooling, carpooling, walking, cycling, telecommuting and compressing the workweek (i.e., allowing employees to work flexible hours resulting in fewer days travelling to work). The role of the CTR program is to coordinate the activities of the participating jurisdictions and employers and assist in implementation.

In 2007, employees commuting to all CTR worksites state-wide made more than 26,000 fewer vehicle trips each weekday morning. Since many of these trips would otherwise have passed through the state's major traffic bottlenecks, their absences reduced travel delay. In 2007, CTR commuters reduced emissions of nearly 4,000 tons (3600 tonnes) of air pollution through the choices they made. They also reduced petroleum consumption by about 7.9 million gallons (29.9 million litres), saving them over US \$23 million in fuel costs.

A program such as Washington's CTR would be very applicable to the NGTA study area. However, the program would benefit from an economy of scale. Key requirements for the program include legislation to enforce program adoption by local jurisdictions and employers, and program funding (the Washington CTR cost the

state US \$5.6 million in 2007). Therefore, such a program should be considered as part of a GGH-wide plan.

## **TSM**

### **1. TSM in Europe (Denmark, England, Germany and the Netherlands)**

Based on the *Active Traffic Management: The Next Step in Congestion Management (July 2007)*, the deployment of congestion management strategies (i.e. TSM) in Denmark, England, Germany, and the Netherlands, is able to optimize the investment in infrastructure to meet drivers' needs. These strategies include:

- *Speed Harmonization* - which involves the use of an expert traffic management system to monitor travel data coming from the sensors that are embedded in the pavement of a roadway and automatically adjust speed limits when congestion thresholds are exceeded. Overhead signs provide speed limits and additional information, depending on the roadway conditions;
- *Dynamic Signing and Rerouting* - the display of warning signs and flashing lights along a roadway to alert that congestion and queues are ahead;
- *Temporary Shoulder Use* - the practice of opening the shoulder lane for temporary use to address capacity bottlenecks on the freeway network during times of congestion and reduced travel speeds. Travel on the shoulder is permitted only when speed harmonization is active and speed limits are reduced;
- *Truck Restrictions* - restrictions along a roadway on the operation of trucks or heavy goods vehicles. Examples include restricting trucks to specific lanes, prohibiting them from using particular lanes, limiting their operating speed, or prohibiting their use of the entire facility during specific periods of the day; and
- *Congestion Tolling* – toll rates are structured such that prices are assessed based upon time of day concurrent with typical or even actual periods of congestion. For example, motorists face higher charges during the peak periods and lesser charges during off-peak or shoulder periods.

In summary, the benefits resulting from the implementation of a comprehensive suite of congestion management strategies can include:

- An increase in average throughput for congested periods;
- An increase in overall capacity;
- A decrease in primary incidents;
- A decrease in secondary incidents;
- An overall harmonization of speeds during congested periods;
- Decreased headways and more uniform driver behaviour;
- An increase in trip reliability; and
- The ability to delay the onset of freeway breakdown.

## **2. Highways Agency, UK - Incident Screen**

An incident screen system generally includes a series of incident screen panels. It may be used at incident locations or in work zones, and its purpose is to block drivers' view of the incident or work activities that may distract other motorists from their driving tasks.

Research on the use of incident screen was carried out by the Transport Research Laboratory (TRL) in Area 5 (Berks, Bucks, Essex, Herts, Kent & Surrey) and Area 8 (Bucks, Herts, Beds, Essex, Cambs & Northants), East Region, UK; the research result indicated that the quick deployment and setting up of screening around serious incidents can minimize the distractions to other motorists by avoiding slowing down on the approach to the incident scene, and the likelihood of the occurrence of secondary collisions.

## **3. Quebec – Mandatory Use of Winter Tires**

Among all provinces in Canada, Quebec is the first province to adopt the regulation to make the use of winter tires between December 15 and March 15 mandatory. The goal is to reduce the number of fatalities on the road. In Quebec, all-season tire users are involved in 38 per cent of the accidents on the road in the winter, whereas these users make up roughly 10% of all drivers.

Finland, Sweden, Estonia and Latvia also have similar laws that require drivers to use winter tires to navigate snowy roads.

## **4. Virginia Department of Transportation – Reversible HOV Lanes**

Virginia Department of Transportation (VDOT) operates a series of HOV facilities, of which there are reversible barrier-separated HOV lanes in order to optimize use of highway infrastructure with significant peak directional volumes. Many lanes also have electronic message signs which display the required occupancy for using the lanes, the hours HOV restrictions are in effect, and where to enter and exit. Message signs will advise if the lanes are open or closed.

Operation requires VDOT to close all entrances to barrier-separated HOV lanes for a short time to ensure all vehicles have cleared the HOV facility before opening the lane to traffic in the opposite direction. VDOT staff drive the lanes to make sure no cars are left behind. HOV lanes also have emergency shoulders which are monitored by the Virginia State Police and VDOT's incident responders.

In 2001 VDOT adopted a policy allowing the HOV lanes to be opened to general-purpose traffic for incidents that obstruct traffic for more than 10 minutes. VDOT has estimated average time saving of approximately four minutes per vehicle when the HOV lane is opened to general-purpose traffic during incidents.

The applicability of reversible lanes requires significant peak commuter directional flows in a specific direction (e.g. high eastbound volumes during the a.m. peak period and high westbound volumes during the p.m. peak period). Given the multi-functional role of an inter-regional transportation corridor serving commuter, recreational/tourism and goods movements in the NGTA study area, it is not expected that there will be significant directional flow distributions. Thus, reversible HOV lanes are not an applicable measure to significantly improve capacity in the NGTA study area.

## A.2.2 Related Policies

In Canada, there is an increasing awareness of the importance of TDM and TSM as innovative strategies to optimize transportation infrastructure. As such, TDM and TSM are becoming key components of the transportation planning process for all government agencies, municipalities and regions. Background document and internet review was undertaken by the study team to identify TDM and TSM plans and policies implemented in or adjacent to the NGTA study area. Phone interviews were also undertaken with local public agencies and transportation service providers.

The following is a summary of the existing policies that support the development and implementation of TDM / TSM measures in the province of Ontario:

### 1. Metrolinx

The following are a few of the key TDM / TSM initiatives identified in the *Regional Transportation Plan (RTP)*:

- a. *Smart Commute* – Its mission is to reduce traffic congestion and to take action on climate change through transportation efficiency. The Smart Commute program encourages employers and commuters to explore more sustainable transportation choices like carpooling, teleworking, transit, cycling, walking or flexible work hours.
- b. *BikeLinx* - is one of the Metrolinx green initiatives. It is designed to accommodate and encourage trips which combine cycling and public transit throughout the GTHA. Funding for the program is part of Ontario's financial commitment to the Metrolinx Quick Wins initiatives, confirmed in the March 2008 Budget. GTHA municipalities will be able to equip each bus in their fleet with a bicycle carrying rack. In addition, Metrolinx will provide funds to purchase and install permanent, secure and / or sheltered bicycle parking facilities, including bike lockers, in strategic locations throughout the region.
- c. *Trip Planner* – Metrolinx will collaborate with GO Transit, TTC and other transit and transportation providers across the GTHA to implement a one-stop integrated trip planner system hosted by [www.metrolinx.com](http://www.metrolinx.com). The trip planner will provide convenient links to real-time traffic and weather conditions, traffic incident reports, as well as airport and border crossing delays.
- d. *Enhance and Expand Active Transportation* – Metrolinx is planning complete, contiguous and integrated cycling and walking networks that address key barriers such as lack of bridges over freeways, rail corridors and rivers. Other initiatives include BikeLinx, intersection improvements, and a region-wide bicycle registry to facilitate searches for stolen bikes.
- e. *Improve the Efficiency of the Road and Highway Network* – The plan for the regional highway network will involve implementing multi-purpose reserved lanes, such as HOV lanes, with the potential for creating HOT (high occupancy / toll) lanes. Metrolinx also plans to expand video and computer-aided traffic monitoring, ramp metering, and traveler information systems to the complete regional highway network and continuing to construct additional carpool lots at strategic locations aligned with the HOV and regional / inter-regional transit

network. Finally, Metrolinx is working to have the *Ontario Public Vehicles Act* amended to allow third parties to provide vanpool services.

- f. *Create an Ambitious Transportation Demand Management Program* – will include: developing TDM strategies for agencies such as school boards, hospitals and universities, establishing guidelines and model policies that municipalities may incorporate into their Official Plans and transportation master plans, encouraging employers to implement TDM programs and to offer cash or subsidized transit fare in lieu of free parking, and requiring Official Plans to include a TDM strategy for all major developments.
  - g. *Create a Customer-First Transportation System* – The traveler information system will incorporate up-to-date information and trip planners for the entire system and will be easily accessible online, by telephone and by Smartphone.
  - h. *Build Communities that are Pedestrian, Cycling and Transit-Supportive* – Metrolinx will support the implementation of mixed-use development, sidewalks and bicycle lanes through municipal plans to promote pedestrian, cycling and transit-supportive development.
2. **Ministry of Transportation – Ontario Transportation Demand Management Municipal Grant Program** – The program provides financial assistance to Ontario municipalities for the development and implementation of TDM plans, programs, and services that promote alternatives to driving alone such as cycling, walking, transit, or carpooling.
  3. **Transport Canada – The \$10-million eMOBILITY program** – makes funding available to municipalities and regional transportation authorities as part of the contribution program.

### **A.2.3 Other Relevant Issues / Constraints**

#### **TDM**

Based on the study team's review of relevant TDM / TSM practices as well as the feedback from interviews with local public agencies and transportation service providers the following issues have been identified:

- a. Need for an enhanced / comprehensive transportation network to support TDM / TSM initiatives and promote behavioural changes. It is anticipated that TDM success is directly linked to the other transit and active modes such as construction of more HOV lanes, bus lanes, enhanced bus service, and comprehensive bike networks.
- b. Engage greater area municipality participation to champion / for advocacy at the resident and corporate levels.
- c. In order to modify motorist behaviours, it is important to continuously develop the transportation network while aggressively advocating TDM.
- d. It will be beneficial to target bigger markets as it is easier to inspire behavioural change to travel in bigger communities / markets. It is also easier to fund in bigger markets as there will be greater resources.

- e. Although TDM funding is generally not an issue at Smart Commute there is still a list of desirables / wish list items that would like to be achieved, and funding has to be continuously monitored. Also, it is important to allow easier access to funding.

Other thoughts for consideration include:

- o Metrolinx' service area currently only covers the Greater Toronto and Hamilton Area (GTHA), including the metropolitan region that stretches from York and Durham, through Toronto, Peel, Halton and onward to Hamilton. Thus, Smart Commute's funding is not available for programs outside of the GTHA. *Despite this limitation, Smart Commute can assist with knowledge dispersion, providing background materials / toolkits, and presenting information to interested parties. Also, the Carpoolzone.ca website for carpool matching is available province wide.*
- o Smart Commute is a partnership between Metrolinx and the cities and regions of the GTHA. Under Smart Commute, there are numerous Transportation Management Associations (TMAs) that coordinate and roll-out TDM initiatives in different areas within the GTHA. However, it is recognized that there is currently no standard amongst the various TMA operations.
- o The principal opportunities for active transportation in the NGTA study area involve reducing the demand for short distance travel on the highway network and in increasing accessibility for active modes to freight inter-modal options, such as transit or carpool lots. The main limitation of active transportation is that it does not contribute to the primary study goal of addressing longer distance travel demand. In addition to improving the safety of active transportation, initiatives to improve freeway crossings for pedestrians and cyclists, if coordinated with local municipal bicycle plans, can reduce automobile demand in and around freeways.

Currently, all regions in the NGTA study area have or are developing bicycle networks, most of which currently or will allow cyclists to travel long distances via paved shoulders, dedicated bicycle lanes or trail systems. Many of these plans have been developed with the consideration of improving connections between neighbouring jurisdictions. The development of these bicycle networks is consistent with *The Growth Plan* and *The Big Move*. In addition, a number of municipalities and Go Transit are improving bicycle storage facilities on buses and at transit stations.

### **TSM**

As noted in the previous section, some of the TSM measures have already been implemented on some sections of the existing highway network such as QEW, Highways 401, 403 and 407, but are only available in the GTA and the immediate areas.

## **A.3 TRANSIT**

### **A.3.1 Relevant Initiatives in Other Jurisdictions**

To facilitate the creative process, the study team's specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative 'long list' of alternatives that reflected elements of successful transportation practices

used in other jurisdictions. The following provides a brief summary of the findings of this exercise:

## 1. Translink

(source: [www.translink.ca](http://www.translink.ca))

The South Coast British Columbia Transportation Authority (commonly referred to as Translink) is Metro Vancouver's regional transportation authority. It is responsible for regional transit, cycling and commuting options as well as AirCare and Intelligent Transportation System programs.

Translink: in its role in designing, coordinating and generally overseeing all manners of transit and transportation in the large Vancouver area has several legislated powers such as power to impose a parking sales tax (21%), a motor fuel tax (15 cents per litre), tolls (such as Golden Ears Bridge set at \$2.75 with transponder and \$3.30 without) and property taxes. These powers allow Translink to generate a constant source of revenue around which it can better plan. In 2008, it generated some \$939 million from fares, advertising and all taxes and levies.

In the GTHA, Metrolinx (including GO Transit) plays a similar role to that of Translink in Metro Vancouver in that they both oversee multi-modal transportation related matters on a regional basis. The feasibility of incorporating the revenue generation methods used by Translink into the Metrolinx mandate may be worthy of further consideration as the basis for funding some or all of the RTP.

## 2. Calgary Transit

(source: [www.calgary.ca](http://www.calgary.ca))

The City of Calgary has plans to manage city growth and to promote more compact, mixed use developments to support sustainable travel choices such as walking, cycling and transit.

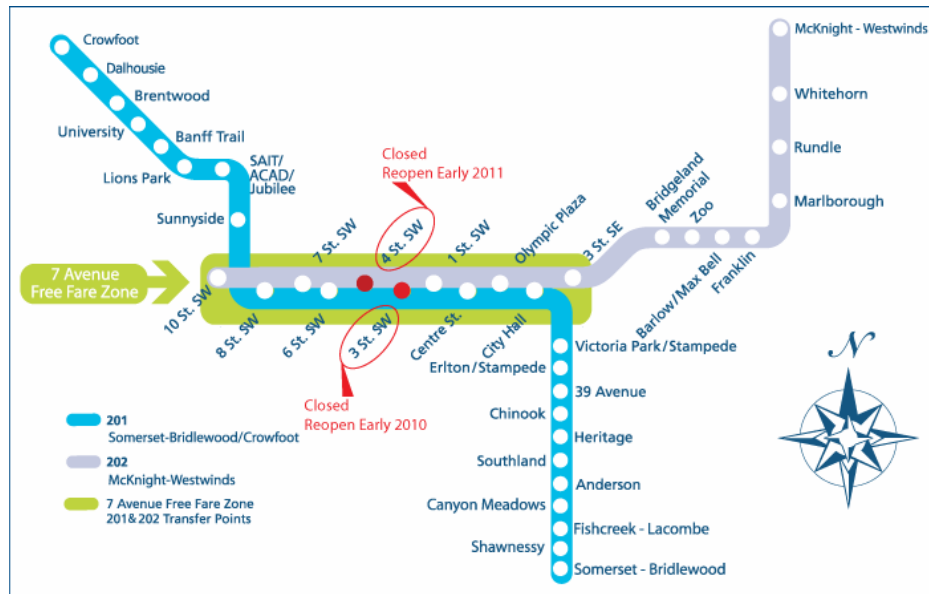
Calgary is constantly working on fostering public transit and this is evident in its high level of transit ridership - the highest ridership, for a light rail system, in North America. Overall, in 2008, Calgary Transit carried 95.3 million passengers.

The City restricts parking within its limits, generates enough electricity from wind mills to run the entire light rail system making it a virtually zero-emissions transit system. It also has a transit-oriented development policy.

Attributes of the successful Calgary Transit model that are relevant to the GTHA include the implementation of policies that promote transit use in land use planning. This includes the parking restrictions (maximum parking supplies can be identified, similar to that currently dictated in the downtown core of the City of Toronto), and implementation of a transit-oriented development policy. The lower-tier municipalities in the GTHA can implement these transit conducive policies (parking strategies, transit-oriented designs), in areas of higher-order transit facilities in order to foster reduced auto usage.

An overview of Calgary's Light Rail Transit Line is provided in **Exhibit A-1**.

Exhibit A-1: Calgary's Light Rail Transit Line



### 3. San Francisco, California - BART

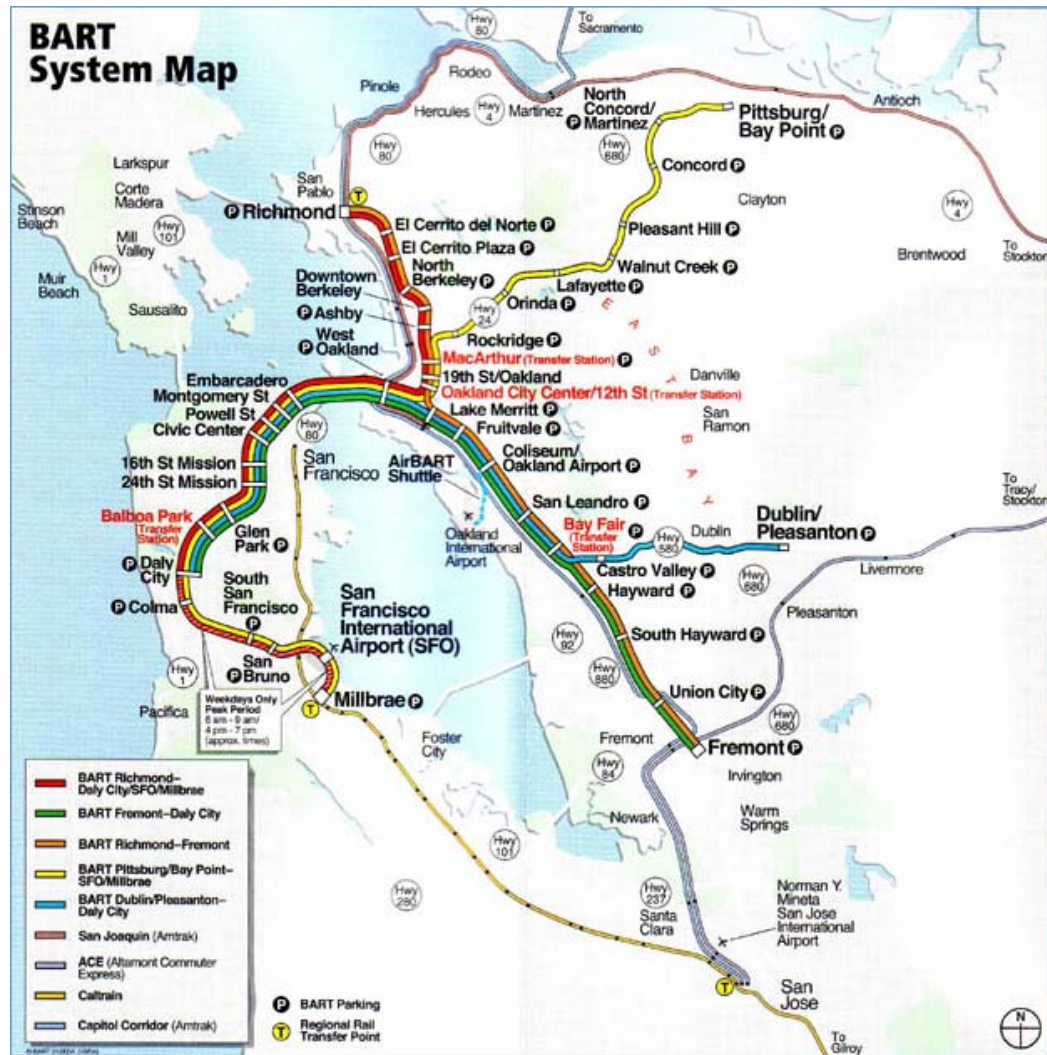
(Source: <http://www.bart.gov/about/reports/index.aspx>)

The Bay Area Rapid Transit (BART) system in San Francisco is a 167 kilometre long linear metro network with branching lines to outlying suburbs. It is an electric heavy-rail public transit system that combines the characteristics of a metro and a commuter rail.

This type of transit system is not expected to address the problems and opportunities of the NGTA study area, because there are already key corridors (rail and highway) that connect the urban centres from Toronto to Niagara. However, some of the principles may be applied to a comprehensive transit solution, such as electrification of heavy rail lines, dedicated passenger rail right-of-way, and branched service that provides greater service in the interlined portions of the route (i.e. where two or more transportation lines are present) and less service in the branches where demand is less.

An overview of the BART system in San Francisco is provided in **Exhibit A-2**.

Exhibit A-2: BART System Map



#### 4. Tokyo, Japan – Shinkansen High-Speed Rail

(Source: *Features and Economic and Social Effects of the Shinkansen, Japan Railway & Transport Review*, October 1994; Central Japan Railway Company, <http://english.jr-central.co.jp/company/company/achievement/transportation/index.html>)

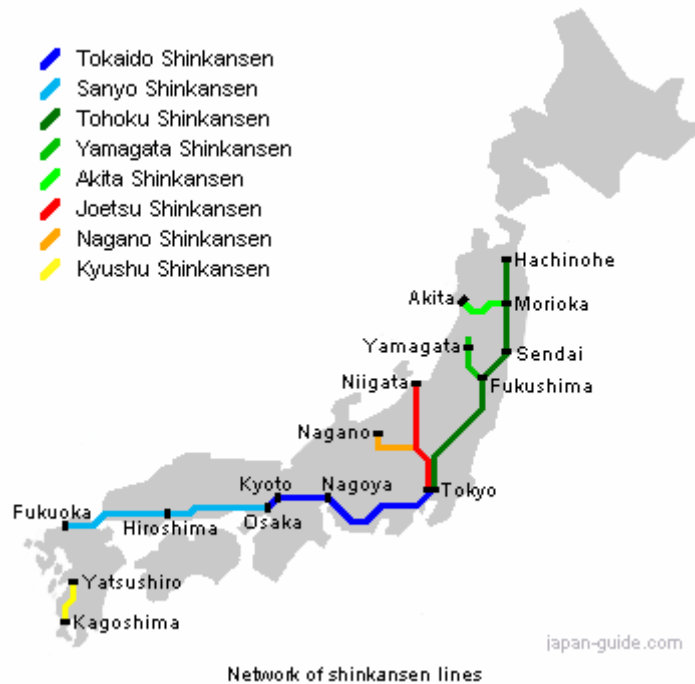
The Shinkansen high-speed electric rail network in Japan has been in operation since 1964. Although the network can be considered an inter-regional transit system due to the distances that are covered, its short travel times, relatively short station-spacing, service frequency and reliability make it comparable to a commuter rail system as well.

The Shinkansen system takes advantage of the natural and urban geography of Japan. The nation is linearly-oriented and the majority of urban centres lie on the east coast. This allows for a high number of potential passengers per kilometre of track. The urban centres are also very densely populated, and generally are well-served by urban transit systems, facilitating connections from feeder systems to the Shinkansen. Finally, the network implements policies that are recognized to

increase the relative attractiveness of transit systems – it is reliable, frequent, comfortable and has competitive travel times. These factors allow the Shinkansen to capture a high ridership and command relatively high fares. Some principles that have made this system successful could be considered for the NGTA study area such as the integration of inter-regional and commuter service as a land use planning principle. This would help to promote a more transit oriented demand profile in the NGTA study area.

A map of Japan's Shinkansen High-Speed Rail is provided in **Exhibit A-3**.

**Exhibit A-3: Japan's Shinkansen System Map**



## 5. Marine Transit

There are a variety of marine transit systems that are operated by other jurisdictions in North America.

Manhattan Island is served by a network of frequent and multiple ferry route alternatives operated by the New York Waterway across the Hudson River and Upper Bay. The network provides links across to significantly populous areas and major destinations, with well-established transit network at both trip-ends in New Jersey and on Manhattan Island.

Seattle and area is served by a network of ferries across Puget Sound that is managed by the Washington State Department of Transportation. The ferry network is oriented to the City of Seattle with links to major destinations such as the Municipal Airport, other communities and Vancouver Island.

Halifax and Dartmouth, Nova Scotia are served by a ferry system across Halifax Harbour that is managed by the Halifax's MetroTransit. The ferry network has a single terminal in Halifax and two terminals in Dartmouth.

In recent years, there was an initiative to investigate the feasibility of a Lake Ontario high-speed commuter ferry service generally connecting the Toronto area with the Niagara peninsula. The initiative was known as the WaveTrain but did not materialize into a commuting option for travellers in the GTHA.

The WaveTrain study reported the following findings:

- The Lakeshore West corridor from Hamilton to Toronto offers the best opportunity for high speed ferry commuter service but would need to compete against current GO rail service;
- A cross lake high speed ferry service could be viable only if the number of commuters from the Niagara Region to Toronto increased significantly;
- A cross lake service based on existing land use and employment trends (at that time) could not be economically viable on a “commuter only” basis; and
- Focus groups were concerned with safety and reliability of the ferry service and with connectivity between docks and TTC Union Station in Toronto.

Based on the limited potential at the time, the WaveTrain proposal did not go forward to implementation.

Beyond the WaveTrain proposal, there have been other attempts to establish ferry service between Toronto and Niagara Region, but all were unsuccessful. This included the Sunrise VI, a passenger hydrofoil providing ferry service for passengers between Toronto and Niagara Region in June 1998 with routes from Toronto to Port Dalhousie, and from Niagara-on-the-Lake and Toronto to Lewiston, New York. It was licensed for 66 passengers and the journey was approximately one hour. Its operation stopped in 1998 due to inability to function in poor weather conditions.

Also in 1998 Waterways Transportation Services Corporation began operating a 300-passenger catamaran six times a day between Jordan Harbour, in Niagara Region’s wine country and Toronto. In the same year, Shaker Cruise Lines also offered a 70-passenger hydrofoil service between Toronto and St. Catharines, Port, Port Dalhousie and Lewiston, New York. However due to various factors, both of these initiatives were short lived.

The key mechanism driving the success of these ferry alternatives is that auto-based travel is poor, while commuter ferry travel is frequent, flexible and fast. Further, the areas are generally linked with urban centres providing for reasonable ridership and revenue viability.

### **A.3.2 Related Initiatives / Policies within the NGTA study area**

In the province of Ontario, there is an increasing awareness of the importance of transit as part of any transportation strategy. This is evidenced by the commitment to transit as the first priority in the province’s *Growth Plan*, as well as the development of the transit focused *Regional Transportation Plan (RTP)*.

This commitment to transit is also being adopted by the municipalities within the NGTA study area in developing their transportation master plans and associated policy documents, as described below.

## 1. City of Hamilton – Rapid Transit Program

The City of Hamilton is developing a rapid transit network as identified in the City's Transportation Master Plan. Hamilton has already implemented Bus Rapid Transit (BRT) improvements such as transit signal priority, low-floor vehicles, HOV and queue jump lanes on one line and these will be implemented on an additional line in the near future. The City plans to eventually upgrade these and additional lines to full BRT systems and eventually to Light Rapid Transit (LRT), as ridership increases.

## 2. Niagara Region – Integration of Regional Transit Services

Transit in Niagara Region is currently provided by the individual member municipalities. The Region has initiated a study to investigate the feasibility of integrating transit service across municipal borders and connect the 12 municipalities of the Region.

## 3. Region of Halton – Transportation Master Plan (TMP)

Halton Region's TMP identifies several strategies including:

- Continue to encourage the introduction of HOV lanes on Highways 403 and 407 through Halton, as part of a GTA-wide HOV network;
- Introduce new HOV lanes on Dundas Street (between Highways 403 and 407) and Trafalgar Road (between Oakville GO station and Highway 407) as HOV lanes with 2+ eligibility in the short-term, and introduce HOV lane eligibility with 3+ occupants across the network by 2021;
- Facilitate the provision of local transit services within the Region in support of the inter-regional transit corridors; and
- Explore opportunities to introduce transit priority measures through further studies and in conjunction with local transit service providers.

### A.3.3 Other Relevant Issues / Constraints

From a broad perspective, one of the key factors contributing to the utilization of transit services is the associated land use in the vicinity of the service. High population and employment densities are critical to realizing a high utilization of transit. The provision of these densities particularly in communities in proximity to the GTA is a core objective of the Province's *Growth Plan*.

Further to the above, representatives from several transportation service providers, municipalities and other government agencies including the Cities of Niagara Falls, St. Catharines, and Hamilton, and Metrolinx (including GO Transit) were interviewed.

Based on the research and input from the interviewees, the following key points were identified as the primary barriers to implementing an effective transit system in the area:

- a. Need for consistent transit policies and practices across municipalities and regions in the NGTA study area, such as permitting neighbouring municipalities to enter each other's jurisdictions, coordinating schedules and service times to facilitate transfers, and creating fare structures that enable multi-jurisdiction transit trips to be competitive with other travel modes;

- b. Need for improved coordination between public transportation (local and inter-regional) and transit service providers;
- c. Constraints of property acquisition;
- d. Control / source of capital and operating funds to support transit improvements; and
- e. Need to identify funding priorities related to the inter-regional transit system and creating an implementation schedule.

In order to address these concerns, two broad types of system improvements can be made:

- **Inter-regional Network Improvements:** Ensure a high quality inter-regional transit network by improving the existing transit infrastructure, strengthen transit-supportive elements such as land use policies and freight inter-modal connections, and enhance transit connections between regions.
- **Inter-municipal Improvements and Integration:** Consolidate transit services between neighbouring municipalities in order to promote seamless and integrated transit service.

## A.4 FREIGHT RAIL

### A.4.1 Relevant Initiatives in Other Jurisdictions

To facilitate the creative process, the study team's specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative 'long list' of alternatives that reflected elements of successful transportation practices used in other jurisdictions.

#### 1. European Union – Development of the Community's Railways

The "First Railway Package" (Directive 91 / 440 / EEC) was issued in 1991, which separated the management of railway operation and infrastructure from the provision of railway transport services. It established access rights to the whole European rail network for international freight services, encouraging competitiveness and market opening. Essential functions such as allocation of rail capacity infrastructure charging and licensing must be separated from the operation of transport services and performed in a neutral fashion to give new rail operators fair access to the market.

Additionally, EU legislation gives rail operators the ability to run services in and between other EU countries, enabling cross-border competition. For international rail passengers, the EU will open up the market as of January 2010. Any licensed, certified rail company established in the EU will in principle be able to serve passengers at any station along the international route.

The separation of railway infrastructure from railway services could encourage new services to operate within the NGTA study area, including passenger and goods movements.

## 2. European Union – Rail Infrastructure Programmes

**European Rail Traffic Management System (ERTMS)** – As part of the EU's TEN-T (trans-European transport network) programme, a number of multi-country rail projects are underway, six of which include ERTMS.

One aim for the rail sector is to upgrade by 2012–2015 a number of important freight routes by deploying ERTMS. The six routes carry around a fifth of Europe's rail freight traffic.

## 3. Rolling Highway

A Rolling Highway is a European concept that involves transporting road vehicles, generally trucks, with their drivers by rail. This is a variation on the concept of Trailers on Flat Cars (TOFC) and ultimately of freight inter-modal containers. The concept has the potential to operate over relatively short distances, allowing trucks to be transported by rail instead of using the road network.

In general, truck operators do not favour such systems due to their cost and need to meet fixed schedules. Without a significant physical obstruction, such as the English Channel or the Alps, a Rolling Highway system is less likely to be successful.

The two Class 1 Railways in Canada are presently offering variations on this type of service. CP offers the Expressway service, which allows shippers to move standard, non-reinforced truck trailers in high-volume corridors. Expressway hubs are located in Toronto, Montreal and Detroit. CN offers a similar service using bi-modal RoadRailer trailers, suitable for truck and rail, linking Montreal and Toronto through to Chicago. Both of these services require truck cabs to move trailers at the terminal ends. The success of these services is still not yet certain in the Canadian market, and there could be potential for increased use in the NGTA Corridor.

### A.4.2 Related Policies

Rail operations in Canada are subject to economic regulation by the Canadian Transportation Agency under the Canada Transportation Act (the CTA); safety regulation by the federal Minister of Transport under the Railway Safety Act and certain other statutes; and security regulation by the Canada Border Services Agency (CBSA). In addition, provincial governments are increasingly involved in owning and operating passenger services in certain rail corridors, through provincial agencies such as Metrolinx. GO Transit which has recently been merged with Metrolinx, has purchased rail corridors and this is likely to continue in the future.

## 1. Rail Corridors

As rail is regulated by the federal government, existing provincial transportation policy does not explicitly address rail corridors. Rail corridors require protection as important elements in the overall development of transportation services in the province. Increasing provincial involvement could be beneficial in rail corridor protection. In particular, there may be financial and related policy tools available to provincial governments to promote certain services (e.g. rolling highway) which shift freight from road to rail.

Changes to rail corridor protection policies would be expected have a minor potential to address the NGTA study area's problems and opportunities, and the study has a low potential to influence national regulations. Ontario's policies and directives to municipalities are important, however, in the implementation of national policy.

## **2. Rail Grade Separation**

Under the *Canada Transportation Act*, the Canadian Transportation Agency (CTA) is responsible for making cost apportionment decisions concerning the construction and reconstruction of grade separations when the parties involved in the project are unable to reach an agreement.

The CTA has set out principles for apportioning these costs. For example, if a grade separation is to be constructed or an existing grade separation is to be reconstructed, the construction costs are normally apportioned as 85% road authority and 15% railway company. These contributions can reduce the railway companies' capital available for other investments and such costs are transferred to customers, increasing the price of shipping.

Similar to rail corridor protection, changes to rail grade separation policies would be expected to have a minor potential to address the NGTA study area's problems and opportunities, and this study has a low potential to influence national regulations. Ontario's policies and directives to municipalities are important, however, in the implementation of national policy.

## **3. Adjacent Land Use**

When land owners decide to change land uses adjacent to a rail corridor, plans must be submitted to the local municipality and approval sought to proceed. As an adjacent land owner, the railways can comment on the acceptability of revised land uses.

The railways have developed adjacent land use information and best practices known as Proximity Issues. This industry reference sets out acceptable adjacent land uses that the railway will find acceptable as an adjacent land owner. It seeks to address the main variations of proposed adjacent land use and mitigation measures that the industry would accept between the differing land uses of the proposed project and the industrial rail corridor, and to enable better communication between all parties involved.

Changes to adjacent land use policies would be expected to have a minor potential to address the NGTA study area's problems and opportunities; the study has some potential to influence municipal level regulations. The government of Ontario's policies and directives to municipalities are important, however, in the implementation of national policy.

### **A.4.3 Other Relevant Issues / Constraints**

From a broad perspective, the utilization of rail for goods movements is constrained by the limited flexibility offered by this mode in terms of origin and destination, and by the time required to make the trip via rail versus another mode such as by truck. As an example, goods movement by track becomes efficient from a time perspective for

distance greater than 500 km. In addition, a number of other factors are important for the use of freight rail transportation for goods movement.

**Security issues** are becoming an increasingly important and expensive issue for railways, as is the case for all modes of transportation. This is most evident at international border crossings. US and Canadian border patrol have been increasing their rules on railway movement between the US and Canada. The railways are concerned that additional security-related measures are becoming more burdensome than those being applied to other competing modes of transportation.

**Coordination of goods movement planning** was identified as an issue by the rail operators. As different parties are responsible for planning of the railways, road networks and other modes, it can be difficult to coordinate planning to ensure that goods and people are moved more efficiently and effectively.

**Inconsistency of regulations** was also identified as an issue by rail operators, including potential for duplication of effort between Canadian and US customs, decreasing efficiency of goods movement, the lack of a harmonized protocol for goods inspection procedures for all cargo shipments, and inconsistent load limitations and weight restrictions amongst railway companies.

**Insufficient and / or inefficient freight inter-modal road connections** can constrain inter-regional goods movement by rail freight, due to limited connections and capacity constraints at such locations, as well as the capacity of the connecting higher order road transportation systems.

Changes to address these issues and constraints could potentially contribute to improving rail transportation services in the NGTA study area and thereby addressing the transportation problems and opportunities. As these are global issues, however, the study has a low potential to influence such changes. The exception is freight inter-modal connections: improvements have a high potential to address the problems and opportunities, and this study has a high potential to influence such changes.

## A.5 MARINE

### A.5.1 Relevant Initiatives in Other Jurisdictions

To facilitate the creative process, the study team's specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative 'long list' of alternatives that reflected elements of successful transportation practices used in other jurisdictions.

#### 1. Port Inland Distribution Network, Port of New York / New Jersey

The Port Inland Distribution Network (PIDN) is a planned system for distributing containers moving through the Port of New York and New Jersey. This system is designed to move containers to inland sites linked by barge, dedicated rail or truck; improving the landside distribution of increased volumes of containers predicted for the port. The goals of the network are to reduce inland distribution costs, reduce reliance on truck trips, improve air quality, increase throughput capacity, and increase market share.

Prior to implementation, about 84% of the containers passing through the port were transported by truck. With all of the ports on line in 2020, the percentage of maritime containers moved by truck could be reduced to 57%<sup>1</sup>.

Given the convergence of the rail, marine and highway modes of transportation in the Port of Hamilton, as well as the close proximity of the Hamilton International Airport, there may be an opportunity to develop a formal multi-modal distribution network centered in the Hamilton area that could benefit the freight inter-modal transportation of goods to / from Montreal and keep containers on the marine transportation system for as long as possible.

## **2. Commission of the European Communities' Programme for the Promotion of Short Sea Shipping**

Recognizing the potential growth in shortsea shipping in the European Community, a program was developed to promote it throughout the European Union (EU). The program, developed in 2003, includes 14 legislative, technical and operational actions with the objective to improve shortsea shipping's efficiency and overcome obstacles to its development.

### Legislative Actions

1. Implementation of the Directive on certain reporting formalities for ships to arrive in and / or depart from ports in the Member States (IMO-FAL)
2. Implementation of the Marco Polo programme, which aims to support commercially-oriented services in the freight transport market and finance actions involving candidate countries
3. Standardization and harmonization of freight inter-modal loading units
4. Motorways of the Sea
5. Improving the environmental performance of Short Sea Shipping

### Technical Actions

6. Guide to Customs Procedures for Short Sea Shipping.
7. Identification and elimination of obstacles to making Short Sea Shipping more successful than it is today
8. Approximation of national applications and computerization of Community Customs procedures
9. Research and Technological Development

### Operational Actions

10. One-stop administrative shops.
11. Ensuring the vital role of Short Sea Shipping Focal Points.
12. Ensuring good functioning of and guidance to Short Sea Promotion Centres.
13. Promote the image of Short Sea Shipping as a successful transport alternative.
14. Collection of statistical information.

Although a number of activities regarding shortsea shipping have been initiated in Canada, a bi-lateral, detailed program aiming to address specific issues and obstacles could increase its usage for goods and people movement. Note,

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<sup>1</sup> Port Authority of New York and New Jersey, Press Release December 13, 2002

however, that there are significant differences in conditions in Europe and North America, including population density, road and rail infrastructure and the management of the shared rail network between passenger and freight traffic.

### **3. European Union’s MOSES Project (Motorways of the Sea European Style)**

The MOSES Integrated Project is another of the Programme’s Legislative Actions and was launched in June 2007. It is a three-year research project of over €14 million total budget co-funded by the European Commission DG Transport and Energy. MOSES targets a significant increase in the market share of shortsea shipping and freight inter-modal transport, by developing a blueprint for an innovative network of Motorways of the Sea which includes: developing seamless freight inter-modal connections; proposing and promoting future oriented logistics solutions; and contributing to harmonized laws and regulations facilitating freight inter-modal transport.

The focus is not only on technology improvements but an integrated approach, linking research and practical development in the technological areas of infrastructure, equipment, and Information and Communication Technologies (ICT), with research and practical development in the domains covering organizational, economic, regulatory, and marketing issues.

### **4. America’s Marine Highway Program**

The goal of America’s Marine Highway Program is to help accelerate the expanded use of the national network of corridors to transport more freight and passengers in a greener, more efficient and responsible manner. The *American Recovery and Reinvestment Act* of 2009 includes discretionary funds for the surface transportation system, including America’s Marine Highways. The Act provides \$1.5 billion in discretionary funds for capital investments in US surface transportation infrastructure, to be made available until September 2011. Eligible projects for funding include port infrastructure investments and projects that connect ports to other modes of transportation while improving the efficiency of freight movement, as well as road and rail investments.

### **5. Amalgamation of Ports in Vancouver**

In 2008, the Fraser River Port Authority, the North Fraser Port Authority and the Vancouver Port Authority amalgamated to become the Vancouver Fraser Port Authority (VFPA). This is a policy measure under the Government of Canada’s Asia-Pacific Gateway and Corridor Initiative, as the amalgamated port is well positioned to contribute to the Initiative’s objectives through better coordination on port planning and the opening up of new investment opportunities to facilitate circulation of goods to and from foreign markets. The VFPA’s jurisdiction encompasses the combined land, water and assets of the previous three Port Authorities. The VFPA also has greater resources for land acquisition, river management and strategic infrastructure investments. The amalgamated port is now Canada’s largest and the fourth largest port in North America by tonnage<sup>2</sup>.

Improved coordination could be a way to improve the distribution of goods throughout the GGH, resulting in better use of the marine infrastructure as well

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<sup>2</sup> Vancouver Fraser Port Authority website – Port Overview  
(<http://www.portmetrovancover.com/about/portoverview.aspx>)

as the connecting travel modes of rail and road. More consolidated port planning could also open up new investment opportunities. Further investigation would be required regarding matters including feasibility of further coordination, advantages of port competition, etc.

## **A.5.2 Related Policies**

### **1. US Harbour Maintenance Tax**

The US Harbour Maintenance Tax (HMT) was enacted by Congress in the Water Resources Development Act of 1986. It is levied on all commercial vessels passing through federally maintained channels and imposes a 0.125% tax of the value of vessel's cargo, paid by the cargo owner. Its purpose is to generate revenue for port maintenance conducted by the US Army Corps of Engineers.

As this tax is only applied to cargo moving by ship, it is a disincentive to move freight by water. This barrier is widely recognized by the marine shipping industry. Movements on changes to the HMT have been ongoing in the US. In January 2009, two bills were introduced for Harbour Maintenance Tax exemptions. The 'Short Sea Shipping Act of 2009' would exempt commercial cargo, other than bulk cargo, moving between US ports and between the US and Canada on the Great Lakes St. Lawrence Seaway System. The 'Short Sea Shipping Promotion Act of 2009' would exempt cargo contained in freight inter-modal cargo containers moving between US ports and between the US and Canada on the Great Lakes St. Lawrence Seaway System. Both bills are in the first step of the US legislative process.

Changes to this tax would be expected to have a minor potential to address the transportation problems and opportunities in the NGTA study area, and as a US tax, the NGTA Corridor Planning and EA Study has a low potential to influence it.

### **2. Cabotage Laws**

Cabotage laws generally deal with the right to trade or transport in coastal waters or between two points in a country. They are intended to assist with the participation of a country's citizens in its own domestic trade, the presence of a strong merchant marine for defense and general economic support<sup>3</sup>. Cabotage laws are enacted to require freight and passenger traffic to be carried on nationally registered and sometimes built and crewed ships.

Canada's *Coasting Trade Act* of 1992 reserves marine transportation of goods and people between two points in Canada, as well as any other marine activity of a commercial nature, to Canadian registered duty-paid ships. If it is demonstrated that no Canadian vessel is available for the specific activity, foreign-built vessels are permitted with a 25% import duty on the full vessel price. Despite the tariff, the Canadian shipbuilding industry continues to suffer a decline in business and many ship-owners find it cheaper to have ships built abroad,

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<sup>3</sup> Transport Canada, Policy Group: A Review of Regulations Governing Use of International Marine Containers in Canadian Domestic Cargo Carriage (December 2005)

even after the import duty is included<sup>4</sup>. Vessel refitting and repair generally constitute the core business of Canadian shipyards.

Under the US Cabotage laws known as the Jones Act, marine vessels transporting cargo, engaged in dredging, towing, salvage, fishing, and other marine operations are required to be built, owned, operated and manned by US citizens and to be registered under the US flag.

The marine cabotage laws serve as a constraint to shortsea cargo transport operations in Canada. They can result in higher shipping rates for coastal or shortsea service and prevent them from being able to compete effectively with other modes. The difficulties associated with bringing in new vessels can be a barrier to expansion or introduction of new marine transportation services. It is considered that this is among the most important issues impacting the Ontario marine transportation industry<sup>5</sup>.

Changes to cabotage laws would be expected to have a minor potential to address the transportation problems and opportunities in the NGTA study area, and as Canadian national law, the current study has a low potential to influence it.

### **3. Advance Notification Rules at Canada-US Border**

The Canadian Border Services Agency's (CBSA) Advance Commercial Information (ACI) Program requires marine carriers to electronically transmit marine cargo data to the CBSA 24 hours prior to loading cargo at a foreign port. If the voyage is less than 24 hours in duration, the cargo and conveyance data must be reported at the time of departure from the foreign port. This requirement is intended to allow the CBSA to identify threats to Canada's health, safety, and security.

US Customs and Border Protection (CBP), through the *Trade Act of 2002*, requires advanced notification of cross-border shipments. Under this act, container, bulk and CBP-approved break-bulk carriers are required to electronically transmit shipment manifests to CBP via Vessel Automated Manifest System (AMS) prior to arrival in the US.

Similar to the policies above, changes to border notification rules would be expected to have a low potential to address the transportation problems and opportunities in the NGTA study area, and as Canadian and US national regulations, the current study has a low potential to influence it.

### **4. Environmental Ballast Water Regulations**

Ballast water is carried in un-laden ships to provide stability. At destination, cargo is loaded and the ballast water, potentially carrying harmful stowaway organisms, is pumped out.

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<sup>4</sup> Transport Canada, Canada Transportation Act Review 2001, Chapter 8 (<http://www.reviewcta-examenltc.gc.ca/index.htm>)

<sup>5</sup> Ontario Marine Transportation Study Phase II Final Report, MariNova Consulting Ltd., June 2009

Over the past two decades, agencies including the International Maritime Organization (IMO) have adopted regulations to control the transfer of invasive species. The IMO has approved a measure that would require all newly built oceangoing vessels to be equipped with on-board ballast-treatment systems by 2012, with existing ships required to install them by 2016. Canadian ballast water use legislation is set at a national level.

In the US, states are developing individual ballast water regulations that are more stringent than federal and international requirements. New York State (NYS) has approved a legislation requiring conditions of operation in state waters including the following:

- All ships entering NYS with ballast water must travel 50 nautical miles offshore to exchange ballast water with salt water. Vessels serving only the Great Lakes-St. Lawrence Seaway System are exempt.
- By 2012, all ships must be retrofitted to install ballast water treatment systems that would meet 100 times the discharge standard proposed by the IMO. Extensions may be applied if the required technology is unavailable.

There is concern that these conditions will result in prohibitive costs for the shipping industry, and compliance with regulations is increasingly difficult as states are developing individual and varying ballast water requirements. Ballast Water Regulation is a potentially serious issue that could restrict the use of marine and as a result impact the study area. Stakeholders have noted that federal standards would reduce uncertainty and improve ease of compliance.

Note that it will also be costly for the marine industry to comply with the IMO's Emission Control Area regulations, including the use of new, more expensive fuel.

Changes to these environmental regulations would be expected to have a minor potential to address the transportation problems and opportunities in the NGTA study area, and as international laws, the NGTA study has a low potential to influence them.

### **A.5.3 Other Relevant Issues / Constraints**

From a broad perspective, the marine mode of transportation presents similar constraints in terms of time and route flexibility as are presented by the freight rail mode (refer to **Section A.4.3**). In addition, a number of other factors are important for the use of marine transportation for goods and people movement.

**Security issues** are becoming increasingly important in international marine shipping. The International Ship and Port Facility Security (ISPS) Code (July 2004) has a mandate to detect and take preventive measures against security incidents affecting ships or port facilities used in international trade. Canada is implementing the requirements of ISPS through Marine Transportation Security Regulations (MTSRs), from the 2004 Marine Transportation Security Act.

The **St. Lawrence Seaway System closes each winter** from approximately late December through March, for scheduled maintenance activities and due to operational difficulties with ice. This practice results in more rail / truck transport

being used during these winter months and can limit opportunities for marine transportation to penetrate some markets.

**Vessel size** constrains marine transportation in the NGTA study area due to the lock dimensions on the St. Lawrence Seaway System (vessel maximum: 225.5m length; 23.7m beam; 8.08m draft; and 35.5m height above water)<sup>6</sup>. These constraints impact cargo travel, with larger vessels having to stop in Montreal for transfer onto smaller ones, or onto rail or truck.

The **freight inter-modal interface** with rail / trucking constrains goods movement by marine transportation, due to limited connections and bottlenecks at such locations, as well as the capacity of these connecting rail and road inter-regional transportation systems.

Changes to address these issues and constraints could potentially contribute to improving marine transportation in the vicinity of the NGTA study area, and thereby addressing some of the transportation problems and opportunities. As security and fuel prices are global issues, however, the current study has a low potential to influence them. Changes to the St. Lawrence Seaway have a low potential to address the transportation problems, and the study has a low potential to influence changes to the Seaway. Improvements to freight inter-modal connections have a high potential to address some transportation problems in the NGTA study area, and the current study has a high potential to influence such changes.

Note that another key factor in the wider use of marine transportation is the requirement for specific shipping costs and services in moving goods. Marine transportation generally moves lower value bulk cargo between waterfront locations and is less suitable for moving between inland locations, shipping goods rapidly, and shipping higher value cargo.

## A.6 AIR

### A.6.1 Relevant Initiatives in Other Jurisdictions

To facilitate the creative process, the study team's specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative 'long list' of alternatives that reflected elements of successful transportation practices used in other jurisdictions.

#### 1. Single European Sky ATM Research (SESAR)

The Single European Sky Air Traffic Management (ATM) Research (SESAR) project is the European air traffic control infrastructure modernization programme. By 2020, SESAR aims to create the capability to handle a threefold increase in air traffic in Europe, while improving safety by a factor of ten and reducing the environmental impact per flight by 10%. This modernized air traffic management system in Europe should also cut ATM-related expenses by half. While the ability to handle increased goods movement volumes has not been raised as a significant concern by the Hamilton International Airport, it is possible that some of the measures and/or recommendations that emerge from the

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<sup>6</sup> Great Lakes St. Lawrence Seaway System website (<http://www.greatlakes-seaway.com/en/seaway/facts/index.html>)

SESAAR project in terms of making air traffic management more efficient may be applicable and of benefit to the HIA.

## **2. NAV Canada**

NAV CANADA is a private sector, non-share capital corporation that owns and operates Canada's civil air navigation service (ANS), purchased from the Federal Government in November 1996. It is responsible for the safety and efficiency of the ANS, including providing air traffic control, flight information, weather briefings, airport advisory, aeronautical information and electronic aids to navigation services. Safety performance is regulated by Transport Canada.

NAV CANADA is leading a number of initiatives to improve air traffic management and air safety. One initiative involves working with airlines to examine operational procedures at the world's busiest airports that could help improve capacity at Canadian airports, via a "Best Practices Working Group" for discussion and assessment of options. NAV CANADA also formed the Air Traffic Services-Pilot Communications Working Group, bringing partners together to address improvements of ATS-pilot communication and reducing communication errors.

While the ability to handle increased goods movement volumes has not been raised as a significant concern by the Hamilton International Airport, it is possible that some of the operational improvement concepts that emerge from NAV CANADA's assessment of the operational procedures at other international airports may be applicable and of benefit to the HIA.

## **3. CentrePort Canada, Winnipeg, Manitoba**

In September 2008, the government of Manitoba introduced legislation to build an inland port around Winnipeg's James Armstrong Richardson International Airport, to gain from the city's proximity to the geographic centre of North America. The CentrePort Canada Act authorizes the creation of a corporation to facilitate the long-term development of the "port", and to fast track investment and economic development decisions.

Federal funding will be used to develop a four-lane expressway linking the inland port to the airport, for completion in 2011. The initial phases of the CentrePort Canada initiative have also received federal funding, including a \$33.25 million contribution toward the twinning of Inkster Boulevard, adjacent to the port<sup>7</sup>.

## **4. Kansas City SmartPort, Missouri, Kansas**

Kansas City (KC) SmartPort is a non-profit economic development organization formed to promote and enhance Kansas City as America's leading inland port. KC SmartPort is not a physical port; the organization's main function is to market all of the transportation assets in the 18-county, 50-city and two-state region.

KC SmartPort plays an active role in three areas:

- Economic Development – attracting investment from companies with significant transportation and logistics elements such as distribution centres, warehouses, third-party logistic providers, and manufacturers;

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<sup>7</sup> Backgrounder - The CentrePort Canada Initiative, Office of the Prime Minister, April 2009

- Trade Data Exchange (TDE) / Intelligent Transportation Systems (ITS) – working to improve the supply chain visibility, providing real-time visibility and cargo security as it increases efficiency in the supply chain; and
- Business Services – working to bring in additional services, such as foreign customs offices, to aide businesses moving goods domestically and internationally.

While the Southern Ontario Gateway Council (SOGC) is a related type of organization operating within the NGTA study area, it serves as a transportation and economic development forum with members that include many of the major transportation providers, shippers and industry associations in Southern Ontario. Its vision is to achieve an integrated transportation system in southern Ontario. The SOGC aims to achieve this vision by solving congestion through infrastructure and funding, improving land use policies to protect for new transportation corridors, optimizing the existing network, and improving goods movement across borders.

#### **5. Air Rail Link from Toronto – Lester B. Pearson International Airport to Toronto Union Station**

This planned public transportation rail service will operate from Pearson International Airport along a dedicated spur line, then along the existing Canadian National Railway (CN) Weston Subdivision line and connect onto GO Transit's Union Station Rail Corridor to Union Station.

#### **6. Alliance Global Logistics Hub**

Alliance Global Logistics Hub is an inland port located in the US that offers strategic multi-modal transportation access. It has access to an inter-modal facility, two Class I rail lines (BNSF and UP), an industrial airport called Fort Worth Alliance Airport, an Interstate highway, two state highways, and the FedEx Southwest Regional Sort Hub.

### **A.6.2 Related Policies**

#### **1. Blue Sky: Canada's International Air Policy**

This policy, announced in November 2006, applies to Canada's approach to bilateral air transportation negotiations for scheduled passenger and all-cargo services. It states that Canada will proactively pursue opportunities to negotiate more liberalized agreements for international scheduled air transportation that will provide maximum opportunity for passenger and all-cargo services to be added according to market demand.

In essence, an "Open Skies"-type agreement would cover the following elements for scheduled passenger and all-cargo services:

- open bilateral markets / access;
- no limit on the number of airlines permitted to operate;
- no limits on the permitted frequency of service or aircraft type;
- market-based tariff / pricing regime for bilateral and third-country services;
- open and flexible regime for the operation of code-sharing services;

- unrestricted services to and from third-countries; and
- rights for stand-alone all-cargo operations.

The policy approach does not include cabotage rights – the right for a foreign airline to carry domestic traffic between points in Canada. Since January 2007, Canada has successfully negotiated new air agreements or updated existing agreements with a number of countries, including the US, Singapore, Mexico, and the European Union (EU). This policy is expected to increase air traffic at Canadian airports, as new carriers are introduced. Note, however, that Pearson International's 2008 Master Plan includes a statement indicating that despite Blue Sky, many current bi-lateral agreements specifically deny foreign carriers rights to fly into this airport.

This study has a low potential to influence national regulations. In addition, changes to international air policies would be expected to have a low potential to address the NGTA study area's problems and opportunities, and may result in some increase in traffic volumes on existing facilities such as the QEW as a result of the diversion of air passengers to US border airports like Buffalo.

## **2. Air Cargo Transshipment Program**

Canadian and foreign carriers can be authorized by the Canadian Transportation Agency to carry international cargo transshipments coming from and destined to points outside Canada via Canadian airports even if the rights are not provided in Canada's bi-lateral air transport agreements. In-transit cargo may also be stored in bond until it is transported to its final destination by air or another mode. This program only applies to in-transit cargo: carriers are not authorized to carry Canadian-originating or destined cargo unless licensed under Canada's bilateral air agreements or arrangements or under the charter regulations.

Hamilton International Airport has been part of this program since 1987. Other airports included in the program include the following: Windsor (1993), Winnipeg (2004), Edmonton (2006), Calgary (2007) and Toronto (2008).

As above, changes to air cargo transshipment policies would be expected to have a low potential to address the NGTA study area's problems and opportunities, and this study has a low potential to influence national regulations.

## **3. Export Distribution Centre Program**

The Export Distribution Centre Program (EDCP) came into effect in 2001 and is Canada's version of a Free Trade Zone. An EDC can be used to store foreign or domestic goods, re-package and re-furbish materials, assemble products, or manufacture and re-export commodities without paying customs, duties and taxes.

The EDCP targets specific relief for the costs that can be incurred by export-oriented businesses providing limited added value in the course of processing or distributing goods. The EDCP rules simplify the system for both the service provider and the owner of the imported goods by relieving the goods of tax if the service provider has been granted an authorization. Eligible businesses are those that do not manufacture or produce goods and that add limited value to goods in the course of their processing or distribution.

The EDCP has created opportunities for airports; however, it is considered that the program is somewhat complex and could be improved with simplification and move toward a true “Free Trade Zone”<sup>8</sup>.

As above, changes to the EDCP would be expected to have a low potential to address the NGTA study area’s problems and opportunities, and this study has a low potential to influence national regulations.

### **A.6.3 Other Relevant Issues / Constraints**

A number of factors are important for the use of air transportation for goods and people movement.

**Security issues** are becoming increasingly important in domestic and international air transportation. Transport Canada and the Canadian Air Transport Security Authority (CATSA) are the main bodies that implement air transport security in Canada. Global security policies as well as procedures at the US border crossings are important factors affecting the movement of people and goods by air. A further tightening of security policies could act as a constraint to goods and people movement by air.

**Fuel prices** affect all modes of transportation. However, air transportation is a relatively high-intensity user of fuel per weight shipped,<sup>9</sup> therefore, is somewhat more adversely affected than other modes such as marine and rail.

Limited **multi-modal connections**, particularly by rail and transit, connecting airports to urban centres and tourist attractions are a constraint for the improved use of air travel. None of the airports in the NGTA study area currently provide dedicated public transit services. Where transit services are available, they are generally privately operated and serve urban centres rather than tourist destinations. Limited road linkages and capacity are also an issue for air transportation.

This mode of transportation is also limited by the weight of goods and number commuters.

Changes to address these issues and constraints could potentially contribute to improving air transportation services in the NGTA study area and thereby addressing the transportation problems and opportunities. As these are global issues, however, the study has a low potential to influence such changes. The exception is freight inter-modal connections: improvements have a high potential to address the problems and opportunities, and this study has a high potential to influence such changes.

## **A.7 FREIGHT INTER-MODAL**

### **A.7.1 Relevant Initiatives in Other Jurisdictions**

To facilitate the creative process, the study team’s specialists reviewed relevant initiatives in other jurisdictions. This review assisted in the development of a creative ‘long list’ of alternatives that reflected elements of successful transportation practices used in other jurisdictions.

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<sup>8</sup> Hamilton International Airport Meeting, May 25, 2009

<sup>9</sup> US Energy Information Administration; Measuring Energy Efficiency in the United States Economy: A Beginning, October 1995 - Chapter 5 ([http://www.eia.doe.gov/emeu/efficiency/ee\\_ch5.htm](http://www.eia.doe.gov/emeu/efficiency/ee_ch5.htm))

## 1. Puget Sound Region

A case study of the freight inter-modal issues facing the Puget Sound Region and the Port of Seattle was reviewed to identify challenges potentially experienced by existing and future facilities. The study intended to answer a number of questions relating to transportation, environmental, economic and land use challenges, including development of innovating solutions; setting priorities; and developing coalitions. Similar questions are applicable to freight inter-modal goods movement in the NGTA study area.

One key point in the study was the perception of competition amongst various transportation modes in the movement of goods. Traffic congestion was identified as a major factor impeding operations, especially for the “last leg” movement of goods, which is typically by truck on municipal roads. Financial constraints were also identified as an issue, as funding freight inter-modal developments is a constant challenge. Negative public perception of a freight inter-modal facility can also be important, especially in areas with mixed land uses in close proximity to freight inter-modal facilities.

The FAST Corridor (Freight Action Strategy for the Everett-Seattle-Tacoma Corridor) is a partnership of 26 local cities, counties, ports, federal, state and regional transportation agencies, railroads and trucking organizations, working toward solving freight mobility problems with coordinated solutions. It is co-sponsored by the Washington State Department of Transportation and the Puget Sound Regional Council, and is managed via a multi-agency staff team. Their vision is to integrate local and regional transportation system improvements along mainline rail lines and truck corridors near ports in the central Puget Sound region.

Closely linked to the FAST Corridor is the Freight Mobility Roundtable, which is a nationally recognized public-private forum working to define and recommend actions serving freight mobility needs in and through central Puget Sound. It is consulted by the FAST Corridor and provides input into regional and state transportation plans. Meetings are held bi-monthly.

## 2. Mid-Continent International Trade Corridor – Developing Freight Inter-Modal Facilities

Another case study that has been reviewed, *Development of Freight Inter-Modal Facilities in the Mid-Continent International Trade Corridor*, identified important considerations required in the successful implementation of freight inter-modal facilities across North America. These considerations included private-public partnerships that can be highly important in creating successful multi-user freight inter-modal hubs. Cooperation amongst participants was also identified as a key factor. A common challenge is the lack of available information about shipments made by privately-owned companies; this can create challenges in determining site-specific characteristics and requirements when developing strategies for future facility and access capabilities.

Logistical support was also identified as an important item, as it is important in the development of business opportunities. The last point identified by the study was international trade itself, and identification of the needs of the business community with respect to it. The study stated that trade processing centres would be beneficial to the mid-continent / Winnipeg area with respect to growth in international trade.

### **A.7.2 Related Policies**

As freight inter-modal facilities accommodate interaction amongst various transportation modes at one location, policies that are applicable to these modes are generally applicable to the freight inter-modal facilities that accommodate them. Policies related to the freight rail, marine and air transportation modes are discussed in **Sections A.4.2, A.5.2, and A.6.2** respectively.

### **A.7.3 Other Relevant Issues / Constraints**

A number of factors are important for the implementation of freight inter-modal facilities for goods movement.

**Perceived competitive interaction amongst transportation modes** has been identified as a potential issue as goods movement is a profit-driven market.

**Insufficient and / or inefficient freight inter-modal road connections** can constrain inter-regional goods movement due to limited connections and capacity constraints, as well as the capacity of the connecting higher order road transportation systems. This subsequently affects implementation of new or expansion of existing freight inter-modal facilities.

Changes to address these issues and constraints could potentially improve freight inter-modal transportation services in the NGTA study area and thereby addressing the transportation problems and opportunities. As security and fuel pricing are global issues, however, the study has a low potential to influence such changes. Freight inter-modal connections and coordination and recognition of the importance of goods movement also have a high potential to address the problems and opportunities, and this study has a high potential to influence such changes.