

# THE BIG MOVE

TRANSFORMING TRANSPORTATION IN THE  
GREATER TORONTO AND HAMILTON AREA



**METROLINX**  
LINKING PEOPLE TO PLACES • ON Y VA

An agency of the Government of Ontario



**METROLINX**  
LINKING PEOPLE TO PLACES • ON Y VA

An agency of the Government of Ontario

**THE **BIG** MOVE**

**Transforming Transportation in the  
Greater Toronto and Hamilton Area**

**NOVEMBER 2008**

© Greater Toronto Transportation Authority, 2008  
All rights reserved. No part of this publication may be  
used or reproduced in any manner whatsoever without  
the prior written permission of the copyright holder.

**ISBN 978-1-4249-8600-2 (Print)**  
**ISBN 978-1-4249-8602-6 (PDF)**  
**ISBN 978-1-4249-8601-9 (HTML)**



# MESSAGE FROM THE CHAIR

On November 28, 2008, the Metrolinx Board of Directors voted unanimously to adopt this Regional Transportation Plan (RTP), which we have named **The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area** (GTHA). The Big Move is a landmark achievement. The municipal leaders on the Metrolinx Board have come together, with a single voice, to create a common vision for transportation in the region.

This plan has been forwarded to the Minister of Transportation as part of the requirement under the Greater Toronto Transportation Authority Act Section 6 (2).

The emergence of the GTHA as one of the largest and fastest-growing urban regions in North America in the 1970s and 1980s was spurred, in part, by a regional transportation network that was ahead of its time.

In the last generation, however, we have not sufficiently invested in the region's transportation network. As a result, every year, congested roads and overtaxed transit systems result in billions of dollars lost from our economy through delays, wasted energy and dirty air.

We are releasing The Big Move at a time of significant economic uncertainty. Despite this, we believe that now, more than ever, acting on the recommendations in the RTP is critically important. The RTP will not only reclaim our region's traditional transportation advantage, but also bolster our global competitiveness, protect our environment, and improve our quality of life.

For the very first time, like so many of our global competitors, we are thinking like a single region. We are proposing new transportation projects that amount to two billion dollars annually over the next 25 years — the largest public transit expansion in half a century. Over its life span, this investment will not only help create thousands of new green and well-paid jobs, but also will save billions of dollars in time, energy and other efficiencies.

We plan to build over 1,200 kilometres of rapid transit — more than triple what exists now — so that over 80 per cent of residents in the region will live within two kilometres of rapid transit, with an emphasis on areas with large senior and low-income populations which rely on transit to get around daily.

The Big Move is about values as much as it is about vehicles. With over 100 priority actions and supporting policies, it moves the yardsticks in a wide range of transportation areas. Benefits will be widespread. It will help get people to the places they need to go more quickly, allowing them to spend more time on what is really important. Average commute times will decrease, despite an expected 50 per cent increase in population. More residents will be able to access jobs that were once inconvenient to reach by transit, while integrated transit fares and leading edge information systems will help all of us make smarter choices.

The Big Move will help to revitalize our communities into the kinds of places where residents can take transit, ride a bicycle or walk to fulfill their day's activities, and where children can once again walk to school. Over 7,000 km of new lanes, trails and pathways for pedestrians and cyclists will make walking and cycling safe and encourage healthy lifestyles. Greenhouse gas emissions per resident will decline dramatically and our air will be cleaner.

The Big Move is the result of the participation and support of many people.

To create this plan, we held open houses and public meetings across the region, as well as numerous meetings and discussions with stakeholder groups. We listened to all the input we received and adjusted the plan where necessary to make it even more practical, realistic and workable.

The plan also owes much to our staff, whose passion and dedication over the last year made the plan possible. Further, our consultants, led by IBI Group, provided us with their unparalleled expertise and in-depth knowledge of the region. Staff from provincial ministries, municipalities and transit agencies guided our work with timely and helpful input.

The development of the plan was guided by the Metrolinx Board of Directors. It was my honour to chair this group of municipal leaders and professionals whose dedication to changing the face of transportation in the region has been unwavering.

And finally, the plan is directly attributable to the Premier of Ontario and the Minister of Transportation who had the vision and commitment to launch both this important initiative, and the unprecedented MoveOntario 2020 commitment of \$11.5 billion to begin the implementation of The Big Move and to get shovels in the ground as early as 2009 on key transit projects.

The Big Move will immediately deliver real, tangible results in the way we plan and operate the transportation system. As the most ambitious long-term transportation plan on the books in North America, the Big Move is a bold and visionary plan that will restore the winning combination of mobility and prosperity that defined our region in the post-war era. It will put us ahead of our competitors and closer to our families and communities. Its vision and concrete actions will permeate every transportation decision in the GTHA. The plan introduces a new way of doing business in transportation.

Working together, let's seize this unique opportunity to keep moving forward.

Thank you.



**Rob Maclsaac**  
Chair, Metrolinx

# METROLINX BOARD OF DIRECTORS

**Rob Maclsaac, Chair**

**Peter Smith, Vice-Chair**

*President and Co-owner, Andrin Limited  
Chair, GO Transit*

**Roger Anderson (Durham)**

*Chair, Region of Durham*

**Paul Bedford (Toronto)**

*Adjunct Professor, Urban Planning  
University of Toronto and Ryerson University*

**Gary Carr (Halton)**

*Chair, Regional Municipality of Halton*

**Fred Eisenberger (Hamilton)**

*Mayor, City of Hamilton*

**Bill Fisch (York)**

*Chair and CEO, Regional Municipality of York*

**Adam Giambrone (Toronto)**

*Chair, Toronto Transit Commission  
Toronto Councillor, Davenport*

**Norm Kelly (Toronto)**

*Chair, Planning and  
Growth Management Committee  
Toronto Councillor, Scarborough Agincourt*

**Hazel McCallion (Peel)**

*Mayor, City of Mississauga*

**David Miller (Toronto)**

*Mayor, City of Toronto*



*Standing left to right:  
Norm Kelly, Gary Carr, Roger Anderson, Peter Smith, Fred Eisenberger, Adam Giambrone  
Seated left to right:  
Bill Fisch, Paul Bedford, Rob Maclsaac, Hazel McCallion, David Miller*

# TABLE OF CONTENTS

<b>PREFACE</b>	<b>vi</b>
<b>1.0 INTRODUCTION</b>	<b>1</b>
1.1 The Need to Act: Transforming Transportation	1
1.2 The Greater Toronto and Hamilton Area	3
1.3 GTHA Challenges	5
1.4 Global Challenges	9
<b>2.0 A VISION FOR THE FUTURE</b>	<b>13</b>
<b>3.0 GOALS AND OBJECTIVES</b>	<b>15</b>
<b>4.0 STRATEGIES</b>	<b>20</b>
<b>Nine Big Moves</b>	<b>21</b>
<b>Strategy #1</b> Build a Comprehensive Regional Rapid Transit Network	<b>22</b>
<b>Strategy #2</b> Enhance and Expand Active Transportation	<b>31</b>
<b>Strategy #3</b> Improve the Efficiency of the Road and Highway Network	<b>34</b>
<b>Strategy #4</b> Create an Ambitious Transportation Demand Management Program	<b>38</b>
<b>Strategy #5</b> Create a Customer-First Transportation System	<b>39</b>
<b>Strategy #6</b> Implement an Integrated Transit Fare System	<b>42</b>
<b>Strategy #7</b> Build Communities that are Pedestrian, Cycling and Transit-Supportive	<b>44</b>
<b>Strategy #8</b> Plan for Universal Access	<b>52</b>
<b>Strategy #9</b> Improve Goods Movement Within the GTHA and With Adjacent Regions	<b>54</b>
<b>Strategy #10</b> Commit to Continuous Improvement	<b>56</b>
<b>5.0 LOOKING FORWARD</b>	<b>58</b>
5.1 What Will Be Achieved	58
5.2 The First 15 Years	60
5.3 Years 16 to 25	66
5.4 Longer-Term Projects	67

<b>6.0</b>	<b>INVESTMENT STRATEGY</b>	<b>68</b>
6.1	Costs of the RTP	68
6.2	Three-Phased Approach to Investment	69
6.3	Investment Profile	71
6.4	Key Characteristics and Assumptions of the Investment Strategy	73
<b>7.0</b>	<b>IMPLEMENTATION</b>	<b>75</b>
7.1	Principles for Implementation	75
7.2	RTP Implementation	76
7.2.1	Status of the RTP	76
7.2.2	Benefits Case Analysis and Alternative Financing and Procurement	78
7.2.3	Capital Planning	79
7.2.4	Investment Strategy	80
7.2.5	Involving the Federal Government	80
7.2.6	Performance Standards	81
7.2.7	Land Use Planning	81
7.2.8	Environmental Assessment	82
7.2.9	Public Outreach	83
7.2.10	Monitoring Progress	83
7.2.11	Role of Metrolinx	84
<b>8.0</b>	<b>GLOSSARY OF TERMS</b>	<b>85</b>
<b>9.0</b>	<b>SCHEDULES</b>	<b>91</b>
Schedule 1:	15-Year Plan for the Regional Rapid Transit and Highway Network	92
Schedule 2:	25-Year Plan for the Regional Rapid Transit and Highway Network	94
Schedule 3:	Areas of Focus for Active Transportation	98
<b>10.0</b>	<b>APPENDICES</b>	<b>100</b>
Appendix A:	Existing Regional Rapid Transit and Highway Network in the GTHA	102
Appendix B:	Areas of Social Need in the GTHA	104
Appendix C:	Regional Rapid Transit Connections Outside the GTHA	106
Appendix D:	Metrolinx Quick Wins	108
Appendix E:	Photo Credits	110

# PREFACE

For many years now, community and business leaders have been calling on federal, provincial and municipal governments to work together to tackle transportation issues in the Greater Toronto and Hamilton Area (GTHA). There is a widespread consensus that incremental change is not sufficient and that our transportation system needs to be dramatically transformed to meet the needs of the 21st century. In Canada's economic heartland, the transportation system needs to be effective, integrated and multi-modal, and it needs to be funded in a sustainable way. This is fundamental to the health of our economy, the environment and our quality of life. The concern about transportation issues has never been higher and public appetite for coordinated action on transportation has never been more pronounced.

In response to this widespread concern, in 2006 the Government of Ontario established the Greater Toronto Transportation Authority (GTTA) under the Greater Toronto Transportation Authority Act. The GTTA, which became known as Metrolinx in December 2007, was given the mandate to develop and implement an integrated multi-modal transportation plan for the GTHA. Metrolinx is also responsible for the development of an Investment Strategy and capital plan, coordination of a transit vehicle purchasing co-operative, and programs such as BikeLinX and the Smart Commute Initiative. The GTTA Act also includes provisions for Metrolinx to assume responsibility for GO Transit in the future.

This document — the Regional Transportation Plan (RTP), which includes the Investment Strategy — provides a vision, goals and objectives for the future in which transportation within the GTHA is seamless, coordinated, efficient, equitable and user-centred. It also contains Strategies, Priority Actions and Supporting Policies that are needed to achieve the future vision, as well as an Investment Strategy to finance the transportation system over the short- and long-terms.

The RTP builds on the extensive work that has been carried out by Metrolinx and others to date. This includes the development of, and consultation on, seven Green Papers in late 2007 and early 2008. Those Green Papers presented, for public discussion, information on transportation trends, challenges and opportunities for the GTHA transportation system and best practices from around the world. The Green Papers included:

- **Green Paper 1:** Towards Sustainable Transportation (December 2007);
- **Green Paper 2:** Mobility Hubs (February 2008);

- **Green Paper 3:** Active Transportation (February 2008);
- **Green Paper 4:** Transportation Demand Management (February 2008);
- **Green Paper 5:** Moving Goods and Delivering Services (February 2008);
- **Green Paper 6:** Roads and Highways (March 2008); and
- **Green Paper 7:** Transit (March 2008).

In May 2008, building on the input received on the Green Papers, Metrolinx released two White Papers for public comment. *White Paper 1: Vision, Goals and Objectives* presented a proposed vision for the GTHA transportation system as well as a series of goals and objectives that could form the basis for developing, evaluating and ultimately shaping the RTP. *White Paper 2: Preliminary Directions and Concepts* explored a range of potential policies, programs and tools for the RTP. It also presented a series of transportation system concepts, and modelled them to see how they would perform against a range of indicators such as transit ridership, congestion rates, and emissions of greenhouse gases (GHGs) and air pollutants.



In September 2008, Metrolinx released a Draft Regional Transportation Plan as well as a Draft Investment Strategy. These brought together the options and concepts from the White Papers into a recommended action plan for the GTHA, and were the basis for a series of stakeholder consultations and public meetings across the GTHA.



The Green and White Papers, the Draft RTP and Investment Strategy, and the feedback that has been received on them from stakeholders and the public, have informed the development of this final Regional Transportation Plan.



# 1.0 INTRODUCTION

## 1.1 THE NEED TO ACT: TRANSFORMING TRANSPORTATION

We have all been there. You are stuck on a 400-series highway for two hours because of a traffic accident. When it finally arrives, the bus is overcrowded. The train is 45 minutes late. Because of traffic congestion, you are late picking up your child from daycare. The courier package does not arrive when it is supposed to. The critical electrical part your company needs is held up in traffic. Your commute, which used to take half an hour, now takes 45 minutes.

You are not alone. This impacts everyone. The Greater Toronto and Hamilton Area (GTHA) is facing a significant transportation challenge — one that affects people, the environment and the economy. Once highly regarded, the GTHA transportation system is no longer meeting the needs of the area's residents and businesses. Some of the symptoms of this are clearly evident in our congested roads and highways, gridlocked urban streets, unreliable and inconvenient transit, and lack of safe bikeways and pedestrian pathways. Other symptoms are less easy to see — the economic disruption from congestion, the hindrance of trade and the movement of goods, the increased number of smog days, the toll on individuals and families from commutes that take way too long, the ever-increasing share of the family budget devoted to basic transportation.

Things need to change. And that is what *The Big Move: Transforming Transportation in the GTHA* is about.

The mandate to create a Regional Transportation Plan (RTP) is embodied in the Greater Toronto Transportation Authority Act, 2006 which established Metrolinx and directed it to create a long-term strategic plan for an integrated, multi-modal, regional transportation system. As defined by the Act, this is to be a transportation plan that:

- takes into account all modes of transportation;
- makes use of intelligent transportation systems;
- promotes the integration of local transit systems with each other and with the GO Transit system;

- works toward easing congestion and commute times, and reducing transportation-related emissions of smog precursors and greenhouse gases; and
- promotes transit-supportive development and the viability and optimization of transit infrastructure.

The RTP is the third piece in a three-part approach by the provincial government to prepare the GTHA for growth and sustainability. It builds on the Greenbelt Plan, which protects more than 1.8 million acres of environmentally sensitive and agricultural land in the heart of the region, and the Growth Plan for the Greater Golden Horseshoe, which manages population and job growth, and curbs urban sprawl. Together these three initiatives will lead to the development of more compact and complete communities that make walking, cycling and transit part of everyday life.

The RTP fulfils the province's commitment to undertake further work and analysis to implement the transportation network and policies of the Growth Plan for the Greater Golden Horseshoe. It also meets the Growth Plan's directions that call for the transportation system to be planned and managed to provide connectivity among transportation modes, offer a balance of transportation choices, encourage the most financially and environmentally appropriate modes for trip-making, offer multi-modal access to jobs, housing and services, and shape growth by supporting intensification.

The Big Move is the blueprint for a more sustainable transportation future. It reaches out 25 years into the future to guide and direct decision-making. It sets out priorities, policies and programs for a future of complete mobility. The aim of the RTP is to achieve a transportation system for the GTHA that is effective, integrated and multi-modal. The RTP presents a vision for the future in which transportation within the GTHA is seamless, coordinated and efficient, as well as a blueprint for how to get there.

## 1.2 THE GREATER TORONTO AND HAMILTON AREA

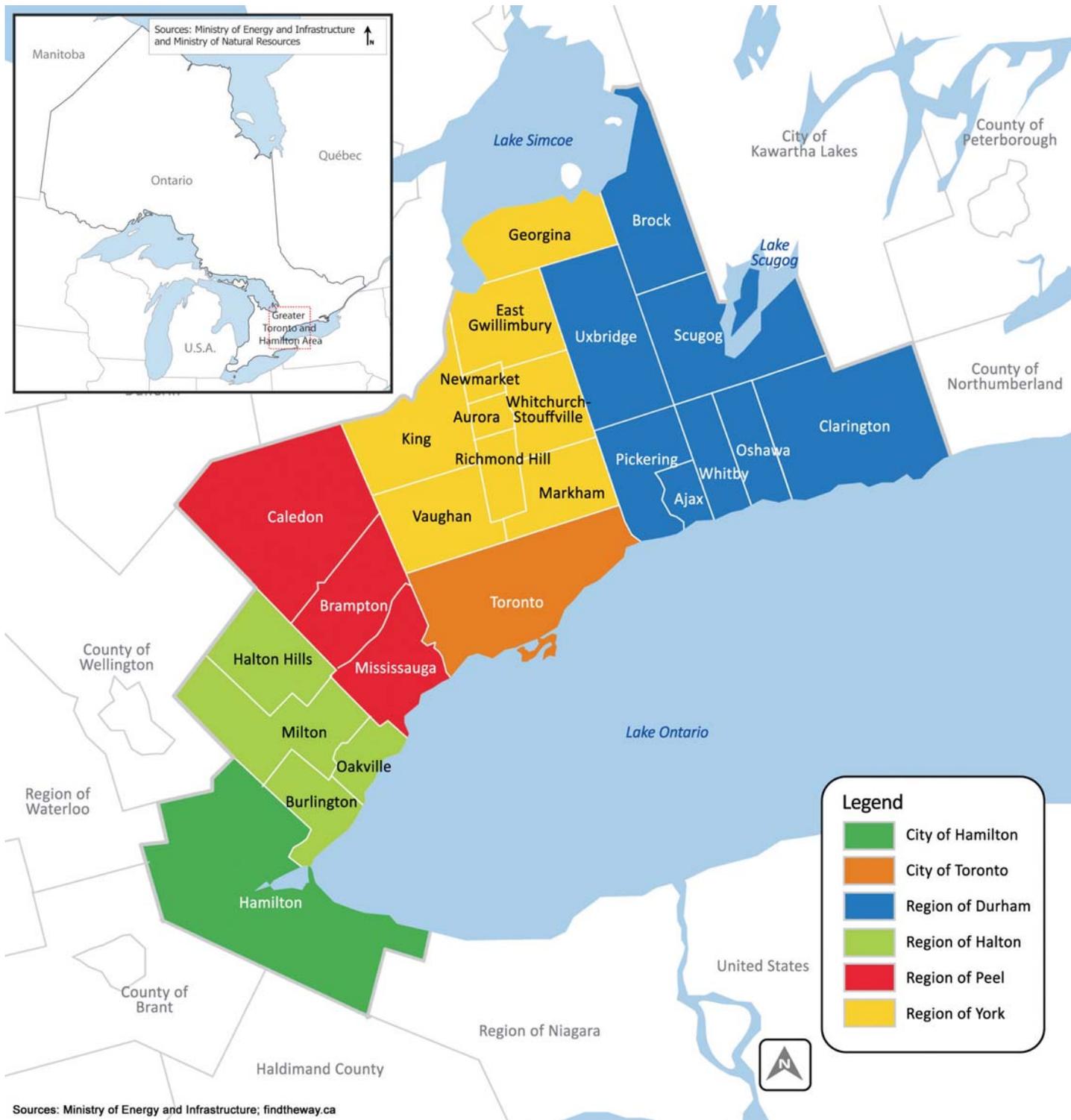
The GTHA, located in southern Ontario, is Canada's largest urban region. It is also one of Canada's fastest growing urban regions. With a current population of over six million people, it is forecast to be home to 8.6 million people by the year 2031. The GTHA comprises two single-tier municipalities (Hamilton and Toronto) and four regional municipalities (Durham, Halton, Peel and York), along with their 24 lower-tier municipalities (see Figure 1).

The GTHA is currently served by a loose network of regional transportation corridors that was mostly developed several decades ago (see Appendix A). Regional rapid transit is limited to the GO Rail network and the Toronto subway system, with a historical emphasis on serving Downtown Toronto. High-order east-west regional travel is accommodated primarily on controlled-access expressways, including the Queen Elizabeth Way, the Gardiner Expressway, Highway 401, Highway 403 and Highway 407, with the Lakeshore GO Rail corridor and Toronto's Bloor-Danforth subway being the only major east-west high-order transit options. Options for north-south travel include several rail corridors radiating outward from downtown Toronto, as well as a few controlled-access expressways. Higher-order transit services that connect destinations outside of central Toronto to one another are almost entirely lacking.





**FIGURE 1: THE GREATER TORONTO AND HAMILTON AREA**



## 1.3 GTHA CHALLENGES

### POPULATION GROWTH

The GTHA will continue to be one of Canada's fastest growing areas over the next few decades. Today, the population is just over six million people. By 2031, the population is estimated to grow to 8.6 million people – all of whom will need to move around. Clearly this growth will require a massive increase in transportation infrastructure; the issue is what form this infrastructure should take.

### INCREASING RELIANCE ON CARS

The GTHA has become increasingly dependent on private automobiles for mobility. The number of car trips on the GTHA's roads is increasing at a faster rate than that of the population: between 1986 and 2006 the number of trips made by automobile in the GTHA grew 56 per cent compared to a population increase of 45 per cent.



### A REGION DESIGNED FOR CARS

Dependence on cars is in part a result of how communities have been built in the GTHA. Lower density, dispersed development has resulted in a pattern of travel that is less and less focused on downtowns and other core urban areas, and hence more difficult to serve by transit. We have continued to respond to automobile demand by expanding the road network. The province's new Growth Plan for the Greater Golden Horseshoe, adopted in 2006, addresses this by mandating the development of mixed-use, transit-supportive, cycling- and pedestrian-friendly communities.

## **CONGESTION**

Associated with the increasing reliance on cars, the GTHA is experiencing ever-worsening traffic congestion. Currently, more than two million automobile trips are made during the peak travel period each morning in the GTHA, with that number forecast to approach three million trips by 2031. Traffic congestion is already excessive and is expected to become even more severe in the future. Traffic congestion increases the costs of the region's transportation activities, negatively impacts the region's economy, and impairs the quality of life by costing travellers' time and money, degrading the environment and causing accidents.

The principal economic and social costs of congestion are:

- costs of reduced economic output and accompanying job loss;
- costs of travel delays for auto and transit users and the unreliability of trip times;
- vehicle operating costs associated with higher traffic volumes;
- environmental costs of vehicle emissions; and
- social and economic costs of the higher frequency of accidents.

According to a study commissioned by Metrolinx on the economic costs of congestion in the GTHA, in 2006 the annual cost of congestion to commuters was \$3.3 billion and the annual cost to the economy was \$2.7 billion. If nothing is done to improve the transportation system, this cost can be expected to increase significantly, with population growth bringing about an increase in daily traffic demand and thus exacerbating the level of congestion. Under current trends, the cost of congestion experienced by GTHA residents is forecast to increase considerably by 2031, resulting in an increase in costs from \$3.3 billion per year to \$7.8 billion. The cost to the economy would experience a similar increase, with a reduction in Gross Domestic Product (GDP) due to excess congestion rising from \$2.7 billion in 2006 to \$7.2 billion in 2031.

## **DISCONNECTED AND VARIED TRANSIT SERVICES**

The GTHA's public transit system is currently comprised of nine separately-governed local transit agencies and one regional transit provider. This patchwork of systems is poorly integrated, making travel across boundaries by public transit an inconvenient, frustrating, unattractive and costly option for many travellers. Given that one out of every four trips in the GTHA crosses a regional boundary, these arrangements need to change if transit is to attract a larger share of trips. Transit use in the GTHA is also highly variable, with much higher transit ridership in the City of Toronto than in the surrounding regions.

## YEARS OF UNDER-INVESTMENT

The GTHA transportation system has not kept pace with population growth. Construction of rapid transit, which averaged approximately 135 kilometres per decade from the 1960s to the 1980s, all but ground to a halt over the past two decades.

This lack of investment contrasts sharply with what is happening elsewhere in the world. In the United States, most large cities have invested heavily in rapid transit. Madrid, Spain — only slightly smaller than the GTHA — has built more rapid transit facilities during the past decade (88 km) than all of our subway and light rail lines (77 km) combined.

The roads, highways, subways, streetcars, buses and regional rail services in the GTHA are being pushed to their limits, and customers are suffering with crowding and poor reliability. The current system does not offer the traveller a high level of customer service or assurance that they can get where they need to go on time and comfortably.

## INEFFICIENT USE OF THE EXISTING ROAD AND HIGHWAY SYSTEM

Years of under-investment in infrastructure aside, we are not even using our existing transportation infrastructure as efficiently as we could be. The average car on the GTHA's roads transports just under 1.2 people during the peak period — in essence, consuming a tremendous amount of energy and wasting significant amounts of road space to transport empty seats. At full capacity, a standard 40-foot bus is about 10 times as space-efficient as a typical North American car. Research also suggests that a significant percentage of trucks circulate empty or not fully loaded. Unlike what is the case with almost every other scarce resource, road users receive little information and few price signals that would help them optimize their use. As a result, demand often exceeds supply, even when supply is expanded.

**The average car on the GTHA's roads transports just under 1.2 people in the peak period.**



**Transit uses much less road space than single-occupant vehicles. At full capacity, a standard 40-foot bus is about 10 times as space-efficient as a typical car.**

The costs associated with building roads, highways and transit are considerable, and the financial resources available to build them are limited. It is in everyone's best interests that we ensure we are using our existing infrastructure as efficiently as possible while at the same time we invest in more.

### **OUR COMPETITIVENESS IN JEOPARDY**

Our economy is changing fast. An increasing number of workers and businesses provide services to a variety of clients and require the ability to travel efficiently around the region. Employers need an efficient transportation system to attract the broadest talent pool possible. Our companies are fully integrated in the global marketplace and rely on predictable and efficient shipping times for their supply chains. Delays can reduce our competitiveness in a just-in-time environment.



### **LACK OF OPTIONS IN AREAS OF HIGHER SOCIAL NEED**

There are many people in the GTHA who cannot afford to own a car and many more who stretch their available resources to do so. As energy costs increase, the potential for social exclusion grows, as more people are unable to afford to participate in activities due to the high cost of travel. Access

to frequent, fast and affordable transit is therefore crucial for equity and social cohesion. As illustrated in Appendix B, there are several pockets of concentrated social need in the GTHA. The transportation system needs to improve the mobility options for people in these areas, connecting at-risk, vulnerable and disadvantaged communities to the jobs, social services, and health care facilities which can improve people's lives.

### **PROTECTING OUR AGRICULTURAL LANDS AND NATURAL AREAS**

As the GTHA grows, so too does the imperative to protect our natural areas and agricultural lands. The GTHA is blessed with some of Canada's richest farmlands and most precious natural areas. The Province of Ontario took a bold step in protecting these lands with the establishment of the 1.8 million acre Greenbelt, as well as with the adoption of the Provincial Policy Statement and the Growth Plan for the Greater Golden Horseshoe. The transportation system plays a critical role in shaping growth and development, and will therefore be an important part of efforts to protect these lands.

## 1.4 GLOBAL CHALLENGES

### CLIMATE CHANGE

The trips that we make in trucks, cars, ships, buses and airplanes are the source of about one-third of all greenhouse gases (GHGs) emitted in Ontario. These GHGs contribute to climate change and its effects, such as drought, floods, rising sea levels and more frequent incidents of extreme weather. Climatic instability, in turn, is reducing the life expectancy of built infrastructure and interfering with day-to-day operations. The storm in August 2005 that washed out a portion of Finch Avenue in Toronto was singled out by the insurance industry as the most expensive natural disaster in Ontario's history. Transforming how we travel around the GTHA is part of the solution to arresting climate change and achieving the province's GHG reduction targets under its Go Green Action Plan on Climate Change (for more information, see the backgrounder "Climate Change and Energy Conservation, December 2008").

### INCREASING ENERGY COSTS AND PEAK OIL

Anyone who has had to fill their tank lately knows that the price of oil has fluctuated dramatically in recent years. Canada-wide, the average retail price of gasoline reached \$1.32 per litre in June 2008, up from \$0.68 per litre in June 2003. Had the Canadian dollar not strengthened against the U.S. dollar in that time, a litre would have reached about \$1.75. With predictions that the production of oil will peak in the next five or 10 years, an upward trend in prices is likely to continue over the long term. The costs of fuelling private automobiles and trucks will become increasingly unsustainable and unpredictable. Metropolitan regions that are fully automobile dependent will be more adversely affected by rising fuel costs than those with more balanced transportation systems. Providing more energy efficient mobility choices also reduces our dependency on fossil fuel imports.



## URBANIZATION

By the year 2030, 61 per cent of the world's population will live in urban areas. This trend is even more pronounced in Canada where nearly half of the population now lives in the six largest urban regions – the GTHA, Montréal, Vancouver, Ottawa-Gatineau, Calgary and



Edmonton. What is more, the population in these urban regions is increasing rapidly: between 2001 and 2006, two-thirds of the population growth nationwide occurred in just these six regions.

Densely populated regions, if planned appropriately, have smaller carbon footprints per person than less dense areas, which tend to be more car-dependent. In addition to not being well-suited to transit, low-density development also consumes a lot of land. In 2003, the Neptis Foundation estimated that if business-as-usual development trends continued, 1,070 square kilometres of agricultural and other natural land — almost double the area of the City of Toronto — would be urbanized in the GTHA between 2000 and 2031. With the delineation of the Greenbelt and the adoption of the Growth Plan for the Greater Golden Horseshoe, the rate at which land is consumed by development in the GTHA is expected to decrease. However, a more balanced transportation system is essential to the success of both the Growth Plan and the Greenbelt.





## SHIFTING ECONOMIES

National economies are in a state of flux. They have become more complex and increasingly more dependent on creativity and innovation. Increases in productivity, a fundamental indicator of standard of living and economic wellbeing, have remained modest in Canada over the past 10 years and are falling behind other G8 nations, according to the Organization for Economic Co-operation and Development (OECD). We need to start now to meet the travel needs of the workforce of the future. For example, we can increase productivity in Ontario by providing transportation access to groups that historically have had limited access to the labour market, such as new Canadians, visible minorities, Aboriginals, youth, persons with disabilities, and older workers.

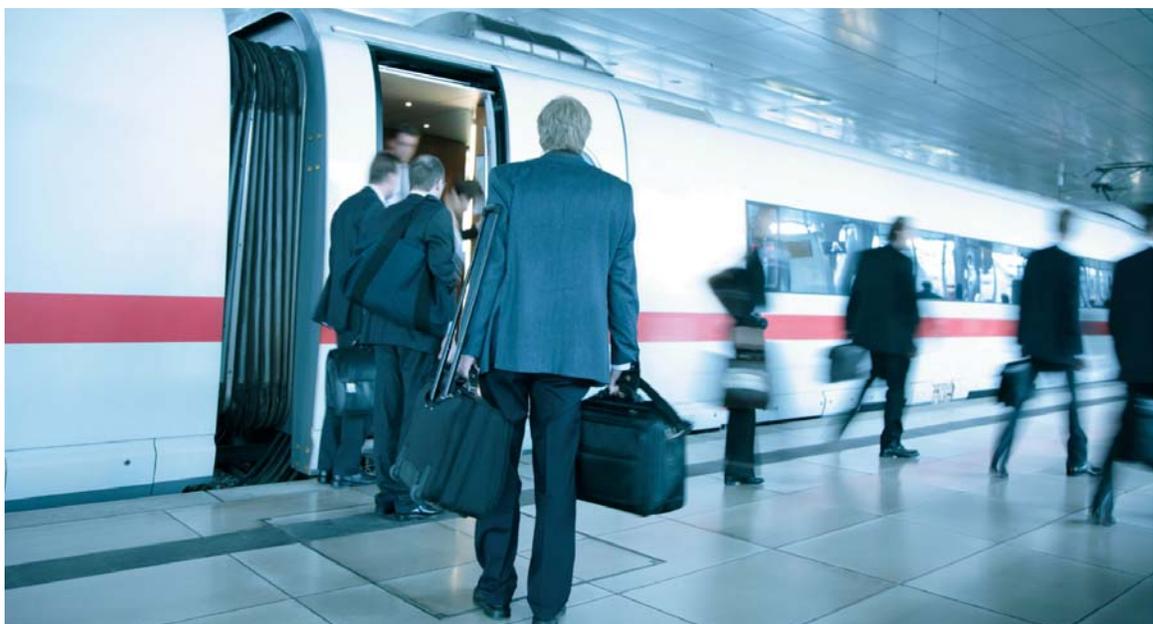
## **AGING POPULATION**

During this century, for the first time in history, the United Nations forecasts that the number of people in the world over the age of 59 years will surpass the number of people under the age of 15. In Ontario, the population aged 65 years and over is expected to more than double to 3.5 million in the next 25 years. The shifting age distribution of the population will have a direct impact on mobility and transportation issues. The percentage of people with a driver's licence begins to decline after age 59. Without access to viable alternatives to driving, many seniors may become isolated, limiting their access to the services and social connections they need.

## **PUBLIC HEALTH**

The World Health Organization predicts that there will be 2.3 billion overweight adults in the world by 2015 and more than 700 million of them will be obese. How we travel contributes to our vulnerability to this major health risk. One study found that each hour spent in a car on a daily basis is associated with a six per cent increase in the likelihood of obesity. In contrast, every kilometre walked per day was associated with a 4.8 per cent reduction in the likelihood of obesity. Arguably, no group is more affected by automobile dependency than children. While in the GTHA less than one in every four children walk or bike to school, the amount of time that children spend in cars has increased exponentially. Between 1986 and 2001, weekday travel by car for 11- to 15-year-olds increased 83 per cent versus 11 per cent for adults.

Emissions from motor vehicles also have impacts on respiratory and cardiovascular ailments and cancers. Toronto Public Health estimates that air pollution gives rise to 440 premature deaths and 1,700 hospitalizations each year in the City of Toronto alone.





# 2.0

## A VISION FOR THE FUTURE

In 25 years, the GTHA will have an integrated transportation system that enhances our quality of life, our environment and our prosperity:

- **A high quality of life.** Our communities will support healthy and active lifestyles, with many options for getting around quickly, reliably, conveniently, comfortably and safely.
- **A thriving, sustainable and protected environment.** Our transportation system will have a low carbon footprint, conserve resources, and contribute to a legacy of a healthy and clean environment for future generations.
- **A strong, prosperous and competitive economy.** Our region will be competitive with the world's strongest regions. Businesses will be supported by a transportation system that moves goods and delivers services quickly and efficiently.

Transportation providers will treat the needs of travellers as their number one job. Priority will be given to moving people and goods, not just vehicles. Connections between different modes of transportation, and across jurisdictions, will be seamless.

The transportation system will support our diversity and will accommodate everyone, regardless of age, means or ability. Services will be delivered fairly and equitably.

Public transit will compete effectively with the automobile with service that is fast, convenient, integrated, comfortable, safe, reliable and valued by its users. Walking and cycling will be attractive choices for travel. Roads and highways will be maintained and used efficiently as a key component of the transportation system.

The transportation system will contribute to the creation of attractive, liveable neighbourhoods and complete communities. It will help protect open space and agricultural lands from development while supporting a robust regional economy, and the efficient movement of goods and services.

Travellers will have timely and complete information about transportation options and will know and understand the true costs of their transportation choices. They will use this information to choose if, how, where and when they travel. They will be active partners in planning the transportation system and will view transportation as a shared responsibility.

The contribution of transportation to climate change will be curbed and Ontario will meet its greenhouse gas reduction commitment.

Ongoing research and development will ensure that the transportation system of the GTHA remains cutting edge.

Funding for new and existing transportation infrastructure will be reliable, predictable and accountable. Investments in transportation will support the creation of high-paying, quality jobs in the GTHA and across Canada.

We will be proud of our transportation system, and the world will once again look to the GTHA as a model of transportation vision and progressiveness.

## **OUR VISION IN NUMBERS**

### **25 YEARS FROM NOW . . .**

The distance that people drive every day will drop by **ONE-THIRD** compared to today. We will accommodate **50% MORE PEOPLE** in the region with **LESS CONGESTION** than we have today. On average, **ONE-THIRD** of trips to work will be taken by transit and **ONE in FIVE** will be taken by walking or cycling. **60%** of children will walk or cycle to school. There will be **SIX** times more bike lanes and trails than today. **ALL** transit vehicles will be accessible. Customer satisfaction with the transportation system will exceed **90%**. A single fare card will be used for **ALL** transit trips throughout the GTHA, and **ALL** fares will be integrated. By transforming the GTHA's transportation system, we will help meet the province's Go Green Action Plan for Climate Change. Per person, our emissions from passenger transportation will be **HALF** what they are today.

# 3.0

## GOALS AND OBJECTIVES

The vision for the Regional Transportation Plan describes where we want to be in 25 years. To guide progress towards the vision, a set of goals and related objectives has been developed. These are presented in the table below. It should be noted that many of the objectives will help to achieve more than one goal. The goals and objectives are intended to provide guidance for decision-making and planning at all levels.

**TABLE 1: GOALS AND OBJECTIVES OF THE REGIONAL TRANSPORTATION PLAN**

GOALS	OBJECTIVES
<p><b>A. Transportation Choices:</b> People will have a wide range of options available to them for getting around regardless of age, means or ability, including walking, cycling, public transit and automobiles.</p>	<ol style="list-style-type: none"> <li>1. Increased transportation options for accessing a range of destinations</li> <li>2. Improved accessibility for seniors, children and individuals with special needs and at all income levels</li> <li>3. Decreased need for travel, particularly over long distances and at rush hour</li> </ol>
<p><b>B. Comfort and Convenience:</b> There will be a strong emphasis on the traveller. Getting around will be more convenient with coordinated information, facilities, operations and pricing; more comfort and less crowding; and the highest standard of customer service across the system. Uncertainty regarding travel times and delays will be reduced.</p>	<ol style="list-style-type: none"> <li>4. Improved transportation experience and travel time reliability</li> <li>5. Faster, more frequent and less crowded transit</li> <li>6. Improved information, including real-time information, available to people to plan their trips</li> <li>7. Region-wide integrated fare structure and collection, and schedule coordination</li> </ol>
<p><b>C. Active and Healthy Lifestyles:</b> Walking and cycling will be attractive and realistic choices for all, including children and seniors.</p>	<ol style="list-style-type: none"> <li>8. Increased share of trips by walking and cycling</li> </ol>

GOALS	OBJECTIVES
<p><b>D. Safe and Secure Mobility:</b> Getting around will be safer and more secure. Parents will feel comfortable allowing and encouraging their children to walk, cycle or take public transit to school.</p>	<p>9. Continued progress towards zero casualties and injuries on all transportation modes</p> <p>10. Improved real and perceived traveller safety, especially for women, children and seniors</p> <p>11. Improved safety for cyclists and pedestrians</p>
<p><b>E. Fairness and Transparency:</b> Citizens will be active partners in shaping the future transportation system. Decision-making will be transparent and inclusive.</p>	<p>12. Increased engagement in the planning and financing of the transportation system from a diverse group of citizens</p>
<p><b>F. A Smaller Carbon Footprint and Lower Greenhouse Gas Emissions:</b> The transportation system will operate sustainably within the capacities of – and in balance with – the GTHA’s ecosystems. The GHGs and other harmful emissions related to transportation will be reduced.</p>	<p>13. Decreased use of non-renewable resources</p> <p>14. Significant contribution to the achievement of the transportation-related GHG reduction targets of Go Green: Ontario’s Action Plan for Climate Change</p> <p>15. Improved air quality, and reduced impacts on human health</p>
<p><b>G. Reduced Dependence on Non-Renewable Resources:</b> By reducing our dependence on non-renewable resources, the transportation system will be more resilient. We will be better able to withstand volatility in energy supply and prices, and have more flexibility to switch to new fuels and technologies.</p>	<p>16. Increased proportion of trips taken by transit, walking and cycling</p> <p>17. Improved energy efficiency, including increased use of clean vehicles and green technologies</p> <p>18. Reduced use of out-of-province energy sources</p>

## GOALS

## OBJECTIVES

### H. **Foundation of an Attractive and Well-Planned Region:**

The transportation system will be a cornerstone of city building, helping to create a region that is a destination of choice for new residents and businesses. The transportation system will help us create valuable, beautiful and attractive places. Roads, streets, transit lines and stations will be designed to benefit both travellers and local residents. The transportation system itself will use less space, and help curb sprawl by supporting more compact and efficient urban forms. Transportation services, particularly transit, will not lag behind population and employment growth.

19. Reduced consumption of land for urban development

20. Reduced negative impacts on our agricultural and natural systems

21. More transit and pedestrian-friendly streetscapes, and improved walking and cycling amenities

22. Greater prevalence across the region of transit-supportive densities and urban design

### I. **Prosperity and Competitiveness:**

The transportation system will respond efficiently and equitably to the needs of the Ontario economy. It will create opportunities for greater prosperity throughout the region and support Ontario in becoming a leader in attracting the best and the brightest from around the world, especially for new green jobs in the transportation sector. Deliveries, imports and exports will be faster and more reliable thanks to a more efficient, integrated and coordinated transportation system. Residents will be able to get to a greater number of jobs.

23. Lower average trip time for people and goods

24. Greater reliability of the freight and passenger systems

25. Managed congestion

GOALS	OBJECTIVES
<p><b>J. Multi-Modal Integration:</b> The transportation system will be fully integrated. It will be easy to make a decision on how to get somewhere or ship something thanks to seamless integration, accurate and timely information, and prices determined in a transparent manner.</p>	<p><b>26.</b> Reduced delays, damage and costs in transferring goods from one mode to another, and more seamless region-wide services for travellers and service-providers</p>
<p><b>K. Interconnectedness:</b> The GTHA transportation system will be well-connected to surrounding regions, the rest of Canada and the world.</p>	<p><b>27.</b> Improved connections and service within the GTHA and to/from regional, provincial, and international terminals and facilities</p>
<p><b>L. Efficiency and Effectiveness:</b> The transportation system will be designed to optimize the use of resources and provide better value to households, businesses and governments. Greater emphasis will be placed on moving people and goods, rather than vehicles.</p>	<p><b>28.</b> Increased prevalence of Transportation Demand Management practices</p> <p><b>29.</b> Improved value of transportation investment and spending for households, businesses and governments</p> <p><b>30.</b> Optimized use of all travel rights-of-way by commercial vehicles through a range of incentives and disincentives</p> <p><b>31.</b> Increased productivity of the transportation system</p>



## GOALS

**M. Fiscal Sustainability:** Funding to build and operate the new and existing system will be sufficient, reliable and predictable. Technology and infrastructure will be selected that promote system productivity and safety, reduces ongoing operating and maintenance costs, and ensures integration across the system.

## OBJECTIVES

- 32.** Sufficient, reliable and predictable funding sources for transportation investments
- 33.** Technical rigour and transparency in the selection and prioritization of major projects
- 34.** Increased financial self-sufficiency of transportation infrastructure and projects
- 35.** Competitive shipping cost structure
- 36.** Fair and effective fiscal treatment of various modes that better reflects the cost of transportation services in the prices paid by users
- 37.** Minimized direct and indirect economic losses due to accidents

# 4.0 STRATEGIES

The RTP contains 10 Strategies that are needed to achieve the vision, goals and objectives of the RTP. Each Strategy includes the following:

- Priority Actions – These are specific and concrete actions that comprise a “to-do” list that is needed to implement the Strategy. These actions are broad in scope and include actions relating to legislation, policies, programs, planning and funding.
- Supporting Policies – These are policies that are needed to guide day-to-day decision making in support of each Strategy.

**TABLE 2: TEN STRATEGIES**

STRATEGIES	
<b>Strategy #1</b>	Build a Comprehensive Regional Rapid Transit Network
<b>Strategy #2</b>	Enhance and Expand Active Transportation
<b>Strategy #3</b>	Improve the Efficiency of the Road and Highway Network
<b>Strategy #4</b>	Create an Ambitious Transportation Demand Management Program
<b>Strategy #5</b>	Create a Customer-First Transportation System
<b>Strategy #6</b>	Implement an Integrated Transit Fare System
<b>Strategy #7</b>	Build Communities that are Pedestrian, Cycling and Transit-Supportive
<b>Strategy #8</b>	Plan For Universal Access
<b>Strategy #9</b>	Improve Goods Movement Within the GTHA and With Adjacent Regions
<b>Strategy #10</b>	Commit to Continuous Improvement

All of these Actions and Policies are important and will contribute to the transformation of the GTHA transportation system. However, nine of the Priority Actions are highlighted as Big Moves. The Big Moves are those that will have the largest and most transformational impacts on the GTHA's transportation system.



The Nine Big Moves are the Priority Actions that will have the largest and most transformational impact on the GTHA's transportation system.

**TABLE 3: NINE BIG MOVES**

<b>BIG MOVES</b>	
1. A fast, frequent and expanded regional rapid transit network.	See Priority Action <b>#1.1</b>
2. High-order transit connectivity to the Pearson Airport district from all directions.	See Priority Action <b>#1.2</b>
3. An expanded Union Station - the heart of the GTHA's transportation system.	See Priority Actions <b>#1.3</b> and <b>#1.4</b>
4. Complete walking and cycling networks with bike-sharing programs.	See Priority Actions <b>#2.1</b> and <b>#2.2</b>
5. An information system for travellers, where and when they need it.	See Priority Action <b>#5.1</b>
6. A region-wide integrated transit fare system.	See Priority Action <b>#6.1</b>
7. A system of connected mobility hubs.	See Priority Action <b>#7.1</b>
8. A comprehensive strategy for goods movement.	See Priority Action <b>#9.1</b>
9. An Investment Strategy to provide immediate, stable and predictable funding.	See Section <b>#6.0</b>

## STRATEGY #1

### BUILD A COMPREHENSIVE REGIONAL RAPID TRANSIT NETWORK

Significant investment in transit infrastructure is needed to make up for a generation of under-investment, meet the challenge of a growing population, and allow more people to choose transit in the face of fluctuating oil prices, growing congestion and environmental concerns. The core of the RTP is a plan for a regional rapid transit network that operates seamlessly across the region. This network is identified in Schedules 1 and 2 and is described more fully in section 5.0. The regional rapid transit network will need to be supported by comprehensive and robust local transit networks, cycling and pedestrian networks, transit-supportive land uses, and supporting policies and programs.

The regional rapid transit network identified in Schedules 1 and 2 is conceptual only. It represents projects proposed for full or substantial completion within the first 15 years and 25 years, respectively, of the RTP's adoption.

Subsequent to the RTP, recommended alignments and technologies for some projects may be refined through the project-level Benefits Case Analysis (BCA) that Metrolinx will carry out in partnership with municipalities and transit agencies.

#### EXAMPLE: TRANSIT PRIORITY MEASURES



Bus Bypass Shoulders can allow for fast and reliable transit service on busy highways.



Queue jump lanes allow transit vehicles to jump ahead of regular traffic at a red light.



## PRIORITY ACTIONS:

### BIG MOVE #1

A fast, frequent and expanded regional rapid transit network.

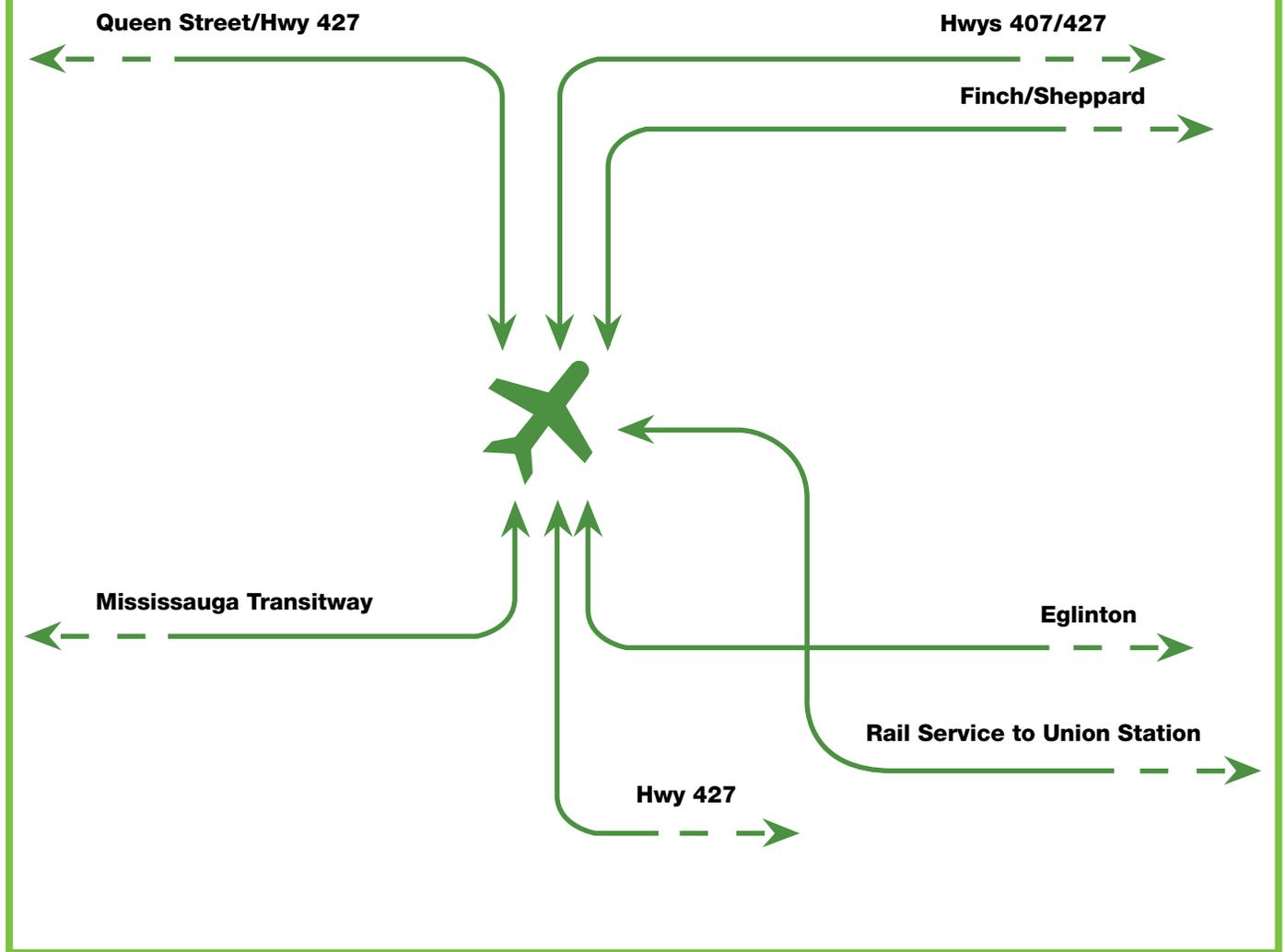
1.1 Build the regional rapid transit network identified in Schedules 1 and 2, to bring fast, frequent, all-day, two-way express rail service and expanded regional rapid transit service to every region of the GTHA and to within two kilometres of 80 per cent of GTHA residents (see Section 5.0 for more detail).



## **BIG MOVE #2**

High-order transit connectivity to the Pearson Airport district from all directions.

- 1.2 Establish high-order transit connectivity to the Pearson Airport district from all directions, including a multi-purpose, fast transit link to downtown Toronto (see Section 5.0 for more detail).



## BIG MOVE #3

### An expanded Union Station – the heart of the GTHA’s transportation system.

1.3 The City of Toronto is proceeding with the revitalization of Union Station to provide new passenger concourse areas, accommodate GO Transit rail expansion, improve pedestrian access to and through the building, and expand customer amenities and retail areas. Metrolinx will work with the City of Toronto, GO Transit, and stakeholders on a long-range strategy that builds on the work already underway, to ensure that all existing and future initiatives to improve Union Station and its surrounding precinct are coordinated to implement the RTP. Union Station will become a customer-focused facility that provides seamless connections between all modes of transportation and the surrounding downtown Toronto area. Union Station should be developed in a way that maximizes not only the value of the station itself, including its cultural heritage value, but also the immediate precinct and broader region that it directly serves. It should also meet the needs of the passenger throughput that will result from the implementation of the RTP. The following will be clearly addressed:

- upgrading of facilities to accommodate services proposed in the RTP, and required phasing to allow for the timely delivery of services; and
- identification of necessary investment and potential revenue streams to meet the above objectives.

1.4 Integrate the Toronto bus terminal with Union Station to provide more seamless connections between regional rail and bus services.



Union Station is Canada’s busiest passenger transportation facility and a National Historic Site. Every day over 240,000 users pass through it, amounting to over 65 million per year. Over the next 25 years, Union Station will see a quadrupling of passenger traffic in the morning peak hour as a result of the expansion of the regional rapid transit network. Improvements to tracks, platforms, and passenger circulation will be needed to accommodate the new services proposed in the RTP.

- 1.5 Establish regional rapid transit connections outside the GTHA, such as the conceptual network shown in Appendix C, that connects the GTHA's transit network to municipalities surrounding the GTHA and to other destinations outside of the region with both public and private transit services, in a manner that supports the urban structure objectives of the Growth Plan for the Greater Golden Horseshoe and Greenbelt Plan.
- 1.6 In collaboration with the federal government, Québec and other provinces, private sector passenger transportation operators and other key stakeholders, identify concrete opportunities to align regional and national transportation objectives, including linking regional networks to national and international networks such as VIA Rail.
- 1.7 Remove barriers to the creation of Bus Bypass Shoulders on controlled-access expressways. Where feasible, create Bus Bypass Shoulders to allow transit vehicles to bypass congested areas.
- 1.8 Establish protocols within the provincial government to facilitate the use of provincially-owned lands for transportation facilities.
- 1.9 Provide municipalities with tools and best practices to leverage funding for local transit and active transportation infrastructure from new development, such as:
  - amending the Development Charges Act to allow municipalities to recover the full, growth-related costs of transit infrastructure, and to base cost recovery on a level of transit service above historical levels;
  - re-directing development charge levies collected within the broader transportation envelope to a variety of modes, including Transportation Demand Management and active transportation, so as to support the goals and objectives of the RTP, rather than extend past patterns into the future;
  - facilitating value-capture related to transit by expanding the use of special-area ratings of benefiting areas or developments; and/or
  - negotiating accelerated transit infrastructure investment in exchange for voluntary contributions from benefiting property owners.



- 1.10 Work with the region's public and private transportation providers, municipalities and large 24-hour trip generators to coordinate existing after-hours services and work towards the establishment of a region-wide 24-hour base transit network that serves entertainment districts, shift employers, and other areas of high demand in evening off-peak hours.
- 1.11 Identify, prioritize and resolve gaps and bottlenecks in the transit network, particularly where they cross municipal boundaries.

**SUPPORTING POLICIES:**

- 1.12 Road-based transit shall make optimum use of existing road infrastructure, and minimize the need for road extensions, widenings and new roads.
- 1.13 To the maximum extent possible, new transit infrastructure, including transit vehicles and technologies, should be compatible across the region and utilize common international standards. This would allow for better integration of transit services, inter-operability across the region, and cost-effective procurement.
- 1.14 Official Plans, secondary plans and municipal Transportation Master Plans should identify transit priority zones where transit priority measures will be put in place and where transit agencies could be allowed to enforce traffic and parking operations to ensure the optimal function of transit operations.

## CHOOSING THE RIGHT TECHNOLOGY

The regional rapid transit network in Schedules 1 and 2 identifies several types of transit service: Express Rail, Regional Rail, Subway, and Other Rapid Transit (comprises Light Rail Transit, Bus Rapid Transit, Automated Guided Transit, and other technologies). These categories are based on the level of service provided. Within each category, several types of technologies are possible. Many of these categories overlap. Subsequent to the RTP, projects identified in the regional rapid transit network will undergo a more detailed Benefits Case Analysis to determine the most appropriate technology.

More information on these categories and technologies is available in the backgrounder entitled “Transit Technologies, December 2008”.

## EXPRESS RAIL



**Yamanote Line  
(Tokyo)**



**Réseau Express Régional  
(Paris)**



**Bay Area Rapid Transit  
(San Francisco)**

High-speed trains, typically electric, serving primarily longer-distance regional trips with two-way, all-day service. Station locations would generally be the same as those of regional rail, but with faster and more frequent service.

**Average Speed: 50 – 80 kilometres per hour**

**Frequency: as low as five minutes between trains**

**Capacity: 25,000 – 40,000 passengers per hour**

**Stations: two to five kilometres apart**

## REGIONAL RAIL



**River Line**  
(New Jersey)



**Deux-Montagnes Line**  
(Montréal)



**GO Train**  
(GTHA)

Diesel-electric or electric trains serving primarily longer-distance regional trips.

**Average Speed:** 30 – 50 kilometres per hour

**Frequency:** as low as 10 minutes between trains

**Capacity:** 5,000 – 20,000 passengers per hour

**Stations:** two to five kilometres apart

## SUBWAY



**Toronto Subway**  
(Toronto)



**Tunnelbanan**  
(Stockholm)



**Metro**  
(Washington D.C.)

High capacity, heavy rail transit that is fully-grade separated from other traffic, predominantly underground.

**Average Speed:** 25 – 50 kilometres per hour

**Frequency:** as low as 90 seconds between trains

**Capacity:** 25,000 – 40,000 passengers per hour

**Stations:** spacing varies depending on desired speeds

## OTHER RAPID TRANSIT



**T3 Tram  
(Paris)**



**Rede Integrada de Transporte  
(Curitiba, Brazil)**



**RandstadRail  
(Netherlands)**

A broad category that includes Bus Rapid Transit (BRT), Light Rail Transit (LRT), Automated Guided Transit (AGT) and other technologies that operate completely or mostly in their own rights-of-way, separate from mixed traffic. Also includes buses operating in mixed traffic on controlled-access expressways that employ congestion management such as tolls, thereby allowing the buses to maintain high average speeds. Speed and reliability can be increased significantly with grade-separation from other traffic (i.e. above-ground or below-ground) that allows the transit to bypass or have priority at signalized intersections.

**Average Speed: 15 – 40 kilometres per hour (higher for dedicated bus transitways on controlled-access expressways or in mixed traffic on tolled controlled-access expressways)**

**Frequency: as low as 90 seconds between trains/buses**

**Capacity: 2,000 – 25,000 passengers per hour**

**Stations: spacing varies depending on desired speeds**

## STRATEGY #2

### ENHANCE AND EXPAND ACTIVE TRANSPORTATION

Active transportation, including walking, cycling, roller-blading and movements with mobility devices, is a healthy, cost-effective and environmentally-friendly way to travel. In the GTHA, it is estimated that 17 per cent of all trips are walkable (i.e. less than two kilometres in length) and 40 per cent are bikeable (i.e. less than five kilometres in length); however, walking and cycling currently account for just five per cent of all work trips and 32 per cent of all school trips in the region. An effective transportation system is one that makes provision for, and encourages, walking, cycling and other forms of active transportation.

#### PRIORITY ACTIONS:

### BIG MOVE #4

#### Complete walking and cycling networks with bike-sharing programs.

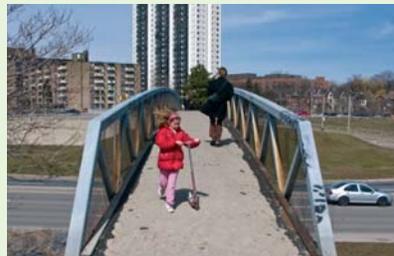
- 2.1 Plan and implement complete, integrated walking and cycling networks for the GTHA, including Toronto's PATH system, that address key barriers such as bridges over 400-series highways, rail corridors and major rivers, and missing sidewalks on major roads. The cycling networks will bring every GTHA urban resident to within a maximum of one kilometre of a dedicated bicycling facility. This will be supported by a provincial funding commitment increased over time to at least \$20 million per year for municipalities to complete the walking and cycling networks.
- 2.2 Create pilot bike-sharing programs in major urban centres.



Bike and pedestrian networks provide safe and convenient opportunities for active transportation.



Bike-sharing programs, such as Vélib' in Paris, France, allow people to pickup and drop off bikes at stations located around the city.



New infrastructure provides connectivity for cyclists and pedestrians over barriers, such as rivers and major roadways.

2.3 Research, standardize and promote best practices to integrate walking and cycling in road design, such as scramble intersections, bike boxes, and signal prioritization.

2.4 Install bike racks on all buses and Light Rail Transit (LRT) vehicles and amend both the Highway Traffic Act (Section 109) and the Public Vehicles Act (Sections 23 and 24) so that transit vehicles with bike racks do not require special permits.



2.5 Establish a coordinated, region-wide bicycle registry with the ability to report and search for stolen bikes.

2.6 Consider changes to the Highway Traffic Act that implement the 1998 recommendations of the Regional Coroner for Toronto to provide greater clarity with respect to the relationship between motorists and cyclists in areas such as safety equipment, lane positioning and passing procedures.

2.7 Implement or expand safe cycling training programs, similar to the Commuter Cycling Skills Course offered in the Vancouver area, or the CAN-BIKE courses offered by municipalities across Canada.

2.8 Undertake Active Transportation Master Plans and incorporate them into municipal Transportation Master Plans.

**EXAMPLE: BIKELINX**



**BikeLinx is a \$5 million Metrolinx initiative that will make it easier for people in the GTHA to combine bicycling with transit.**

**Through the BikeLinx program, Metrolinx has provided funding to GTHA municipalities to equip every bus in their transit fleets with an external bike rack and to install permanent, secure and sheltered bicycle parking facilities at major transit stops.**

## **SUPPORTING POLICIES:**

- 2.9** Opportunities for promoting active transportation and connecting key destinations, including mobility hubs and major transit station areas, shall be identified and implemented when designing greenways strategies and park systems.
- 2.10** Enabling Official Plan policies to support active transportation shall be adopted. Where appropriate, the bonusing provisions under the Planning Act should be used to require that any application for major commercial, employment or multiple residential development, particularly in a mobility hub, provides appropriate facilities for cyclists and pedestrians such as secure bike storage, showers and change rooms.
- 2.11** School catchment areas shall be defined, and school campuses shall be designed, to maximize walking and cycling as the primary means of school travel.
- 2.12** Sidewalks should be required on all new regional and new local roads inside settlement areas.

## STRATEGY #3

### IMPROVE THE EFFICIENCY OF THE ROAD AND HIGHWAY NETWORK

Most people and goods in the GTHA travel on roads. Only about five per cent of the GTHA's total daily travel is done on rail (via subway and GO Transit). The rest of the 12 million-plus trips that are made every day – whether by car, truck, bus, streetcar, bicycle or foot – are made on roads and highways. For the GTHA's rural areas, the regional road and highway network is their mobility lifeline. It is critical to improve the efficiency of the GTHA's network of road and highways, through better monitoring and planning, strategic improvements to the road network, promotion of ride-sharing and car-sharing, and the use of tools that improve traffic flows.

#### FACT

**Currently the average vehicle travelling on the GTHA's roads and highways during the morning rush hour carries less than 1.2 people. Increased use of ride-sharing can have a significant benefit. Increasing the average number of people per vehicle to 1.4 would take 344,000 vehicles off the roads every rush hour.**

#### PRIORITY ACTIONS:

- 3.1 Implement the regional highway network identified in Schedules 1 and 2, and complete studies and obtain federal and provincial environmental approvals for the proposed transportation corridors.
- 3.2 Identify, prioritize and resolve gaps and bottlenecks in the road network, particularly where they cross municipal boundaries.
- 3.3 Assess and implement an inter-connected regional network of multi-purpose reserved lanes that builds on existing plans for high occupancy vehicle (HOV) lanes to improve the efficiency of highways and arterial roads for transit and multi-occupant vehicles, with potential for high occupancy toll (HOT) lanes. The use of both existing and new lane capacity as well as shoulders will be explored, with an emphasis on interconnectivity and more efficient use of available capacity.

- 3.4** Building on highly successful programs such as the Ontario Ministry of Transportation's COMPASS freeway traffic management system and the City of Toronto's RESCU traffic management system, create an Intelligent Transportation System strategy for the GTHA, with policies and programs to:
- reduce traffic congestion and delays by implementing or expanding road and highway video and computer-aided monitoring for faster incident detection, management and emergency vehicle or tow truck dispatching;
  - implement a coordinated, region-wide system of ramp metering signals at entry ramps to major highways, coordinated with signals on adjacent arterial roads, that monitors cumulative traffic conditions and optimizes traffic flows to reduce congestion;
  - improve and coordinate signal controls for more efficient traffic flows, including across municipal boundaries and in response to major incidents on highways;
  - provide real-time road and highway traffic information and travel-related weather information directly to travellers; and
  - integrate regional traffic management for all 400-series expressways, urban expressways and regional roads with centralized monitoring of traffic flows and patterns, and control over signalization and other traffic management measures.
- 3.5** Continue to support the Smart Commute CarpoolZone online ride-matching service, and identify and eliminate legal and liability barriers to ride-sharing.

#### **EXAMPLE: CARPOOLZONE**

**CarpoolZone.ca was launched by Smart Commute in November 2005 to serve as a region-wide carpooling ride-match service. Users can specify their home and work locations, whether they would like to be a driver, passenger or both, and how flexible they are in terms of distance, departure times and other preferences. CarpoolZone will find them an ideal match. CarpoolZone.ca now has over 5,000 active users and over 400 active carpools.**

**3.6** Amend the Ontario Public Vehicles Act to allow third-parties such as non-governmental organizations to provide vanpools to service major trip generators such as employers, post-secondary institutions and tourism destinations and to augment public transit service in low density or dispersed employment areas.

**3.7** Continue to develop and expand the provincial carpool lot network to include additional lots at strategic locations, aligned with High Occupancy Vehicle (HOV), rapid transit and interregional bus networks, particularly at the periphery of the GTHA.

**3.8** Develop road capacity enhancement pilot projects, such as tidal flow operations, contraflow lanes, dynamic lanes, continuous flow intersections, diverging diamond interchanges, shoulder bus lanes, roundabouts, reversible lanes, and moveable barriers.

**3.9** Support driver education programs which encourage more efficient driving practices to reduce fuel consumption and decrease emissions.

**SUPPORTING POLICIES:**

**3.10** Any new additions or major improvements to the provincial, regional or local road network in the GTHA, shall be considered within the context of the transportation hierarchy in Policy 5.11, and shall contribute to meeting the goals and objectives of the RTP.

**3.11** New or expanded roads or highways should not undermine the viability of existing or planned regional rapid transit services in the same area, particularly when the transit service operates within the same corridor.

**3.12** Planning for new or expanded roads or highways shall consider opportunities to support or improve existing or planned regional rapid transit services or operations.

**EXAMPLE: DRIVEWISER**  
Drivewiser is a fuel efficiency and driver training program, administered by the province of Nova Scotia in partnership with a not-for-profit organization. In addition to an online resource, the program also includes workshops to promote the use of efficient vehicles and good driving habits to improve fuel efficiency on the road. The program focuses on communicating the benefits of fuel efficiency and the impacts of individual behaviour on emissions reduction.

**3.13** Whenever parking is provided at mobility hubs, major transit station areas or major commercial or employment areas, priority spaces shall be provided for carpool and car-share vehicles. Operators of non-residential parking lots should provide easily visible information on carpooling opportunities.



**EXAMPLE: ONTARIO HOV NETWORK**

A High Occupancy Vehicle (or HOV) lane is a roadway lane designated for use only by vehicles with a specified minimum number of occupants — usually two or three. HOV lanes encourage people to use transit or carpool rather than drive alone by ensuring them more reliable and faster trip times. This increases the efficiency of the road network as more people are moved in

fewer vehicles, reducing congestion and improving the reliability and speed of travel in the other lanes, as well.

In December 2005, the Province of Ontario opened its first HOV lanes on sections of Highways 403 and 404. By 2031, a network of more than 300 km of HOV lanes will be in place on 400-series highways in the GTHA as part of the Ministry of Transportation’s HOV Lane Network Plan for the Greater Golden Horseshoe. The network will be accompanied by supportive programs, including the provision of carpool and parking lots in strategic locations.

## STRATEGY #4

### CREATE AN AMBITIOUS TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM

Residents of the GTHA are making more and more trips every year and the average length of these trips is increasing. The number of daily car trips during the morning peak period increased 60 per cent from 1.3 million in 1986 to 2.1 million in 2006. The average distance of these morning peak period trips increased 21 per cent from 12.3 km in 1986 to 14.9 km in 2006. The increase in car trips and distance travelled is heightening the stress on our transportation system and leading to ever-worsening traffic congestion. The best way to reduce this stress on our system is to reduce the demand for travel. The most efficient and cost-effective trip to service is the trip that never happens in the first place. By changing whether, when, where and how we travel, we can make more efficient use of our transportation system.

#### FACT: EMPLOYER TDM PROGRAMS

Employer TDM programs can include:

- emergency ride-home programs, such as free taxi fares, for employees who miss their train or carpool because they had to work late;
- employee ride-matching services;
- flexible work hours; and
- promotion of telework opportunities.

#### PRIORITY ACTIONS:

- 4.1 Develop a Transportation Demand Management (TDM) policy and strategy for provincial ministries and agencies such as school boards, hospitals and universities that include actions, timelines and targets.
- 4.2 Establish guidelines and model policies to help municipalities develop and implement TDM policies in their Official Plans and Transportation Master Plans.
- 4.3 Encourage private sector employers to implement TDM programs.
- 4.4 Encourage employers who currently offer their employees free or subsidized parking a choice between the parking or a cash equivalent that can be used for other means of transportation.
- 4.5 Incorporate objectives and goals related to TDM as part of any revenue or financial tools that are recommended as part of the Metrolinx Investment Strategy.

#### SUPPORTING POLICIES:

- 4.6 Official Plans shall require a TDM strategy as part of planning applications for any major commercial, employment or institutional development.

## STRATEGY #5

### CREATE A CUSTOMER-FIRST TRANSPORTATION SYSTEM

It often appears as if the GTHA's current transportation system is designed and operated with the needs of the transportation provider in mind, rather than those of the traveller. With limited resources available to them, local transit agencies have had to focus on meeting immediate demands.

To achieve an effective transportation system, this must change. The comfort and convenience of the traveller must be the primary consideration in how the transportation system is planned, designed and operated. Regional travel must be made more convenient and barrier-free as travellers transfer between modes, services and across municipal boundaries. Travellers must have the information they need to make the best choices about whether, when, where and how they travel. Planning a trip with certainty, regardless of destination or mode, should be easy for travellers or commercial users. Most of all, the system needs to strive to make transportation a more reliable and enjoyable experience for users.

#### PRIORITY ACTIONS:

### BIG MOVE #5

An information system for travellers, where and when they need it.

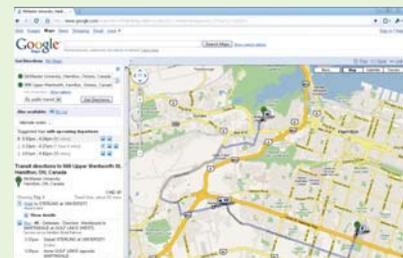
- 5.1 Create a regional transportation information portal that is accessible online and by telephone, e-mail or smart phone that provides all users of the transportation system with comprehensive, easily accessible and standardized information on the full-range of transportation alternatives and optimal routings available to them, as well as the status of all of the elements of the transportation network.



Get information about schedules or delays sent to your cell phone or PDA.



Real-time information at transit stations will tell you when the next transit vehicle will arrive.



An online trip planner will help you choose the best way to get to your destination.

**5.2** Establish region-wide standards and public reporting requirements for all transit services in the GTHA that are appropriate to the local context, and that address customer service issues such as minimum service frequency, crowding, safety, service reliability including on-time performance and cancellations, cleanliness, responsiveness and customer satisfaction.

**5.3** Coordinate schedules among transit service providers, including demand-responsive services for persons with disabilities. Establish best practices that ensure GO Transit and local transit agencies provide each other with a minimum 90-days' notice before implementing any changes in service, to allow time for agencies to adjust and coordinate their schedules.

**5.4** Establish customer service centres at all mobility hubs where travellers can obtain information on schedules, connecting trips, fares and other information for any transportation provider in the region.

**5.5** Equip all mobility hubs, and key transit stations and stops with real-time information displays that tell transit riders the arrival time of the next transit vehicle, and what alternatives are available in the event of a service disruption.

**5.6** Phase out the restrictions that currently prevent transit agencies from picking up passengers while passing through neighbouring jurisdictions.

**5.7** Encourage developers to provide information about transportation alternatives, including local transit routes and schedules, and active transportation networks, to new home buyers.

**EXAMPLES: HELSINKI, LYONS & SINGAPORE**

**Regional transportation information portals in places such as Helsinki, Lyons and Singapore provide travellers with information on a wide range of matters including:**

- **schedules, routes and fares for public transit as well as inter-city motor coach and rail services;**
- **real-time location and arrival time of individual transit vehicles;**
- **walking and cycling routes;**
- **accessibility of stations, stops and vehicles;**
- **road and transit closures, construction and detours;**
- **planned infrastructure improvements;**
- **school bus cancellations;**
- **parking lot locations, costs and availability;**
- **carpooling and car-sharing opportunities;**
- **air quality conditions and smog alerts;**
- **a personal carbon footprint calculator that allows people to compare the environmental impacts of their transportation options; and**
- **opportunities for contributing to local carbon offset programs.**

- 5.8 Undertake individualized social marketing campaigns directed at the household level to reach every household near rapid transit approximately every three years with information about transportation alternatives, including local transit routes and schedules.
- 5.9 Develop a consistent set of procedures, visual and audio cues, and wayfinding measures, that make the transit system easier to use and navigate, including consistent numbering and naming of transit stations and stops, consistent schedules, and common transit signage standards.
- 5.10 Expand the availability of overhead display boards on roads and highways that show the estimated time to key destinations and notify travellers of delays and alternative routes.

#### **SUPPORTING POLICIES:**

- 5.11 All relevant decision-making, such as planning, designing, financing and operating the transportation system, locating major trip generators, and designing communities and individual buildings, should promote a shift in travel behaviours to the maximum extent that is feasible, based on the following passenger transportation hierarchy:
- (i) Trip reduction, shortening or avoidance
  - (ii) Active transportation
  - (iii) Transit
  - (iv) Ride-sharing and taxis
  - (v) Single-occupant vehicles
- 5.12 The needs of all travellers, including transit users, cyclists and pedestrians, shall be considered as part of all planning decisions by:
- obtaining the input of transit agencies and public health departments on all major planning and transportation matters; and
  - requiring, as part of planning applications, a comprehensive transportation impact study that is integrated with the applicable municipal Transportation Master Plan and that considers the impacts of the new development on all forms of transportation as well as the impacts of induced traffic.

**EXAMPLE: SOCIAL MARKETING IN PORTLAND**  
Portland, Oregon was the site of the first large-scale individualized social marketing project in North America. The project, called TravelSmart, reached more than 14,000 people in 2004 after a new MAX light rail line was opened. Thousands of households in the TravelSmart area received information on transit, walking and cycling. Subsequent surveys showed that after the light rail line opened, the growth in transit trips was 24 per cent in the area where there was no individualized marketing project, but 44 per cent — almost twice as much — in the TravelSmart area.

## STRATEGY #6

### IMPLEMENT AN INTEGRATED TRANSIT FARE SYSTEM

There are 10 public transit agencies in the GTHA. Currently each has its own, separate system for paying fares and each has its own fare structure. This means, for example, that people who travel from a local bus in one city, to a GO train, and then to the subway in Toronto need to pay three different fares, or have three different transit passes for their trip. Other jurisdictions in Canada and around the world have integrated their transit fare systems to offer a more consistent and seamless service to travellers. The Ontario Ministry of Transportation launched a regional farecard pilot project called Presto in the summer of 2007. By 2012, the Presto farecard will allow users to swipe the card and automatically be billed for travelling on transit systems anywhere in the GTHA. There is a potential to expand Presto to become the premiere payment platform in the GTHA and revolutionize the way that travellers interact with the transportation system. There is also an opportunity to use it to help integrate fares across the region.

#### PRIORITY ACTIONS:

### BIG MOVE #6

#### A region-wide integrated transit fare system.

- 6.1 Implement a region-wide integrated transit fare system by 2012 that allows users to pay a seamless, integrated fare for all transit systems across the region.



No more tokens or tickets: the Presto smart card will allow transit riders to pay their fare in any part of the region with a single card.



Transit riders in Hong Kong can use their Octopus transit smart card for payment at stores and restaurants. Frequent users receive reward points.



An integrated fare system can enable travellers to cross municipal boundaries or transfer between transit modes or operators without fare duplication.



**6.2** Over time, leverage the Presto fare smart card's technology to offer new fare products and integrate fares throughout the region. Pursue partnerships with financial institutions, local businesses, tourism destinations, transit agencies and public sector agencies to expand the scope of the Presto fare smart card to function as a debit card, library card, parking pass, bike share card or to offer discounts and reward points.

**EXAMPLE: McMASTER U-PASS**

**McMaster University's U-PASS program provides all McMaster students with an eight-month transit pass for only \$94.80 annually. An overwhelming 89 per cent of students voted in favour of the program in the last referendum.**

**FACT: EMPLOYER-PROVIDED TRANSIT PASSES**

**If an employer provides a free or subsidized transit pass, it is considered a taxable benefit and the employee has to pay tax on it. If the employer provides free parking, however, it is not considered a taxable benefit and the employee does not have to pay tax on it, unless there is a specific spot reserved for their exclusive use.**

**6.3** Expand GO Transit's local transit subsidy program for riders who are travelling to GO stations using local transit.

**6.4** Provide financial incentives to encourage greater transit use, such as:

- expanding the use of U-PASS programs currently offered by many transit providers;
- making employer-provided or employer-subsidized transit passes tax-exempt; and
- offering bulk discounts on transit pass sales to employers and major trip generators.

## STRATEGY #7

### **BUILD COMMUNITIES THAT ARE PEDESTRIAN, CYCLING AND TRANSIT-SUPPORTIVE**

How we design our communities is a major factor in determining how we choose to travel. People who live in a higher density neighbourhood with a variety of stores and services near their home are more likely to walk, cycle or take transit. People living in a lower density neighbourhood that is far from stores and services, and lacks sidewalks and bike lanes are much more likely to drive. An effective transportation system is one that is supported by, and that promotes efficient and sustainable land use. The RTP builds on the linkages between the transportation system and the management of urban growth that have been established in the province's Growth Plan for the Greater Golden Horseshoe and helps to support and implement the Growth Plan vision.

#### **FACT: ONTARIO'S GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE**

Ontario's Growth Plan for the Greater Golden Horseshoe was released in June 2006. It sets out a 25-year vision and plan to accommodate the expected growth in the region. It is designed to support economic prosperity, protect the environment and help communities achieve a high quality of life. The Growth Plan calls for the creation of more compact and complete communities, with a strong emphasis on transit and pedestrian-friendly design.

For more information about the Growth Plan visit [www.placestogrow.ca](http://www.placestogrow.ca).



**PRIORITY ACTIONS:**

**BIG MOVE #7**

**A system of connected mobility hubs.**

- 7.1 Create a system of connected mobility hubs, including Anchor Hubs and Gateway Hubs, at key intersections in the regional rapid transit network that provide travellers with access to the system, support high density development, and demonstrate excellence in customer service.



Atocha Station in Madrid, Spain is at the intersection of commuter and national rail lines and one of the city's metro lines. There are also shops, cafés, a nightclub and a 4,000 square metre covered tropical garden.



In St. Paul, Minnesota a new transit hub will link a new LRT station with relocated bus and train stations, making it easier to transfer between routes and modes. The priority is to make transit use as simple and pleasant as possible. To that end, the station will also feature a new public square to provide focus for activities in and around the station.

- 7.2 As the regional rapid transit system is implemented, detailed planning is undertaken for specific corridors, and municipal growth planning exercises unfold, Metrolinx may, in consultation with municipalities and transit agencies, refine the list of mobility hubs based on the definitions and criteria of the RTP.

## MOBILITY HUBS

The relationship between the structure of a city-region and its transportation system is critically important. An attractive and environmentally sustainable urban structure requires fast, frequent and well-connected means of movement. An efficient and cost-effective transit system requires nodes (or dense concentrations) of trip origins and destinations. The interface between urban form and the transportation system is particularly important around major transit stations.



Focusing growth and development around major transit stations allows more people to live near transit services, and makes more destinations accessible by transit.

Transit stations are also the key point of contact between the traveller and the transit system, so they have a significant impact on customer service and the overall travelling experience. A well-designed transit station can help make travellers feel relaxed, informed and appreciated. A poorly-designed station can cause frustration.

Some of the GTHA's transit stations are particularly significant given the level of transit service that exists or is planned for them, as well as the development potential around them. These stations are identified in the RTP as mobility hubs. In addition to serving as places to arrive, wait for and depart on transit, successful mobility hubs have the potential to become vibrant places of activity and destinations in themselves. Currently, many of these sites offer little more than vast parking lots, but they could be much more.

The RTP imagines a future in which key major transit stations are turned into true mobility hubs, where transportation modes come together, including local transit service, cycling and pedestrian networks, with secure storage facilities for bikes and car-share drop-off areas. They will be locations for major destinations such as office buildings, hospitals, educational facilities and government services. They will also offer amenities to travellers such as heated waiting areas, traveller information centres, cafés or restaurants, and services like a daycare, grocery store or post office (for more information see the backgrounder "Mobility Hubs, December 2008").

- 7.3** Develop a financial program to facilitate mobility hub capital improvements that increases over time to \$50 million annually. This program would fund or leverage transit-related improvements such as converting surface parking to structured parking, strategic land acquisitions, station improvements, and local road re-alignments to facilitate integration of transportation modes, with a focus on those mobility hubs that:
- have the greatest potential to improve the performance of the overall transit system and generate a return on the transit investment;
  - demonstrate an ambitious and practical development plan for achieving or exceeding the land use and transportation objectives of the RTP and the minimum requirements of the Growth Plan for the Greater Golden Horseshoe;
  - have prepared a viable business plan that outlines the public and private financing techniques for achievement of the intended development;
  - have strong support from the municipality;
  - have high levels of existing or planned local transit service; and
  - demonstrate best practices in the design and function of the mobility hub.
- 7.4** Establish a special purpose, transit-related urban development capability to lead or facilitate development for those mobility hubs where it is determined that jurisdictional issues, land ownership patterns or other issues present particular challenges that would otherwise inhibit their successful, integrated development. Such capability would be structured appropriately to respond to the issues identified and could be vested with authority to manage publicly owned lands and to acquire or assemble lands needed to realize the strategic development objectives of the mobility hub.
- 7.5** Take advantage of the full range of financial and development tools available as part of a mobility hub development strategy and establish guidelines for their appropriate use. These tools may include tax increment financing, community improvement plans, area development charges, as well as value capture strategies, public-private partnerships and the possible use, as necessary, of statutory expropriation powers.

- 7.6** With the guidance of a multi-stakeholder roundtable, undertake a comprehensive parking study to identify best practices and guidelines with respect to:
- optimum parking standards, practices and pricing policies for non-residential parking, particularly in mobility hubs;
  - design of parking facilities to ensure they do not act as barriers to transit or active transportation;
  - transitioning from free to paid parking to encourage transit and active transportation use;
  - separating parking costs from transit fares at mobility hubs, in order to encourage travellers to access the station by walking, cycling or local transit; and
  - implementation mechanisms such as municipal parking authorities.
- 7.7** Update the province's Transit Supportive Land Use Guidelines.

### **SUPPORTING POLICIES:**

- 7.8** The transportation system shall be planned, designed, built and operated to create pedestrian-, cycling-, and transit-friendly communities, and to ensure connectivity between places and along corridors that support the urban structure and intensification objectives of the Growth Plan for the Greater Golden Horseshoe.
- 7.9** The transportation system shall be planned, designed, built and operated in a manner that directs growth to approved settlement areas, particularly already built-up areas, and away from areas where development is discouraged by provincial policy, such as natural areas and agricultural lands.
- 7.10** The regional rapid transit and highway network in Schedules 1 and 2 shall be incorporated into all municipal Official Plans, and these planned transit services shall be used as the basis for determining appropriate land uses and densities in conformity with the Growth Plan for the Greater Golden Horseshoe.
- 7.11** In new residential, commercial and employment developments in municipalities where transit service is planned or available, all homes and businesses shall be within walking distance of a transit stop with frequent service. Transit stop signage shall be erected as soon as roads are constructed so that prospective businesses and homeowners are aware of where transit service will be provided.

- 7.12** New institutions such as elementary, secondary and post-secondary schools, regional hospitals, large sporting venues and cultural centres should demonstrate excellence in transit-oriented and pedestrian-friendly design and should choose locations that maximize access by transit and active transportation. This shall be supported by municipal Official Plan policies.
- 7.13** Municipal parking and zoning by-laws shall be updated to:
- establish maximum parking requirements;
  - decrease minimum parking requirements where appropriate;
  - permit off-site, on-street and shared-parking capacity to be counted towards meeting parking requirements;
  - provide priority parking for car-sharing; and
  - give landowners and developers the option of providing alternatives to free on-site parking, such as transit passes, car-sharing memberships, carpooling services, and/or financial contributions towards transit or active transportation infrastructure.
- 7.14** Gateway hubs and anchor hubs identified in Schedules 1 and 2 of the RTP shall be identified and incorporated into municipal Official Plans and Transportation Master Plans. Official Plans and Transportation Master Plans should also identify unique destinations that are important regional activity centres and/or major trip generators, such as universities, regional shopping centres, hospitals, and cultural facilities.
- 7.15** Municipalities, in consultation with transit agencies, landowners, major stakeholders, and public agencies and institutions, shall prepare detailed master plans for each mobility hub. Where appropriate, master plans should also be prepared for major transit station areas and unique destinations that have been identified in accordance with Policy 7.14. At minimum, master plans will:
- set out policies and an anticipated schedule for their achievement, to conform with and implement the Growth Plan for the Greater Golden Horseshoe's policies for major transit station areas and, where applicable, urban growth centres;
  - establish minimum density targets that conform to the Growth Plan for the Greater Golden Horseshoe and are based on the planned transit service levels of the RTP;
  - optimize transit-oriented development potential, and identify and implement incentives to promote transit-oriented development, such as streamlined planning and building approvals and reduced development application fees;

- provide for a range of amenities for travellers such as retail uses, restrooms, community spaces and tourism information, where appropriate;
- optimize the trip-generation benefit of the mobility hub;
- set target modal splits for transit usage, single occupancy vehicle trips and active transportation for each mobility hub, and an anticipated schedule for their achievement;
- establish a surface parking reduction strategy in consultation with transit agencies, that is based on site-specific redevelopment opportunities and the existing or planned availability of alternative modes of access to the mobility hub, and that includes a scheduled transition from free surface parking to a limited supply of fairly priced, structured parking, and policies to set aside reserved parking spaces for carpool and car-sharing vehicles;
- include design policies that help achieve environmental sustainability objectives, such as LEED Gold or equivalent standards, for any new transit-related buildings;
- improve the travelling experience through the use of public art, landscaping and architectural excellence;
- minimize distances between transit stations and between transit stations and key destinations within the mobility hub;
- give priority to transit, pedestrian and bicycle access over all other modes, and identify a zone around mobility hubs that provides priority measures for these modes on access roads;
- establish a pedestrian-focused internal movement plan that integrates public and private spaces through well-designed, human-scaled spaces;
- provide secure, conveniently located, weather-protected bicycle storage facilities and integrate bike-sharing where available; and
- address issues related to the comfort and convenience of transit users, including policies that provide for customer service amenities, such as a plentiful supply of clean, safe, comfortable, weather-protected waiting areas, way-finding, and access for users with special needs.

**7.16** Municipalities may identify areas in Official Plans and Transportation Master Plans that have the potential to meet the mobility hub definitions and criteria of the RTP in the future, and plan for their potential future role as mobility hubs. This may include the preparation of detailed master plans for these areas as described in Policy 7.15.

- 7.17** All transit corridors in the regional rapid transportation network shall be assessed for their potential for higher density mixed-use development and for their suitability as intensification corridors as defined in the Growth Plan for the Greater Golden Horseshoe. Generally, all regional rapid transit corridors that are not on controlled-access expressways or outside of settlement areas should be identified as intensification corridors, except where this would conflict with other provincial policy.
- 7.18** For those transit corridors that are identified as intensification corridors in accordance with Policy 7.17, municipalities, in consultation with transit agencies, landowners, major stakeholders, and public agencies and institutions, shall set out policies in their Official Plans and Transportation Master Plans that:
- conform with and implement the Growth Plan for the Greater Golden Horseshoe’s policies for intensification corridors;
  - establish minimum density targets based on the planned transit service levels of the RTP;
  - facilitate a mix of modes, including active transportation;
  - give priority to transit vehicles over private vehicles, and maximize the value of the transit investment;
  - discourage free parking, minimize street-facing surface parking lots, accommodate appropriate streetside parking and minimize the impacts of parking on other forms of transportation such as walking and cycling; and
  - provide for desirable maximum and minimum heights, and maintain site development standards, to create positive visual relationships among buildings along the street, and between buildings and the street.
- 7.19** Design standards and streetscape guidelines, enforceable through the site plan process, should be prepared for those transit corridors that are identified as intensification corridors. These should address landscaping, street furniture, integrating transit facilities (shelters and waiting areas), signage and lighting.
- 7.20** Stations on the regional rapid transit network shall be planned, located and designed to:
- maximize transit ridership;
  - maximize integration of transportation services;
  - prioritize access by transit, walking and cycling;
  - optimize transit cost-effectiveness and operational considerations;
  - maximize integration with the surrounding neighbourhood to create a walkable environment; and
  - optimize development opportunities.

## STRATEGY #8

### PLAN FOR UNIVERSAL ACCESS

Currently, people in the GTHA with disabilities have limited mobility options. Although progress is being made, there are still too many conventional transit vehicles on the road with steps that people with some disabilities are unable to climb, and bus stops and stations that are not accessible to people in wheelchairs. For trips that cannot be accommodated on conventional transit, people with disabilities can apply to use one of several specialized transit providers in the GTHA, each of which has a geographically distinct service area. These services do not generally accommodate cross-boundary trips. Such trips typically involve transferring from one service provider to another, sometimes with substantial waits in between.



#### FACT: ACCESSIBILITY

**The Accessibility for Ontarians with Disabilities Act (AODA), adopted by the Government of Ontario in 2005, will improve accessibility for Ontarians with disabilities by developing, implementing and enforcing accessibility standards.**

**The process will be complete by January 1, 2025.**

**By then, people with disabilities should be able to move from place to place within Ontario, for whatever purpose, without facing barriers that people without disabilities do not face.**

Metrolinx is committed to making the GTHA's transportation systems fully accessible to people with disabilities by 2025, as required by the Accessibility for Ontarians with Disabilities Act, 2005 (AODA). Metrolinx is also committed to improving access for people with other special needs — newcomers whose first language is not English and seniors, for example. Planning for universal access is a fundamentally important part of the RTP.



## **PRIORITY ACTIONS:**

- 8.1 Create a regional body to advise Metrolinx on matters related to universal access.
  
- 8.2 Develop a region-wide strategy and local implementation strategies to improve specialized transit coordination and delivery, and address:
  - opportunities to accelerate the achievement of AODA compliance in transit facilities;
  - integration of eligibility criteria;
  - improved training for transit agencies;
  - coordination and standardization of trip requests through a “one-window” service, including removing transfers at municipal boundaries, particularly for vulnerable users;
  - expansion of traveller education programs for those who are unsure about using accessible conventional transit services;
  - coordination of services with transportation providers in the health care sector; and
  - establishing a GTHA taxi scrip or voucher program for areas where service is inadequate.

## STRATEGY #9

### IMPROVE GOODS MOVEMENT WITHIN THE GTHA AND WITH ADJACENT REGIONS

Every year, traffic congestion in the GTHA costs the economy billions of dollars. Congestion costs businesses money, and affects their competitiveness and ability to provide goods and services to customers on time. The ability to move goods to, from and through the region is critical to our ability to compete in a global economy. Currently, most of the freight movements in the GTHA are local, and 89 per cent of all freight movements are by truck. While improvements are being made with respect to emissions of many pollutants by individual trucks, overall emissions rise as truck movements increase. Greenhouse gas emissions from heavy trucks are the fastest growing of all vehicle classes. We need to develop a strategy to improve the movement of goods within the GTHA and to adjacent areas. This will require a multi-pronged approach and will need a strong partnership with users and players in the goods movement industry.



#### EXAMPLE: PACKSTATIONS

One of the challenges of residential deliveries is coordinating shipments with customer availability. One solution used in several western European countries is the “Packstation” or “Locker Box”. Customers choose their preferred drop-off point. As soon as the package arrives, a message is sent to the customer by e-mail or text message with a code to retrieve the package. Vehicle travel is minimized because people can walk to the boxes or combine their pick-up with other trips.

## PRIORITY ACTIONS:

### **BIG MOVE #8**

#### **A comprehensive strategy for goods movement.**

- 9.1 Develop a comprehensive strategy for goods movement within the GTHA, and between the GTHA and other regions, that identifies opportunities and actions to improve efficiency, increase capacity, enhance the region's competitiveness, and reduce emissions of GHGs and other pollutants. Establish a roundtable to steer the development of the strategy with representatives from the goods movement industry, including shippers, the Ontario Chamber of Commerce, Ontario Trucking Association, Southern Ontario Gateway Council, Canadian National and Canadian Pacific Railways, logistics companies, freight forwarders, manufacturers and exporters, the agricultural community, environmental groups, municipalities, port authorities and the province. Components of this strategy will include:
- mapping goods movement flows by mode, and identifying bottlenecks in the system;
  - accomplishing goods movement using the most environmentally sustainable modes and technologies, and considering modal shifts to arrive at an optimal balance;
  - identifying innovative approaches for urban freight movements such as urban logistics centres, centralized lock boxes for end-consumer deliveries, and shared urban freight and delivery centres (e.g., for construction sites);
  - identifying innovative approaches for regional freight movements such as logistics villages (e.g., next to inter-modal hubs), siting, loading and routing optimization, real-time fleet management systems, and off-peak truck delivery;
  - identifying infrastructure needs such as new east-west freight rail capacity, new inter-modal facilities, priority measures for truck-based goods movement, and strategic bypasses to get goods around rail and highway bottlenecks;
  - a freight corridor optimization strategy that optimizes the use of existing rail infrastructure and the allocation of rail between freight and passenger trains;
  - an analysis of constraints and opportunities for marine transport of goods;
  - opportunities to promote active transportation-based and other low-impact goods movement in urban areas;
  - land use policies for areas around transportation facilities such as inter-modal facilities, rail yards, airports, dockyards and major highway interchanges that are compatible with, and supportive of the primary goods movement function of these facilities;
  - improving efficiencies of all modes;
  - documenting and sharing best practices; and
  - identifying opportunities for coordination with the Continental Gateway Strategy.

## STRATEGY #10

### COMMIT TO CONTINUOUS IMPROVEMENT

The best transportation systems and transportation plans are informed by the best available data and research. Many information gaps currently remain in the GTHA, particularly with respect to the movement of goods within the region. As the RTP is being implemented, it will be important to continue to improve our understanding of transportation issues, and the factors that affect our success. The ability to offer innovative new programs over time will require increased local knowledge and understanding of transportation issues.

#### PRIORITY ACTIONS:

**10.1** Establish a Centre of Excellence for Transportation in the GTHA.

**10.2** Improve the coordination and standardization of transportation data collection, forecasting and modelling. This could include:

- expansion of the Transportation Tomorrow Survey (TTS) to gather more detailed information on active transportation;
- analysis of global and regional macro-economic forces;
- development of a leading edge activity-based transportation demand model that can serve as a common base for modelling throughout the region, by all stakeholders;
- analysis of socio-demographic dimensions of travel behaviour, and trends;
- analysis of trip assignment methodologies;
- analysis of transportation-land use integration; and
- analysis of effects of induced travel and congestion on emissions.

#### FACT: TTS

The Transportation Tomorrow Survey (TTS) is a travel survey conducted in the Greater Golden Horseshoe once every five years. Approximately five per cent of the households in the region are surveyed by telephone with questions pertaining to mode choice, trip purpose, trip timing, trip origin and destination, and other related issues.

This data is an invaluable resource to transportation planners.

One shortcoming of the TTS is that it counts walking and bicycling trips only if they are undertaken for work purposes. Walking and bicycling trips for other purposes, such as going to school, shopping and visiting friends, are not counted. As a result, these modes are systematically undercounted and information about their use for non-commute trips is lacking, which hampers efforts to match the supply of walking and biking facilities with the demand.

- 10.3** Develop a long-range land protection and/or acquisition strategy to accommodate future transportation needs. This strategy should:
- identify and accommodate future needs for active transportation, transit, roads, highways and goods movement, including the requirements for corridors, stations, intermodal facilities and other elements of the network;
  - review all public land holdings for possible applicability to RTP projects;
  - establish a process to review RTP needs prior to the disposal of any publicly owned properties; and
  - identify provincial and municipal tools that are necessary to protect lands for future transportation needs.
- 10.4** In collaboration with TransLink in Vancouver, the Agence Métropolitaine de Transport in Montréal, and other partners, identify common approaches to prioritizing transportation projects, including linking regional to national transportation benefits.
- 10.5** Consult with private and public partners, post-secondary institutions, and others to expand the body of research related to the links between transportation and public health, socio-economic conditions, economic competitiveness and the environment, and on clean fuel technologies and green vehicles.
- 10.6** Gather and disseminate knowledge about best practices in regional transportation planning, drawing on examples from similar organizations in comparable regions such as Agence Métropolitaine de Transport in the Montréal area, TransLink in the Vancouver region, Transport for London in England, and Verkehrsverbund Berlin-Brandenburg in Germany.
- 10.7** In collaboration with the province, the Transportation Association of Canada, the Institute of Transportation Engineers, municipalities and other relevant stakeholders, expand and recalibrate road design standards and practices for more compact and fuel-efficient vehicles. Over time, replace demand-driven standards with those that recognize pedestrian, cycling and transit priority, as needed, to shift dependency away from single occupancy vehicles.
- 10.8** Metrolinx will explore options, for the Province of Ontario's consideration, to create a GTHA Green Transportation Sector Initiative in collaboration with the federal and provincial levels of government, the post-secondary education sector and others, that would foster a made-in-the-GTHA resource and talent pool to implement the RTP.

# 5.0 LOOKING FORWARD

## 5.1 WHAT WILL BE ACHIEVED

With implementation of the Regional Transportation Plan, the GTHA's transportation system will be transformed into an effective, integrated, multi-modal transportation system. Schedules 1 and 2 illustrate the significantly expanded regional rapid transit and highway network that GTHA residents and businesses can expect. These road and transit projects will be supported by the comprehensive suite of Priority Actions and Supporting Policies that are outlined in section 4.0.

What will it all mean to the average person? Modelling conducted in support of the RTP demonstrates that, even in the face of significant population growth, the changes will indeed be profound. As illustrated in Table 4, the RTP will provide significant benefits, including reduced commuting times, improved access to transit, increased use of transit, and more walking and cycling. The modelling forecasts represent conservative forecasts of what the RTP can be expected to achieve. It is important to note that the model is limited in its ability to forecast the likely impacts of the supporting policies and programs that are proposed in the RTP. With these included, the true results with respect to each of these indicators is likely to be even greater than is shown below. The bottom line will be a stronger and more competitive economy, a healthier environment, and a higher quality of life for those who live and work in the GTHA.

**TABLE 4: MODELLING FORECASTS\***

	TODAY	25 YEARS FROM NOW:	
		CURRENT TRENDS	RTP FORECAST
<ul style="list-style-type: none"> <li>Population</li> </ul>	just over 6 million	8.6 million	8.6 million
<b>Amount Driven</b>			
<ul style="list-style-type: none"> <li>Average distance travelled by car each day per person</li> </ul>	26 km	25 km	19 km
<b>Transportation Choice</b>			
<ul style="list-style-type: none"> <li>Percent of people who live within two km of rapid transit</li> </ul>	42%	47%	81%
<ul style="list-style-type: none"> <li>Total length of rapid transit service in the region</li> </ul>	500 km	525 km	1,725 km



	TODAY	25 YEARS FROM NOW:	
		CURRENT TRENDS	RTP FORECAST
<b>Time Spent Commuting</b>			
<ul style="list-style-type: none"> <li>Percent of commuters who can get to work in 45 minutes or less by transit</li> </ul>	38%	26-30%	52-56%
<ul style="list-style-type: none"> <li>Percent of commuters who can get to work in 45 minutes or less by car</li> </ul>	60%	45-49%	59-63%
<ul style="list-style-type: none"> <li>Average time spent commuting each day per person</li> </ul>	82 minutes	109 minutes	77 minutes
<b>Use of Transit</b>			
<ul style="list-style-type: none"> <li>Total number of transit trips taken every year</li> </ul>	546 million	798 million	1.27 billion
<ul style="list-style-type: none"> <li>Number of transit riders during the morning peak period</li> </ul>	467,000	682,000	1.1 million
<ul style="list-style-type: none"> <li>Proportion of morning rush hour trips taken by transit</li> </ul>	16.5%	16.4%	26.3%
<b>Walking and Cycling</b>			
<ul style="list-style-type: none"> <li>Proportion of morning rush hour trips taken by walking or cycling</li> </ul>	9.0%	9.0%	12.5%
<ul style="list-style-type: none"> <li>Approximate percentage of school children 11 years of age or older who walk or cycle to school</li> </ul>	32%	32%	50%
<b>Environmental Impact</b>			
<ul style="list-style-type: none"> <li>Annual greenhouse gas emissions from passenger transportation per person**</li> </ul>	2.4 tonnes	2.2 tonnes	1.7 tonnes
<ul style="list-style-type: none"> <li>Annual energy consumption from passenger transportation per person (in Gigajoules)**</li> </ul>	26.4	24.9	19.1
<ul style="list-style-type: none"> <li>Number of occupants in the average private motor vehicle during the morning rush hour</li> </ul>	1.15	1.23	1.32

\* Values derived from modelling carried out in support of the RTP. More information can be found in the backgrounder "Modelling Methodology and Results for the Regional Transportation Plan, December 2008".

\*\* For more information on these indicators see the backgrounder "Climate Change and Energy Conservation, December 2008".

## 5.2 THE FIRST 15 YEARS

In the first 15 years of the RTP's implementation, there will be significant improvements to the GTHA's transportation system. A priority has been placed on key regional projects that will result in substantial capacity increases in key corridors, bring new rapid transit services to underserved areas throughout the region, and improve regional connectivity. These are illustrated in Schedule 1 and are highlighted below. Details such as routing, technology, station locations and level of service are subject to further analysis, such as the Benefits Case Analysis that Metrolinx will carry out in partnership with municipalities and transit agencies. These projects will also be supported by significant new policies and programs.

### CONNECTING URBAN GROWTH CENTRES

The Growth Plan for the Greater Golden Horseshoe identifies 17 urban growth centres in the GTHA — typically the downtowns of large- and mid-sized cities — and directs municipalities to plan these areas as focal points for growth and development.

The GTHA's first Express Rail service will provide significantly faster and

### Top Transit Priorities Within the First 15 Years

Within the first 15 years of the RTP's implementation, the top 15 transit priorities for early implementation are (from west to east):

- Express Rail on the Lakeshore Line from Hamilton to Oshawa
- Rapid transit in Downtown Hamilton from McMaster University to Eastgate Mall
- Rapid transit on Dundas Street in Halton and Peel
- 403 Transitway from Mississauga City Centre to the Renforth Gateway
- Hurontario rapid transit from Port Credit to Downtown Brampton
- Brampton's Queen Street AcceleRide
- Rail link between Union Station and Pearson Airport
- VIVA Highway 7 and Yonge Street through York Region
- Spadina Subway extension to Vaughan Corporate Centre
- Yonge Subway capacity improvements and extension to Richmond Hill
- Eglinton rapid transit from Pearson Airport to Scarborough Centre
- Finch/Sheppard rapid transit from Pearson Airport to Scarborough Centre and Meadowvale Road
- Upgrade and extension of the Scarborough Rapid Transit line
- Rapid transit service along Highway 2 in Durham
- Improvements to existing GO Rail services and extension of GO Rail service to Bowmanville

higher capacity service to commuters travelling along the GO Lakeshore Line, connecting several of the Growth Plan urban growth centres: the downtowns of Hamilton, Burlington, Oakville, Toronto, Pickering and Oshawa. Collectively, these six centres are forecast to accommodate significant growth over the next 25 years, and new Express Rail service will make transit an attractive alternative.

Express Rail will also be extended to Downtown Brampton, along with more frequent, two-way all-day Regional Rail service to the urban growth centres of Downtown Milton, Richmond Hill/Langstaff Gateway, Markham Centre and Etobicoke Centre.

The first subway extensions outside of Toronto will connect two additional urban growth centres — the Vaughan Corporate Centre via York University and Richmond Hill/Langstaff Gateway.

Toronto's five urban growth centres — Etobicoke Centre, Yonge-Eglinton Centre, North York Centre, Scarborough Centre and Downtown Toronto — will be linked by the expanded and improved rapid transit network.

Rapid transit services will also be extended to Mississauga City Centre, Newmarket Centre and Downtown Burlington.

The Downtown Markham and Downtown Pickering urban growth centres will be connected via rapid transit on Highway 407 and Brock Road.

By the end of the first 15 years of the RTP, every urban growth centre in the GTHA will be linked by the regional rapid transit network.

## **NEW EAST-WEST TRANSIT CONNECTIONS**

One of the most significant gaps in the current transit network is the lack of east-west higher-order transit connections to destinations other than Union Station.

A new rapid transit line along Eglinton Avenue in Toronto will provide rapid transit service for local residents as well as a crucial new east-west corridor for regional travellers. By connecting to an upgraded and extended Scarborough Rapid Transit (SRT) line, which is also part of the first 15 years of the RTP, the opportunity exists to create a new continuous service, without transfer, from

the east end of Scarborough to the Pearson Airport district. The Benefits Case Analysis will consider both fully and partially grade-separated applications of Toronto Transit Commission (TTC) light rail vehicles for this corridor, and will assess the termination of the SRT line at Sheppard Avenue or at Malvern.

Several other significant new east-west rapid transit corridors are part of the first 15 years of the RTP.

With the new Finch/Sheppard rapid transit corridor, communities of social need that have historically lacked good higher-order transit service will have ready access to new rapid, comfortable, safe and frequent higher-order transit services, connecting those communities to employment and training opportunities throughout the GTHA, including the Pearson Airport district. The Benefits Case Analysis will consider several routing options for this corridor. Options will explore approaches to connect the Finch line more directly to the Sheppard line for improved connectivity.

In York Region, existing VIVA services will be upgraded to rapid transit to create an east-west spine on Highway 7, connecting with AcceleRide on Queen Street to Downtown Brampton.

In Halton and Peel, rapid transit along Dundas Street will provide a direct linkage to the subway system at Kipling Station, and rapid transit along Highway 403 will connect Peel and Halton to the Pearson Airport district.

In Durham Region, Oshawa, Whitby, Ajax and Pickering will have rapid transit access along Highway 2 to Toronto, with connections for travel further west to the Pearson Airport district along the new Finch/Sheppard corridor or the new Eglinton rapid transit corridor. The Benefits Case Analysis will consider options for connecting this corridor to either the Kennedy Subway Station or Scarborough Centre.

Across Halton, Peel, York and Durham, high speed bus service along Highway 407, with priority measures where necessary, such as bus bypass shoulders, improved station access, and other improvements, will serve longer distance travellers in a precursor service to the fully dedicated transitway facility proposed in the later years of the RTP.

With these additional services, travellers will have several new options for travelling by transit from east to west across the region.

## INTENSIFICATION CORRIDORS

Directing growth and development to intensification corridors is a key objective of the province's Growth Plan for the Greater Golden Horseshoe as well as municipal Official Plans. The RTP supports this objective with new transit service along several corridors including:

- King/Main Streets and James Street in Hamilton;
- Trafalgar Road in Oakville;
- Hurontario/Main Streets in Mississauga, Brampton, and Caledon;
- Highway 7 and Yonge Street in York Region;
- Finch Avenue, Sheppard Avenue, Eglinton Avenue, Jane Street, Don Mills Road and Lakeshore Road West in Toronto; and
- Brock Road connecting Downtown Pickering to the Seaton community.

These corridors have tremendous opportunity to accommodate growth and development, and achieve a transit-supportive density and urban form.

These corridors are also critical linkages in the local transit networks of these municipalities. Upgrading transit services in these corridors to rapid transit, and including them in the regional rapid transit system, will significantly improve service for local transit riders, it will also offer the potential to free up local resources that are currently being used to fund local bus services in these corridors to improve local transit elsewhere in these communities.

## PEARSON AIRPORT AND UNION STATION

With well over half a million combined jobs within less than four kilometres of these two hubs, and tens of thousands of travellers passing through them every day, Pearson Airport and Union Station are the two most significant mobility hubs in the GTHA.

Access to Union Station will be significantly enhanced with improvements to the rail network. Improvements at Union Station will ensure that it has the capacity to handle the additional trains and increased passenger flows.

**FACT: TRANSIT TRIPS TO PEARSON**  
Currently, less than one per cent of all travellers at Pearson Airport arrive by public transit.

Transit access to the Pearson Airport district will be provided from all directions: from the east along the Eglinton corridor; from the north via the Finch transit corridor; from the west via the

Highway 403 Transitway and via the Queen Street/Highway 427 corridor; and from the south via Highway 427 from Kipling Station.

The RTP will also connect these two critical hubs to one another with new rail service.

### **EXTENDING THE REACH OF RAPID TRANSIT**

Most communities at the periphery of the GTHA are entirely dependent on driving for getting around. The RTP will extend rapid transit service to more of these communities, giving them a viable alternative to driving or opportunities to shorten their auto trips, taking more cars off our congested highways. In the first 15 years of the plan, GO Regional Rail service will be extended to Stoney Creek, Bolton, Aurora Road, east Markham, Seaton and Bowmanville.

Although outside the mandate of Metrolinx and the RTP, several transit linkages to communities outside of the GTHA are identified as potential future extensions of the GO Regional Rail system. These include connections to Cambridge, Guelph, Niagara, Peterborough and Kitchener-Waterloo. Metrolinx will continue to engage provincial and federal partners to ensure that regional and national/international passenger transportation services are well-integrated.

### **STRATEGIC IMPROVEMENTS TO THE HIGHWAY AND REGIONAL ROAD NETWORK**

Improvements to the transportation system in the first 15 years of the plan are not limited to transit. Hundreds of lane-kilometres will be added to the region's expressway network with the completion of the Highway 407 East extension to Highway 35/115 and the extensions of Highways 404, 427 and 410, as identified in the Growth Plan for the Greater Golden Horseshoe.

Improvements to existing 400 series highways are also part of the RTP. For example, they include widening Highway 401 from Highway 410 to Hurontario Street, including HOV lanes, and new HOV lanes on Highway 400 between Major Mackenzie Drive and King Road, on Highway 427 from Highway 409 to Highway 407, and on the QEW between Trafalgar Road and Guelph Line.

Carpool lots will be added to the highway network to encourage carpooling and to support inter-regional bus services and HOV lanes.

In addition, arterial road widenings and extensions will be added to the road system, in accordance with the 10-year municipal road programs and longer range road network expansion plans in the Transportation Master Plans of the Cities of Toronto and Hamilton and the regional municipalities of Halton, Peel, York and Durham.

## **REGIONAL BUS SERVICES**

Although not part of the regional rapid transit network in Schedules 1 and 2, GO Transit and privately-delivered regional bus services provide an essential regional transportation service. The flexibility of buses is unmatched in serving low-density areas, as well as off-peak and complex trips, and in adapting quickly to new demand patterns. Today, GO buses carry over 12 million passengers per year, and private bus operators carry millions more, with ridership growing rapidly.

The expansion of GO Transit and other regional bus services throughout the region, with an emphasis on building ridership in anticipation of future regional rapid transit service while meeting the immediate needs of travellers, will be a critical part of the GTHA's future transit network.

## **SMART GOODS MOVEMENT**

The RTP's goods movement strategy will identify key investments and opportunities to improve goods movement through the region. Recommendations from that strategy related to separating freight and passenger service and identifying new freight rail corridors and inter-modal facilities will have begun to be implemented within the first 15 years of the RTP. Innovative approaches, for example on urban logistics, will be piloted in test areas.

## **A GROWING WALKING AND CYCLING NETWORK**

By the 15-year mark of the RTP, as much as \$300 million will have been invested in new walking and cycling infrastructure across the region, creating up to 4,500 kilometres of new, dedicated, on- and off-road facilities, including new facilities to overcome barriers such as 400-series highways, rail corridors and major rivers, and missing sidewalks on major roads. New policies and programs will have created environments that encourage walking and cycling throughout the GTHA.

## **A BETTER TRAVELLING EXPERIENCE**

Several new programs will be in place within the first 15 years of the plan that will improve the travelling experience. Walking and cycling to rapid transit stations will be easy and appealing. Travellers will be able to access the vastly expanded transit network with an integrated transit fare card that allows for seamless connections among all transit service providers. An online information portal will provide a single access point for information on transit fares, schedules, cycling networks, congestion, roadworks and more. Mobility hubs and other key stations will offer real-time information on vehicle arrival times, and notifications about delays.

## 5.3 YEARS 16 TO 25

In years 16 to 25 of the RTP, additional gains will be made to the GTHA transportation system. These infrastructure projects consolidate and strengthen the 15-year network described above. They are illustrated in Schedule 2 and some of them are highlighted below.

- Express Rail service will be extended to Cooksville on the Milton Line and to Richmond Hill/Langstaff Gateway.
- Additional rapid transit services will be added on the mountain along Mohawk Road in Hamilton and in Halton connecting both Burlington and downtown Milton to the rapid transit service on Dundas Street.
- Durham, Toronto and York will be connected by a new rapid transit service along the Taunton Road and Steeles Avenue corridor.
- Rapid transit on Steeles Avenue in Brampton will connect the Lisgar GO station to Highway 427.
- Rapid transit will be extended along Simcoe Street to connect the University of Ontario Institute of Technology to Downtown Oshawa.
- The first component of the dedicated 407 Transitway will provide rapid transit service through York Region, continuing as high speed bus service to the east and west along Highway 407, and connecting to Pearson Airport via Highway 427.
- A new subway service in the King/Queen corridor in Downtown Toronto will provide relief to the Bloor/Danforth subway line and greatly improved service in the downtown core.
- Necessary improvements to arterial road networks to service new growth will continue to take place in accordance with municipal Transportation Master Plans.
- Studies will be complete, and the recommended alternatives implemented, for major transportation corridors connecting the GTHA to Niagara Region and the U.S. border, and to the Kitchener-Waterloo region.
- A further \$200 million will be invested in walking and cycling infrastructure for an additional 3,000 kilometres of new facilities.
- Opportunities for upgrading BRT services to LRT will be examined.

## 5.4 LONGER-TERM PROJECTS

The first comprehensive review of the RTP will examine the results achieved in the early years of the plan's implementation, and the latest information on environmental, social and economic trends. As part of this review, specific projects and actions for beyond the 25-year time horizon of the current RTP will be identified. Some of these projects may also be recommended for earlier implementation as a result of this analysis. Priority projects for analysis include (from west to east):

- additional rapid transit service in Hamilton along the Centennial Road/Rymal Road corridors;
- extension of the Dundas Street rapid transit corridor to Waterdown, with a connection between Waterdown and Downtown Hamilton;
- a direct Express Rail link between Mississauga City Centre and Union Station via Cooksville;
- new rapid transit service in York Region along Major Mackenzie Drive, with additional north-south connections to the Highway 7 corridor;
- additional capacity along the Yonge subway line or in the Richmond Hill Express Rail corridor to provide relief to the Yonge subway;
- new rapid transit service in Durham Region if necessary, should the federal government proceed with the proposed Pickering airport;
- extension of the Highway 2 rapid transit corridor to Bowmanville and Newcastle;
- additional rapid transit in a dedicated transit facility along the east and west portions of Highway 407;
- east-west Express Rail connecting Oakville, Mississauga, Vaughan, Richmond Hill, Markham and Pickering;
- new highway capacity in the region, particularly for goods movement; and
- extension of all-day two-way regional rail service to additional communities.

In undertaking their growth planning and land use planning, municipalities should give consideration to the future importance of these corridors as part of the long-term regional transportation system.

# 6.0 INVESTMENT STRATEGY

## **BIG MOVE #9**

**An Investment Strategy to provide immediate, stable and predictable funding.**

Adopt the Metrolinx Investment Strategy to begin providing stable and predictable capital and operating funding to support the implementation of the RTP.

## **6.1 COSTS OF THE RTP**

### **CAPITAL COSTS**

Pre-engineering capital costs were estimated for the regional rapid transit and highway network identified in Schedules 1 and 2 based on industry-standard unit costs, and costs for similar types of road and transit facilities. In some cases, broad assumptions were made with respect to the need for structures, tunnelling and other higher-cost construction activities. Contingencies are included in the unit costs to reflect minor property acquisition and other cost uncertainties. For transit, a cost component for transit vehicles and operations, and maintenance facilities was also included in the capital costs. It is important to note that these costs may vary based on alignment, technology, station spacing and design, and other project scope factors that will be determined during the Benefits Case Analysis (BCA).

**Table 5: Transit and RTP Policy and Program Capital Costs**

15 Year Plan	16-25 Year Plan	Total	Annual
\$30 billion	\$20 billion	\$50 billion	\$2 billion

The estimated costs relate only to the upgrade and expansion of the regional transportation network and do not include deferred maintenance (“state of good repair”), any required investment to upgrade the accessibility of facilities, investment in local transit or local roads, or the extension of the regional transportation network outside of the GTHA. The transit capital costs are net of existing funding (e.g. Spadina Subway extension, AcceleRide, Mississauga Transitway).

Capital costs also include capital costs for the programs described in the RTP’s Strategies that are designed to improve the efficiency and capacity of the system. This includes up to \$20 million per year for active transportation infrastructure and up to \$50 million per year for capital improvements at mobility hubs.

Capital costs for highway improvements are limited to the costs for controlled-access expressways and are estimated to be an additional \$5 billion. They include projects that are in the Ministry of Transportation's five-year capital program for expansion and the 25-year High Occupancy Vehicle network proposal as of July 2007, but do not include widening or extension of non-controlled-access local or provincial roads, or capital improvements beyond the current Ministry of Transportation capital program.

## **OPERATING AND MAINTENANCE COSTS**

Operating and maintenance cost estimates are provided for the regional rapid transit and highway network identified in Schedules 1 and 2, including both new and existing services. These costs also include program costs described in the RTP, such as TDM measures and other directions that are designed to make more efficient use of the road and transit network. Costs do not include local transit or regional bus services, although it is important to note that these services would have to be increased and/or adjusted to provide connections to the regional network.

Cost estimates are based on current delivery methods, and headway and operating speed assumptions adopted in the model. As with capital cost estimates, operating costs will vary depending on technologies and operating conditions that will be determined as part of the Benefits Case Analysis.

For transit, at full build-out and with full program implementation, operating and maintenance costs are estimated at approximately \$1.5 billion per year. For controlled-access expressways, operating and maintenance costs are estimated at \$230 million per year, and include rehabilitation and reconstruction. They do not include costs related to non-controlled-access local or provincial roads.

## **6.2 THREE-PHASED APPROACH TO INVESTMENT**

The Investment Strategy reflects the "results-first" imperative that was repeatedly emphasized by the public and stakeholders during consultations held by Metrolinx during the development of the RTP and Investment Strategy. While it is widely recognized that bold action is needed to address regional transportation needs, people are sceptical about the pattern of continuing re-announcements with no construction ground-breaking in sight. They want to see action and results, and to get on with the construction of the major new transit projects that will improve mobility in the GTHA. As well, they want Metrolinx to build implementation credibility and a track record first, using existing resources, before seeking any new revenue and financial tools.

The Investment Strategy is a critical component of RTP implementation. The Investment Strategy sets out a three-phased, affordable plan to finance the implementation of the RTP, with the first construction ground-breaking on major transit projects to occur as early as 2009.

### **PHASE ONE: QUICK WINS**

The first phase of the Investment Strategy is already underway. To demonstrate early action on transit improvements, in late 2007 Metrolinx recommended to the province a package of “Quick Win” transit investments across the GTHA. The Quick Wins will be in service within five years or less. The province subsequently approved almost \$750 million towards these projects in the 2008 Provincial Budget, and the majority of this funding has already been transferred to municipal transit operators to allow these projects to get underway.

The Quick Win projects, which are illustrated in Appendix D, may be ‘quick’ in timing, but they represent a significant advancement in taking a regional approach to addressing transportation needs, and they are the precursors of the larger scale, transformational projects identified in the RTP.

### **PHASE TWO: MOVEONTARIO 2020 FUNDING FOR MAJOR NEW TRANSFORMATIONAL PROJECTS**

The second phase begins immediately in 2009, with a focus on the 15 priority transit projects identified in section 5.2 of the RTP. During this phase, the province’s \$11.5 billion MoveOntario 2020 foundation commitment, coupled with previously announced project funding, will enable Metrolinx and its partners to proceed with construction of these major new transformational projects that will positively shape travel decisions, growth patterns and the long-term development of the GTHA.

Announced by the Premier of Ontario in June 2007, the MoveOntario 2020 initiative is a bold, landmark step to improve the economic competitiveness and quality of life in the GTHA through major rapid transit expansion. It is one of the single largest transit investments in Canadian history. Ontario is asking the federal government to contribute a further \$6 billion to increase the total investment to \$17.5 billion. This level of support is consistent with other infrastructure projects of national economic and environmental importance – and typical practice of federal or national governments around the world.

The provincial MoveOntario 2020 commitment should be sufficient to sustain RTP project commitments from 2009 to 2015. With the additional requested federal MoveOntario 2020 funding, RTP implementation could be sustained to 2018.

Leveraging the Ontario Government's MoveOntario 2020 commitment will allow Metrolinx to achieve early implementation action and results, before opening the public dialogue about new revenue and financial options to pay for the balance of the 25-year RTP.

### **PHASE THREE: BEYOND 2015**

After the MoveOntario 2020 phase is over, and people are beginning to enjoy the benefits of new rapid transit services, shorter commute times and more environmentally friendly transportation choices, there will be a continuing need for significant, ongoing investments to achieve the full build-out of the RTP. New and innovative ways of funding the regional transportation system will need to be considered to meet capital expansion and rehabilitation, as well as operating and maintenance requirements.

Working directly with government partners, business, the public and other stakeholders, and by considering leading international best practices, Metrolinx will report back to the province by 2013 with recommendations to close the 2016–2033 investment gap and to implement the balance of the 25-year vision set out in the RTP.

## **6.3 INVESTMENT PROFILE**

The RTP capital and operating program will be one of the largest of its kind in Canadian transportation history. The total cost of the 25-year transit plan capital expansion component alone is estimated at approximately \$50 billion in today's dollars. On a year-by-year basis, capital expenditures will increase to \$2.5 billion by 2015 (see Figure 2). The capital expansion program will be completed by 2033.

The upfront capital expenditures of the RTP are assumed to be financed through long-term debt in order to spread the costs over the life of the assets. Debt to support Metrolinx investments is assumed to be arranged through the Ontario Financing Authority. The province could also consider assigning a dedicated revenue stream to Metrolinx, from existing revenues, to support debt service payments.

Asset rehabilitation is projected to start in 2020, five years after the completion of the first RTP expansion projects (see Figure 2). Rehabilitation costs will increase with the completion of more projects. Once the RTP capital program is completed, rehabilitation expenditures are estimated to continue at \$1.8 billion per year, to ensure we are adequately reinvesting in these long-lasting assets to safeguard optimum operating efficiency and public safety.

Operating expenditures of the RTP projects are estimated at \$18 million in 2009 for initial RTP policy and program costs. The operating cost impacts of the first completed major new transit projects are assumed to commence in 2015. Total operating expenditures are assumed to increase to approximately \$1.5 billion in 2033 upon the completion of all RTP projects (see Figure 2).

For the purpose of developing the Investment Strategy, the current division of responsibility for transit operations in the GTHA is assumed to continue. The ongoing operating cost of new Regional Rail and Express Rail services is assumed to be mainly the responsibility of the province, while municipalities are assumed to be mainly responsible for subway, Automated Guided Transit (AGT), Light Rail Transit (LRT) and Bus Rapid Transit (BRT) operating costs.

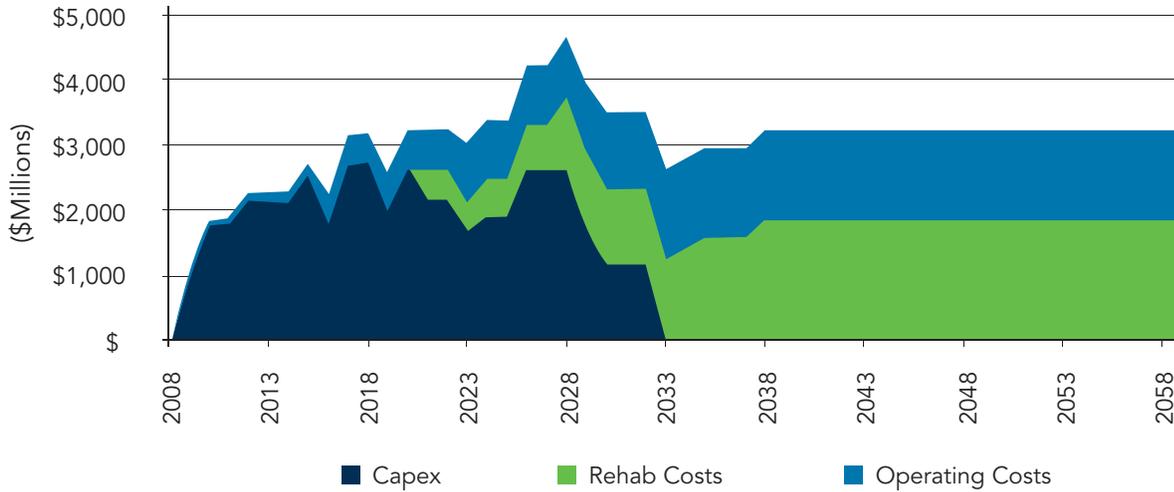
Metrolinx proposes to develop options for long-term, sustainable GTHA transit operating funding, as part of the report back on potential dedicated revenue tools and instruments to fund the balance of the RTP projects to 2033, for the Province of Ontario's review and consideration by 2013.

The total expenditure profile to deliver the ultimate 25-year RTP vision is substantial (see Figure 2). Combined capital, rehabilitation, and operating expenditures on a cash basis (before debt financing) are approximately \$3 billion per year for most years during the life of the 25-year RTP.

When considered on a per capita basis, the RTP investment is reasonable. The Province of Ontario's MoveOntario 2020 commitment, which will support the initial transit projects, is equivalent to less than \$155 per year per person in the GTHA. In other words, for about 42 cents a day, or less than the cost of a daily newspaper, Metrolinx can begin to invest in projects that will help to prevent longer commute times, provide greater choice and flexibility in transportation options, and help stop the negative impacts that transportation congestion has on the GTHA's economy, environment and quality of life.

This investment will grow over time as the system itself expands, and will reach \$470 per year per person by 2033. In today's terms, this means an investment of approximately \$50 billion dollars, for the equivalent of no more than \$1.30 per day – about the cost of a cup of coffee - a relatively small price to pay to secure a long-term, sustainable transportation future.

**FIGURE 2: RTP TOTAL EXPENDITURE PROFILE (TODAY'S DOLLARS)\***



*\*includes transit, policy and programs costs only*

## 6.4 KEY CHARACTERISTICS AND ASSUMPTIONS OF THE INVESTMENT STRATEGY

Each RTP project should be implemented using a procurement model that maximizes the ability of Metrolinx to implement projects quickly, ensure value for money, and limit exposure to project risks. It is assumed that in each case, private sector involvement in project design, construction, and financing will be considered, where appropriate. According to Province of Ontario and federal government requirements, all large transit capital project proposals must be submitted for Alternative Financing and Procurement (AFP) evaluation.

Investments should be affordable and a Financial Plan should be in place to demonstrate how the investments will be funded. Since the investments in the transportation system will generate benefits for the GTHA residents over many years, the use of debt financing is appropriate and the debt should be amortized over the useful life of the assets, similar to a home mortgage.

The current Financial Plan is focused on the capital expansion costs of the RTP. Options for long-term sustainable funding of transit operating and rehabilitation costs, and the remainder of the RTP capital expansion requirements, will be addressed in the Metrolinx report back to the Ontario government by 2013.

The province is currently considering asset title options for new rapid transit infrastructure. For the purposes of developing the Investment Strategy, all new rapid transit capital assets were



assumed to be under the title of the Province of Ontario or Metrolinx, as the primary capital funding source. Capital costs were assumed to be amortized over the life of the assets similar to a homeowner's mortgage (e.g., over 15, 25, or even 40 years depending on the type of asset). This also reflects the benefits that accrue to future generations that would gain from the continuing use of these assets.

Debt service payments are assumed to commence as debt is issued to pay for capital costs. However, arrangements for construction period financing could be considered at the individual project decision-making level, based on the selected procurement and delivery model.

Capital assets should be maintained over their life-cycle using internationally-recognized sound asset management principles. This means that assets should be maintained to an agreed standard through continuous investments in asset rehabilitation. Rehabilitation expenditures are assumed to commence five years after project completion.

# 7.0

## IMPLEMENTATION

### 7.1 PRINCIPLES FOR IMPLEMENTATION

Implementation of the RTP will be guided by the following principles:

- **Be Bold:** The scope and breadth of the RTP are transformational. Bold steps will be necessary to implement it.
- **Move Quickly:** We have already lost several decades. The transportation system is at an impasse. It is time for action. The GTHA needs “shovels in the ground” as soon as possible.
- **Get Going on the Big Moves:** The RTP contains numerous Strategies. All are important, but the most important are the nine Big Moves listed in Table 3. Getting these right will be critical to the achievement of the overall plan.
- **Don't Ignore the “Little Things”:** In transportation planning, there is often a tendency to focus on mega-projects and “big ticket” items, but the power and impact of the “little things” must not be under-estimated. Whether it is the design of one local street, or the actions of one employer, the true success of the RTP will be in the collective achievement of hundreds of actions, large and small.
- **Invest Where it Matters Most:** All Metrolinx investments will be aligned with the RTP. Projects should be subject to a fair, clear and rigorous Benefits Case Analysis process where financial, economic, environmental and social needs and impacts are taken into account to ensure that the most optimal investment decisions are made.
- **Partnership and Collaboration:** No single organization can implement the RTP on its own, and the plan cannot be legislated or regulated into reality. Successful implementation will depend on partnership and collaboration across governments and across sectors.
- **Lead by Example:** While directing the actions of others is an important element of implementation, it will be equally important to lead by example. Every day, governments, agencies, employers, and individual citizens make decisions that affect how the transportation system performs, and how it affects our environment, economy and quality of life. Each of us must lead by example with the decisions we make.

- **Management and Project Implementation Discipline:** People are tired of construction projects that take longer than they should and cost more than promised. Metrolinx will introduce sound, recognized disciplines in project delivery and management by adopting domestic and international best practices. The project delivery process will ensure that risks are managed, projects are delivered on time and on budget, and there are no ‘surprises’. Metrolinx will set ambitious objectives and performance expectations – while leaving it to the creativity, expertise and technical skills of local authorities and professionals to meet those standards.
- **Remain Adaptable to Opportunity:** While every effort has been made to anticipate the needs of the future in developing the RTP, it is important to remain adaptable to changing conditions and circumstances. The plan must be viewed as a living document, and the approach to implementation must allow it to change course should the need arise.
- **Be Accountable:** Metrolinx is a regional authority and will be directly accountable to all people in the GTHA. A system that works is one in which clear targets for construction and implementation are set, performance is managed, and people can trust that their interests are being served. Toward that end, Metrolinx will provide regular reporting on progress towards the achievement of the RTP.

## 7.2 RTP IMPLEMENTATION

The RTP provides direction and sets priorities for decision-making on transportation in the GTHA. Embodied in the plan is the notion that all levels of government, as well as operators, stakeholders and users of the system have an important role to play in contributing to its success. The RTP proposes a broad range of actions and supporting policies. Some of these will require legislative changes; some will require the creation of new programs; others will need to become engrained in the policy framework that guides day-to-day decision-making across a broad spectrum of issues, from planning to infrastructure investment. In this section, an implementation plan is described that reflects the broad scope of the RTP and the many types of actions and decisions that are necessary to make the plan a reality.

### 7.2.1 STATUS OF THE RTP

The status that the RTP has in the decision-making process is central to its success. The recommendations of the plan are broad and far-reaching. Decisions relating to them will involve

large numbers of decision-makers and stakeholders over the next 25 years. Each of these decisions, large and small, will need to support the implementation of the RTP. This includes decisions related to transportation planning, infrastructure investment, land use planning, transit operations, and more.

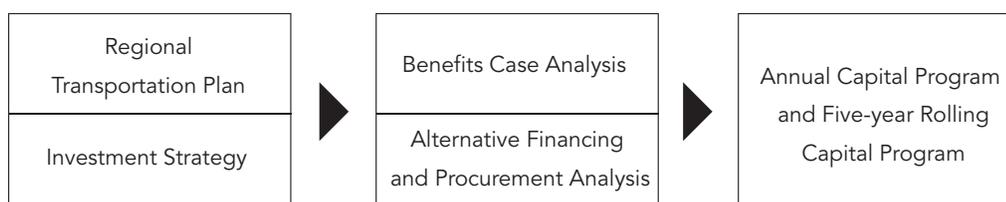
- (i) Metrolinx will work with the Province of Ontario, municipalities and stakeholders to develop an RTP implementation strategy that identifies roles and responsibilities and key milestones for the Priority Actions identified in section 4.0.
- (ii) Metrolinx will work with the Province of Ontario, municipalities and stakeholders to establish a provincial transportation policy for the GTHA that is based on the RTP's vision, goals and objectives and the Priority Actions and Supporting Policies identified in section 4.0.
- (iii) Metrolinx will work with the Province of Ontario to identify potential amendments to the Greater Toronto Transportation Authority Act to establish the status of the RTP in the decision-making process, to address:
  - conformity of municipal and provincial planning decisions to the provincial transportation policy for the GTHA and the relevant land use planning-related components of the RTP;
  - requirement for all municipalities to update their Official Plans to conform to the provincial transportation policy for the GTHA and the relevant land use planning-related components of the RTP, and a timeline for achieving conformity that seeks to harmonize conformity exercises with regular five-year reviews;
  - requirement for municipalities to prepare Transportation Master Plans (TMPs) as part of their Official Plan development process that conform to the provincial transportation policy for the GTHA and that establish more detailed local transportation networks, policies and programs;
  - requirement for the GO Transit Strategic Plan to conform to the RTP;
  - provisions for addressing potential conflicts between the RTP and other provincial plans, and to reinforce the primacy of the Growth Plan for the Greater Golden Horseshoe;
  - transition provisions to address planning processes and development applications already in progress; and
  - a review and amendment process for the RTP, including a requirement for a mandatory comprehensive review of the RTP at least every five years.

- (iv) Metrolinx will work with the Province of Ontario and others to ensure that public infrastructure planning and investment is co-ordinated to implement the RTP’s vision, goals, objectives and strategies, particularly with respect to the design and location of post secondary institutions, hospitals, government services, justice facilities and other major public sector trip generators.
- (v) Metrolinx will work with the Province of Ontario to integrate the RTP’s directions as appropriate with other provincial plans, such as the Growth Plan for the Greater Golden Horseshoe, as part of the regular reviews of those plans.

### 7.2.2 BENEFITS CASE ANALYSIS AND ALTERNATIVE FINANCING AND PROCUREMENT

The RTP is the first step in building a world-class regional transportation system in the GTHA, but further analysis is required before project scopes are finalized, projects are prioritized, and construction can begin on individual projects.

**Figure 3: How It All Fits Together**



The regional rapid transit network described in the RTP is conceptual only. Alignments and technologies will be developed during the project-level Benefits Case Analysis that Metrolinx will carry out in partnership with municipalities and transit agencies for individual projects. When it comes to making decisions on new transit projects, the costs and benefits of all reasonable alternatives need to be evaluated so that the best possible transit projects are built. The Metrolinx Benefits Case Analysis will provide decision-makers with a robust and consistent "triple bottom line" evaluation of the relative environmental, economic and social impacts of each RTP transit project. Each benefits case will evaluate the relative merits and costs of alternative project options, which may include variations in the alignment, technology, performance, stations and/or phasing of the project.

Transit projects in the RTP will also undergo evaluation for their potential for Alternative Financing and Procurement (AFP), as required by the provincial and federal governments. Alternate Financing and Procurement has the potential to expedite the delivery of transportation

infrastructure and to ensure the most appropriate and cost-effective allocation of both private and public sector resources.

Following the Benefits Case Analysis and AFP evaluation, projects will be prioritized and included in the Metrolinx Annual Capital Program and Multi-Year Capital Plan that will cost, record and calendarize project and program expenditures.

- (i) Metrolinx will subject transit projects identified in Schedules 1 and 2 to a comprehensive Benefits Case Analysis to inventory the social, environmental and economic benefits and costs resulting from the project, and determine the most appropriate technology, routing, phasing and station location. Depending on the size and scope of the project, Metrolinx will also assess the suitability of transit projects identified in Schedules 1 and 2 for Alternative Financing and Procurement.

### **7.2.3 CAPITAL PLANNING**

The Metrolinx capital planning program flows from the RTP and the Benefits Case Analysis. It will identify the phasing, timing and financing for individual projects.

The capital planning program will begin by updating and verifying information about each project, particularly in terms of project status and state of readiness, estimated eligible costs, and planning, engineering and construction schedules. Individual projects will then be prioritized in accordance with the goals and objectives of the RTP. Projects will then be assembled into a multi-year program, taking into account such aspects as the project ranking, the anticipated scheduling (e.g. preparedness for tendering), project type and any seasonality considerations, appropriate phasing within and between corridors, equipment delivery outlook, hardware requirement, capitalization profiles, AFP opportunities, and so on.

The resulting array of projects, starting dates and anticipated duration will be matched with the anticipated annual funding envelope, and adjustments made to ensure that the aggregate annual cash flow/capitalization costs are contained within the anticipated provincial funding envelope.

- (i) Metrolinx will develop a 15- and 25-year Capital Outlook, five-year rolling capital program, and annual capital program to identify the phasing of implementation for individual transit projects identified in the RTP.

## **7.2.4 INVESTMENT STRATEGY**

The Investment Strategy is a critical component of the RTP. The Investment Strategy sets out a three-phased plan to finance the implementation of the RTP and allow the regional transportation system to be expanded, maintained and operated in a financially sustainable way both in the short- and long-term.

- (i) Metrolinx will report back by 2013 on recommended revenue and financial tools to implement the 25-year RTP.

Metrolinx will not wait until 2013 to begin pursuing innovative and practical ways of funding the expansion of regional transportation infrastructure. Land value enhancement is one promising tool wherein a portion of the “value uplift” of lands adjacent to future rapid transit corridors, major transit stations and mobility hubs is dedicated towards the cost of rapid transit improvements.

- (ii) Metrolinx will create a task force on land value enhancement in collaboration with municipalities, the Province of Ontario, the development industry and other relevant stakeholders to develop policy recommendations for consideration by the province by the end of 2009.
- (iii) Metrolinx will consult with the Province of Ontario, financial services sector and investors, including the major public-sector pension funds, on the feasibility of establishing a dedicated Transit and Transportation Investment Fund as a new capital funding pool for transit expansion projects in the GTHA. The fund concept could potentially be expanded to support transit project investment opportunities in other major Canadian urban regions and cities.

## **7.2.5 INVOLVING THE FEDERAL GOVERNMENT**

The federal government has a critical role to play in building this transportation system that is vital not only to the competitiveness of the GTHA, but also to businesses throughout Canada that rely on goods travelling to and through our region reliably and expeditiously. By providing a long-term blueprint for an integrated transportation system, the RTP makes a compelling case for long-term, stable, predictable and sufficient funding from all levels of government. It also provides guidance to the federal government on the transportation priorities of the GTHA that will serve as an important strategic input to transportation issues under federal jurisdiction, such as airports, railways, marine ports, border crossings and VIA Rail services.

- (i) Acknowledging the recent increase in federal participation in funding transportation projects, Metrolinx and the province will collaborate with the federal government, municipalities and other regional transportation authorities to develop a stable and predictable federal funding strategy for transportation projects.

- (ii) Metrolinx will work with the province to assist the federal government in aligning transportation issues under federal jurisdiction, such as airports, railways, marine ports, border crossings and VIA Rail services, with the vision, goals, objectives and priorities of the RTP.

### **7.2.6 PERFORMANCE STANDARDS**

Metrolinx has a responsibility to ensure that the value to travellers and the economy of all transportation investments is maximized. This means ensuring that all appropriate measures are put in place to support each investment, from land use provisions to social marketing. It also means ensuring consistently high levels of service are provided on all routes. This will necessitate the inclusion of performance standards as a condition of all investments.

- (i) As a condition of funding for transit projects, Metrolinx will enter into agreements with municipalities and/or transit agencies that address performance standards, such as:
  - requiring transit priority and traffic management measures as well as transit supportive land uses to be in place;
  - requiring a TDM strategy, including social marketing where applicable;
  - ensuring seamlessness with other transit services; and
  - achieving minimum standards with respect to reliability, on-time performance, customer service, and other measures.
- (ii) When establishing its priorities for capital funding and determining the appropriate transit mode and level of service to be funded, Metrolinx will have regard for the RTP's vision, goals and objectives, as well as the achievement and application of the actions and policies of the RTP and conformity with the policies of the Growth Plan for the Greater Golden Horseshoe.

### **7.2.7 LAND USE PLANNING**

The critical link between land use planning and transportation planning is highlighted throughout the RTP. The primary land use planning policies for the GTHA are the province's Growth Plan for the Greater Golden Horseshoe, 2006, the Greenbelt Plan and the Provincial Policy Statement, 2005. The RTP provides the transportation plan that conforms to, and helps implement, these provincial policy directions. The RTP also provides additional direction on land use planning that builds on these policies, and ties together the Growth Plan for the Greater Golden Horseshoe's urban structure policies with the transportation system envisaged by the RTP.

Metrolinx will participate in local, regional and provincial land use planning exercises, where necessary, to ensure that land use planning and transportation planning decisions are fully integrated. This includes reviewing key local land use and transportation planning proposals and decisions, as well as providing advice and guidance to provincial ministries to help them align their plans, priorities and programs with the RTP (for example, decisions related to the siting of major public facilities such as universities and hospitals).

- (i) Metrolinx will provide input regarding major local, regional and provincial planning exercises, including significant development applications, that may have a significant effect on the performance of the regional transportation system, and will work with the Province of Ontario to identify the appropriate mechanism for this, potentially using the province's one window planning service.
- (ii) Metrolinx will give appropriate consideration to established provincial plans, priorities and programs in implementing the RTP.

### **7.2.8 ENVIRONMENTAL ASSESSMENT**

Implementation of any public sector transit project identified in the RTP will have to fulfill the requirements of Ontario's Environmental Assessment Act. The RTP provides important background information for transit Environmental Assessments (EAs), and sets the context for transit projects, including those which are assessed under the new streamlined EA process. When those projects are being considered in the future, the RTP will provide a solid foundation for meeting the requirements of the new six-month assessment process or the requirements under the GO Transit Class EA, the Transit Chapter of the Municipal Class EA, or an individual Environmental Assessment.

- (i) The RTP should be recognized as a Master Transportation Plan, addressing the early planning principles for transit projects and serving as the basis for Environmental Assessments for individual transit projects identified in Schedules 1 and 2.

In addition to being subject to Ontario's new six-month EA process, many of the transit projects identified in the RTP will need to satisfy the requirements of the federal government's Canadian Environmental Assessment Act. Metrolinx is committed to working closely with the federal government and with project proponents to dovetail the Ontario and federal EA processes to limit duplication and overlap, and expedite project approvals.

- (ii) The province and Metrolinx will work with the federal government and with project proponents to dovetail the Ontario and federal EA processes to provide a seamless process that eliminates duplication and overlap, and expedites project approvals.

### **7.2.9 PUBLIC OUTREACH**

One of the most important aspects of an integrated transportation system is choice. The individual decisions of the millions of residents of the GTHA will be at the heart of the RTP's success or failure. Whether it is around the block, or across town, people should be able to take transit or ride a bike just as easily as they can drive. While having the infrastructure in place to offer that choice is important, just as important is that people choose to use it. That is why public outreach and social marketing will be a vital component of the RTP's implementation.

Today, transportation users are not receiving appropriate signals that would allow them to adapt their demand to the available supply of transportation services. Better travel planning can eliminate some trips, or make others more efficient. Using transit or regional rail rather than a car will reduce one's impact on the environment, as would carpooling or working from home. Short trips can be made on foot or by bicycle. Supported by new options, as well as more incentives and clearer price signals, public outreach and education will be an important and integral part of the RTP's implementation, and will help to shape travel behaviour, guide travel choices and transform travel patterns across the GTHA.

- (i) Metrolinx, the Province of Ontario, municipalities, transit agencies and non-governmental organizations will work together to engage the public in the implementation of the RTP and in implementing social marketing strategies to change travel behaviours.

### **7.2.10 MONITORING PROGRESS**

Effective implementation of a long-range plan such as the RTP will require ongoing monitoring of the overall performance of the transportation system and the impacts of actions taken. This will be done through the tracking of key indicators. The results will be compiled and reported publicly as part of a Mobility Index for the region. Reporting will include benchmarks comparing the GTHA's performance to other jurisdictions around the world. The Mobility Index will help inform the development and review of the RTP, and also provide a means to review and assess the return on the investments made to support the RTP.

Wherever possible, the data that are used to develop the Mobility Index will build on existing information sources and data that are already being collected, such as the Urban Transportation

Indicators reports produced by the Transportation Association of Canada and Transportation Environmental Indicators published by the Centre for Sustainable Transportation. The Mobility Index will be coordinated with monitoring of other provincial plans including the Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan and Provincial Policy Statement. This will be augmented by an enhanced modelling capacity that Metrolinx will develop in collaboration with Ontario's Ministry of Transportation.

- (i) Metrolinx will develop a Mobility Index for the GTHA to track progress in achieving the goals and objectives of the RTP, and publicly report on progress at regular intervals.

### **7.2.11 ROLE OF METROLINX**

As the lead agency responsible for the implementation of the RTP, Metrolinx requires authority to address several critical issues, and to undertake the actions described above. In doing so, Metrolinx understands the necessity of cooperating with all regional stakeholders, including municipalities, the province and the federal government. Examples of areas where new or refined authorities may be needed include project and program management and delivery; authority to enter into long-term, performance-based agreements with project partners; ability to draw on sustained financial resources and the flexibility to deploy those resources as needed, similar to funding models that already exist in other regional Canadian jurisdictions, such as TransLink in Greater Vancouver, and the Agence Métropolitaine de Transport in Montréal; service and technology integration and coordination; dispute resolution, mediation and arbitration; establishment of development corporations; and fare integration.

- (i) Metrolinx will work with the province to identify the necessary areas of authority and responsibility that Metrolinx requires to fully implement the RTP, including the roles described above.



# 8.0

## GLOSSARY OF TERMS

**Active Transportation:** Non-motorized travel, including walking, cycling, roller-blading and movements with mobility devices. The active transportation network includes sidewalks, crosswalks, designated road lanes and off-road trails to accommodate active transportation.

**Anchor Hub:** Mobility hubs that have strategic importance due to their relationship with urban growth centres (UGCs), as well as Pearson Airport and Union Station due to their roles as the GTHA's primary international gateways. Urban growth centres are identified in the Growth Plan for the Greater Golden Horseshoe as focal areas for directing significant high-density employment and population growth, major transit infrastructure, and a mix of land uses such as commercial, recreational, cultural, entertainment, institutional and public services. As such, they contain current or planned major regional destinations such as major institutions, employment centres, town centres or regional shopping centres, and they have significant potential to attract and accommodate new growth and development. Anchor Hubs have the potential to transform the regional urban structure and act as anchors of the regional transportation system. Anchor Hubs are identified in Schedules 1 and 2 of the RTP. (For more information see the backgrounder "Mobility Hubs, December 2008").

**Alternative Financing and Procurement (AFP):** The use of private sector involvement to design, finance and/or build infrastructure while ensuring appropriate public control.

**Arterial Road:** A high-volume urban road with at least four lanes, having a typical speed limit of 50 to 60 km/h and typical spacing between traffic signals of 200 to 400 metres. The typical volume of an arterial road is less than 20,000 vehicles/day and it connects to collector roads, other arterial roads and expressways.

**Automated Guided Transit (AGT):** A type of rapid transit that uses a fully grade-separated right-of-way, which can be elevated or located in a segregated at-grade corridor. The complete separation from traffic, including at intersections, allows for the use of fully automated vehicles as well as higher service frequency, speed, capacity, reliability and service flexibility than non-grade separated Light Rail Transit (LRT). The capacity of AGT is typically 10,000 to 25,000 passengers per hour, peak direction. Average speed: 20 to 35 km/h with stations one to two km apart depending on area density. Example: Vancouver Skytrain.

**Bus Rapid Transit (BRT):** Similar to light rail transit operating predominantly in protected rights-of-way, separate from other traffic, but using advanced bus technology. Also includes buses operating in mixed traffic on controlled-access expressways that employ congestion management such as tolls, thereby allowing the buses to maintain high average speeds. The capacity of BRT is typically 2,000 to 10,000 passengers per hour, peak direction. Average speed: 15 to 40 km/h depending on station spacing, with higher speeds possible on grade-separated rights-of-way on controlled access highways. Example: Vancouver 98B Line (Richmond section), Ottawa Transitway system.

**Controlled-Access Expressway:** A high-speed, high-capacity highway with at least four lanes and grade-separated with access to the facility limited to ramps and interchanges. A controlled-access expressway has a typical speed limit of 60 to 100 km/h with daily traffic greater than 20,000 vehicles.

**Dedicated Walking or Bicycling Facility:** A sidewalk, path or traffic lane that is reserved for use by pedestrians and/or bicyclists only.

**Express Rail:** High-speed trains, typically electric, serving primarily longer-distance regional trips with two-way all-day service. Regional Express service could have a capacity of 25,000 to 40,000 passengers per hour in the peak direction with trains operating in completely separated rights-of-way, with as little as 5 minutes between trains. Average speed: 50 to 80 km/h with stations two to five km apart. Example: Paris Region Réseau Express Regional (RER).

**Gateway Hub:** All mobility hubs that are not Anchor Hubs. Gateway Hubs are identified in Schedules 1 and 2 of the RTP. (For more information see the backgrounder “Mobility Hubs, December 2008”).

**Greater Golden Horseshoe:** The geographic area designated as the Greater Golden Horseshoe Growth Plan Area in Ontario Regulation 416/05.

**Greater Toronto and Hamilton Area (GTHA):** The metropolitan region encompassing the City of Toronto, the four surrounding Regional Municipalities (Durham, Halton, Peel and York) and the City of Hamilton.



**Headway:** The scheduled time between successive transit vehicles on a given route.

**High Occupancy Toll (HOT) Lane:** On an expressway, an HOT lane is a High Occupancy Vehicle (HOV) lane which single drivers are also allowed to use by paying a toll. Tolls can vary depending on time of day and demand, in order to regulate the flow of traffic. HOT lanes allow for a better utilization of HOV lanes while generating revenue. HOT lanes can also be opened to buses.

**High Occupancy Vehicle (HOV) Lane:** A roadway lane designated for use only by vehicles with a specified minimum number of occupants, usually two or three. HOV lanes can also be opened to buses.

**High-Order Transit:** Includes all forms of rapid transit (see definition below). The term Higher-Order Transit is often used interchangeably.

**Intelligent Transportation System (ITS):** The use of real-time computer/communications/information technology for advanced, traffic-responsive, area-wide traffic control and to provide information which allows transportation providers to optimize transportation system operations and enable travellers to use the system more efficiently and effectively, while also increasing their convenience and ease of travelling.

**Intensification Corridors:** Intensification areas along major roads, arterials or higher-order transit corridors that have the potential to provide a focus for higher density mixed-use development consistent with planned transit service levels. [Source: Ministry of Energy and Infrastructure, Growth Plan for the Greater Golden Horseshoe, 2006.]

**LEED (Leadership in Energy and Environmental Design):** A green building rating system, since expanded to rate neighbourhood development. Buildings can qualify for four levels of certification related to environmentally sustainable construction. Certification is granted by the Green Building Council based on an application documenting compliance with the rating system requirements, as well as paying registration and certification fees.

**Light Rail Transit (LRT):** Streetcar trains (up to three or four cars per train) operating on protected rights-of-way adjacent to or in the medians of roadways or rail rights-of-way. Generally at-grade, possibly with some sections operating in mixed-traffic and/or in tunnels. Electric power is normally via an overhead trolley or pantograph. Capacity of 2,000 to 10,000 passengers per hour in the peak direction, with higher capacities where there are significant stretches of completely segregated rights-of-way. Average speed: 15 to 35 km/h depending on station spacing and extent of grade separation. Examples: Calgary and Edmonton LRT systems.

**Major Transit Station Areas:** The area including and around any existing or planned higher-order transit station within a settlement area, or the area including and around a major bus depot in a urban core. Station areas generally are defined as the area within an approximate 500 metre radius of a transit station, representing about a 10-minute walk. [Source: Ministry of Energy and Infrastructure, Growth Plan for the Greater Golden Horseshoe, 2006.]

**Major Trip Generator:** A facility or area which generates significant volumes of passenger and/or goods/services trips.

**Mobility Hub:** Major transit station areas, as defined in the Growth Plan for the Greater Golden Horseshoe, that are particularly significant given the level of transit service that is planned for them and the development potential around them. They are places of connectivity between regional rapid transit services, and also places where different modes of transportation, from walking to high-speed rail, come together seamlessly. They have, or are planned to have an attractive, intensive concentration of employment, living, shopping and enjoyment around a major transit station. To be identified as a mobility hub, a major transit station area must be located at the interchange of two or more current or planned regional rapid transit lines as identified in the RTP, and be forecasted in the RTP to have 4,500 or more combined boardings and alightings in the morning peak period in 2031. In addition, these areas are generally forecasted to achieve or have the potential to achieve a minimum density of approximately 10,000 people and jobs within an 800 metre radius. The primary major transit station area associated with an urban growth centre are also identified as mobility hubs, as are Pearson Airport and Union Station due to their roles as the GTHA's primary international gateways. (For more information see the backgrounder "Mobility Hubs, December 2008").

**Mobility Index:** a set of indicators, derived from the goals and objectives of the RTP, developed to gauge and monitor the progress and success of the RTP as Strategies are implemented and investments are made. The indicators will cover a range of goals and objectives that support a high quality of life, a thriving sustainable and protected environment, and a strong, prosperous and competitive economy.

**Modal Split:** The proportion of total person trips using each of the various different modes of transportation. The proportion using any one mode is its modal split.

**Queue-Jump Lanes:** Short roadway lanes provided on the approaches to signalized intersections which allow buses or cyclists to by-pass queued traffic and enter the intersection before other traffic when the traffic light turns green.

**Rapid Transit:** Transit service separated partially or completely from general vehicular traffic and therefore able to maintain higher levels of speed, reliability and vehicle productivity than can be achieved by transit vehicles operating in mixed traffic.

**Regional Rail:** Diesel-electric or electric trains serving primarily longer-distance regional trips; approximate capacity at 10-minute headways of 5,000 to 20,000 passengers per hour peak direction; service can be enhanced by electrification, enabling better train performance (acceleration) and therefore higher average speeds even with relatively close station spacing. Average speed: 30 km/h with two km station spacing; 50 km/h with wider station spacing or electrified trains. Example: GO Transit rail system.

**Regional Rapid Transit Network:** The network of Express Rail, Regional Rail, Subway and Other Rapid Transit services identified in Schedules 1 and 2 of the RTP.

**Regional Transportation System:** The regional rapid transit and highway network identified in Schedules 1 and 2 of the RTP.

**Settlement Areas:** Urban and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) where: a) development is concentrated and which have a mix of land uses; and b) lands have been designated in an official plan for development over the long-term planning horizon provided for in the Provincial Policy Statement, 2005. Where there are no lands that have been designated over the long-term, the settlement area may be no larger than the area where development is concentrated. [Source: Ministry of Energy and Infrastructure, Growth Plan for the Greater Golden Horseshoe, 2006.]

**Short Sea Shipping:** Port-to-port goods movement on the Great Lakes. In the RTP context, these would likely be mainly among ports serving the GTHA or between these ports and transfer points to/from ocean-going vessels downstream from the St. Lawrence Seaway.

**Specialized Transit:** A door-to-door service for passengers with special needs. Specialized transit riders must meet specified eligibility criteria and are required to book their trips in advance.

**Streetcars:** Urban rail vehicles circulating at low speeds (e.g. 10 to 25 km/h) in mixed traffic, with closely spaced stops (e.g. 200 metres). Examples exist in Toronto, Vienna, Prague and Melbourne. Generally known as “trams” outside of North America.

**Subway:** High-capacity, heavy rail transit that is fully-grade separated from other traffic, predominantly underground. Capacity in the range of 25,000 to 40,000 passengers per hour in the peak direction, with frequency as low as 90 seconds between trains. Average speed: 25 to 50 km/h. Example: Toronto subway.

**Transit Agency:** One of the following public transit operators in the GTHA: GO Transit; Hamilton Street Railway; Burlington Transit; Oakville Transit; Milton Transit; Mississauga Transit; Brampton Transit; York Region Transit; Toronto Transit Commission or Durham Region Transit.

**Transit Catchment Area:** The area around each transit station that contains most origins (e.g. home) and destinations (e.g. work or school) for transit users. The catchment area varies by the type of transit being accessed, the means by which it is being accessed, and by the surrounding urban fabric. For example, a downtown subway station will have a different-sized catchment area for a pedestrian than would a suburban GO train station.

**Transportation Demand Management (TDM):** A program of incentives which influence whether, when, where and how people travel, and encourage them to make more efficient use of the transportation system.

**Transportation System:** A system comprised of corridors and rights-of-way for the movement of people and goods, and associated transportation facilities including transit stops and stations, cycle lanes, bus lanes, High Occupancy Vehicle lanes, rail facilities, park-and-ride lots, service centres, rest stops, vehicle inspection stations, inter-modal terminals, harbours, and associated facilities such as storage and maintenance [Source: Provincial Policy Statement, 2005.]

**Urban Growth Centres (UGC):** Centres designated in the provincial Growth Plan for the Greater Golden Horseshoe, 2006. The Growth Plan designates 25 UGCs in the Greater Golden Horseshoe, of which 17 are in the GTHA.



# 9.0

## SCHEDULES

**SCHEDULE 1: 15-YEAR PLAN FOR THE REGIONAL RAPID TRANSIT AND HIGHWAY NETWORK**



**SCHEDULE 2: 25-YEAR PLAN FOR THE REGIONAL RAPID TRANSIT AND HIGHWAY NETWORK**



## Regional Rapid Transit\* and Highway Network

### 15-Year Plan

#### Express Rail

Lakeshore (1): *Hamilton - Oshawa GO*  
 Brampton (2): *Downtown Brampton - Union Station*

#### Regional Rail

Stoney Creek (3): *James Street North Station - Stoney Creek*  
 Milton (4): *Downtown Milton - Union Station/Summerhill*  
 Georgetown (5): *Georgetown - Downtown Brampton*  
 Airport (6): *Pearson Airport - Union Station*  
 Bolton (7): *Bolton - Union Station*  
 Crosstown (8): *Dundas West - Summerhill Station*  
 Barrie (9): *Bradford - Union Station*  
 Richmond Hill (10): *Richmond Hill GO - Union Station*  
 Richmond Hill (11): *Aurora Rd. - Richmond Hill GO*  
 Stouffville (12): *Mt Joy GO - Union Station*  
 Havelock (13): *Locust Hill (Markham) - Union Station/Summerhill*  
 Seaton (14): *Seaton - Union Station/Summerhill*  
 Lakeshore (15): *Oshawa GO - Bowmanville†*

#### Subway

Spadina (16): *Downsview Station - Vaughan Corporate Centre*  
 Yonge (17): *Finch - Richmond Hill/Langstaff Gateway*

#### New Transportation Corridors

Highway 410 Extension (42)    Highway 404 Extension (44)  
 Highway 427 Extension (43)    Highway 407 East (45)

#### Other Rapid Transit (BRT / LRT / AGT)

Hamilton James Street (18): *Downtown Hamilton - Hamilton Airport*  
 Hamilton King/Main (19): *McMaster University - Eastgate Mall*  
 Burlington Connector (20): *Fairview GO - Downtown Burlington*  
 Dundas Street (21): *Brant St - Kipling Station*  
 Trafalgar (22): *Hwy 407 - Midtown Oakville*  
 403 Transitway (23): *Midtown Oakville - Renforth / Airport*  
 Hwy 10 (24): *Mayfield West - Downtown Brampton*  
 Main Street AcceleRide (25): *Downtown Brampton - Hwy 407*  
 Hurontario (26): *Hwy 407 - Port Credit GO*  
 Waterfront West (27): *Port Credit GO - Union Station*  
 Queen Street AcceleRide (28): *Downtown Brampton - Peel-York Boundary*  
 VIVA Highway 7 (29): *Peel-York Boundary - Locust Hill (Markham)*  
 Finch West (30): *Pearson Airport - Finch Station*  
 Eglinton (31): *Pearson Airport - Kennedy Station*  
 Hwy 427 South (32): *Pearson Airport - Kipling Station*  
 Jane (33): *Vaughan Corporate Centre - Bloor Street*  
 Don Mills (34): *Hwy 7 - Bloor Street*  
 VIVA Yonge (35): *Richmond Hill/Langstaff Gateway - Newmarket Centre*  
 Sheppard East (36): *Don Mills Station - Meadowvale Road/Scarborough Centre*  
 Scarborough RT (37): *Kennedy Station - Malvern*  
 Hwy 2 (38): *Scarborough Centre - Downtown Oshawa*  
 Brock Road (39): *Downtown Pickering - Hwy 407*  
 Oshawa Connector (40): *Oshawa GO - Downtown Oshawa*  
**BRT on Controlled-Access Expressway in Mixed Traffic with Congestion Management**  
 Hwy 407 (41): *Halton - Durham*

### 25-Year Plan

#### Express Rail

Mississauga (46): *Cooksville - Union Station*  
 Richmond Hill (47): *Richmond Hill/Langstaff Gateway - Union Station*

#### Subway

Downtown Core (48): *Bloor West - Downtown - Danforth*

#### Transportation Corridors Under Study

Niagara-GTA (61)    GTA-West (62)

#### Other Rapid Transit (BRT / LRT / AGT)

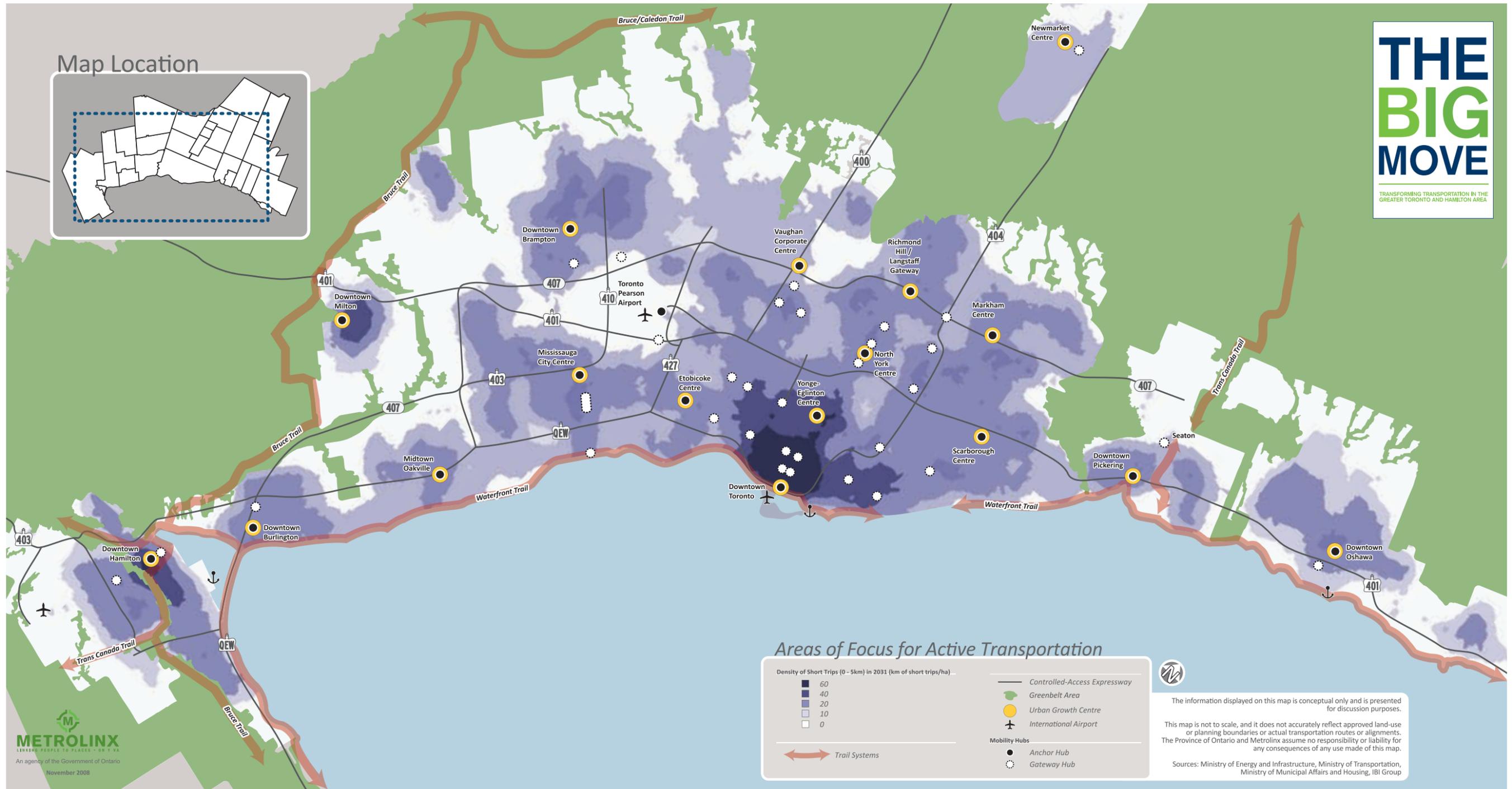
Hamilton Mohawk (49): *Centre Mall - Ancaster*  
 Brant (50): *Fairview GO - Dundas Street*  
 Trafalgar/Main (51): *Downtown Milton - Hwy 407*  
 Steeles AcceleRide (52): *Lisgar GO - Hwy 427*  
 Hwy 427 North (53): *Pearson Airport - Queen Street*  
 407 Transitway (54): *Hwy 427 - Markham Centre*  
 Steeles (55): *York University - Milliken GO*  
 VIVA Yonge North (56): *Newmarket Centre - Green Lane*  
 McCowan (57): *Markham Centre - Scarborough Centre*  
 Scarborough - Malvern (58): *Kennedy Station - Malvern*  
 Steeles/Taunton (59): *Milliken GO - Downtown Oshawa*  
 Simcoe (60): *Downtown Oshawa - Hwy 407*

#### Notes

\* Details such as routing, technology, stations, and level of service are subject to further analysis, such as the project-level Benefits Case Analysis that Metrolinx will carry out in partnership with municipalities and transit agencies.

† Routing on either CNR or CPR corridor to be assessed through the environmental assessment process

**SCHEDULE 3: AREAS OF FOCUS FOR ACTIVE TRANSPORTATION**



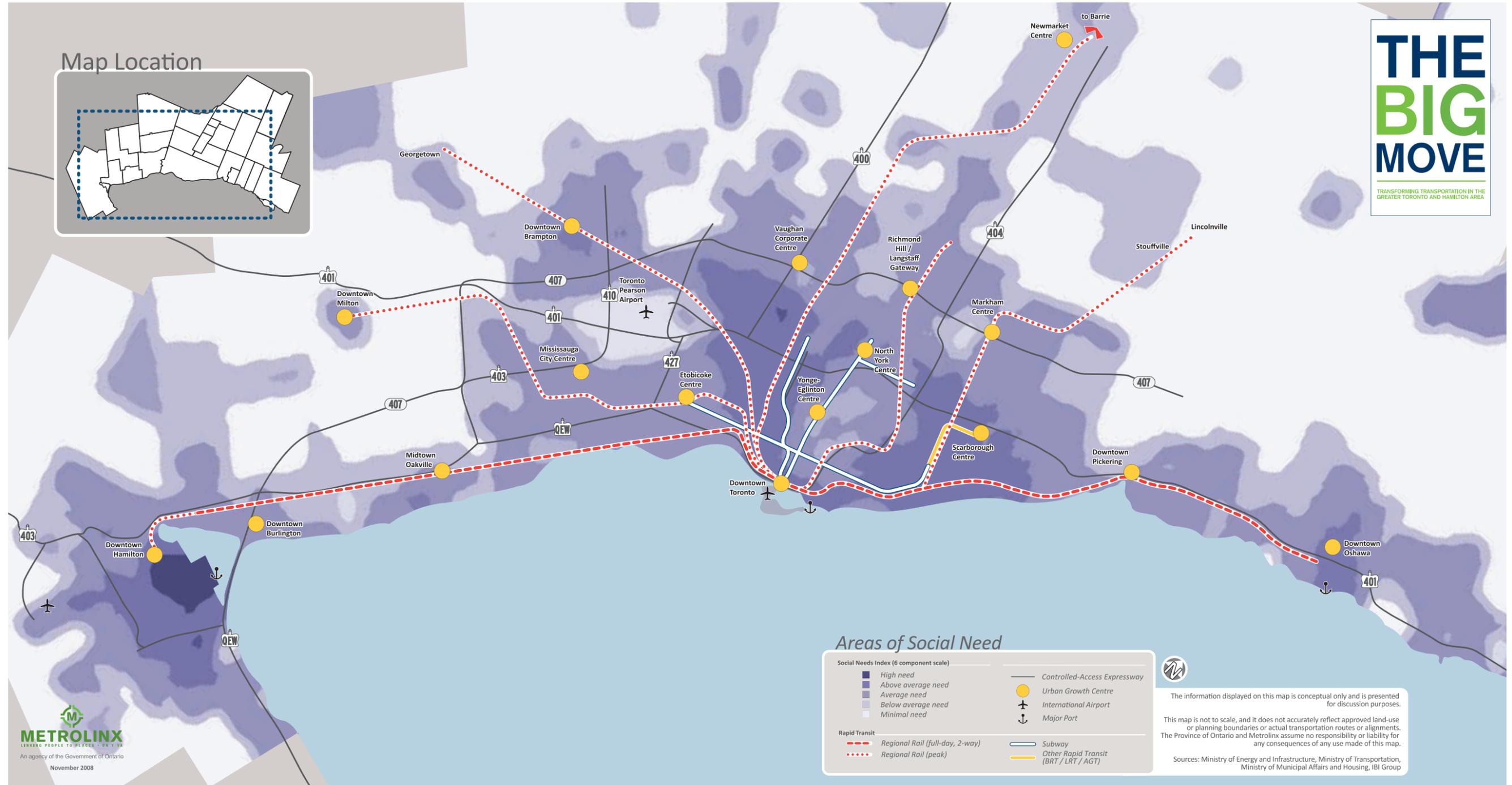
# 10.0

## APPENDICES

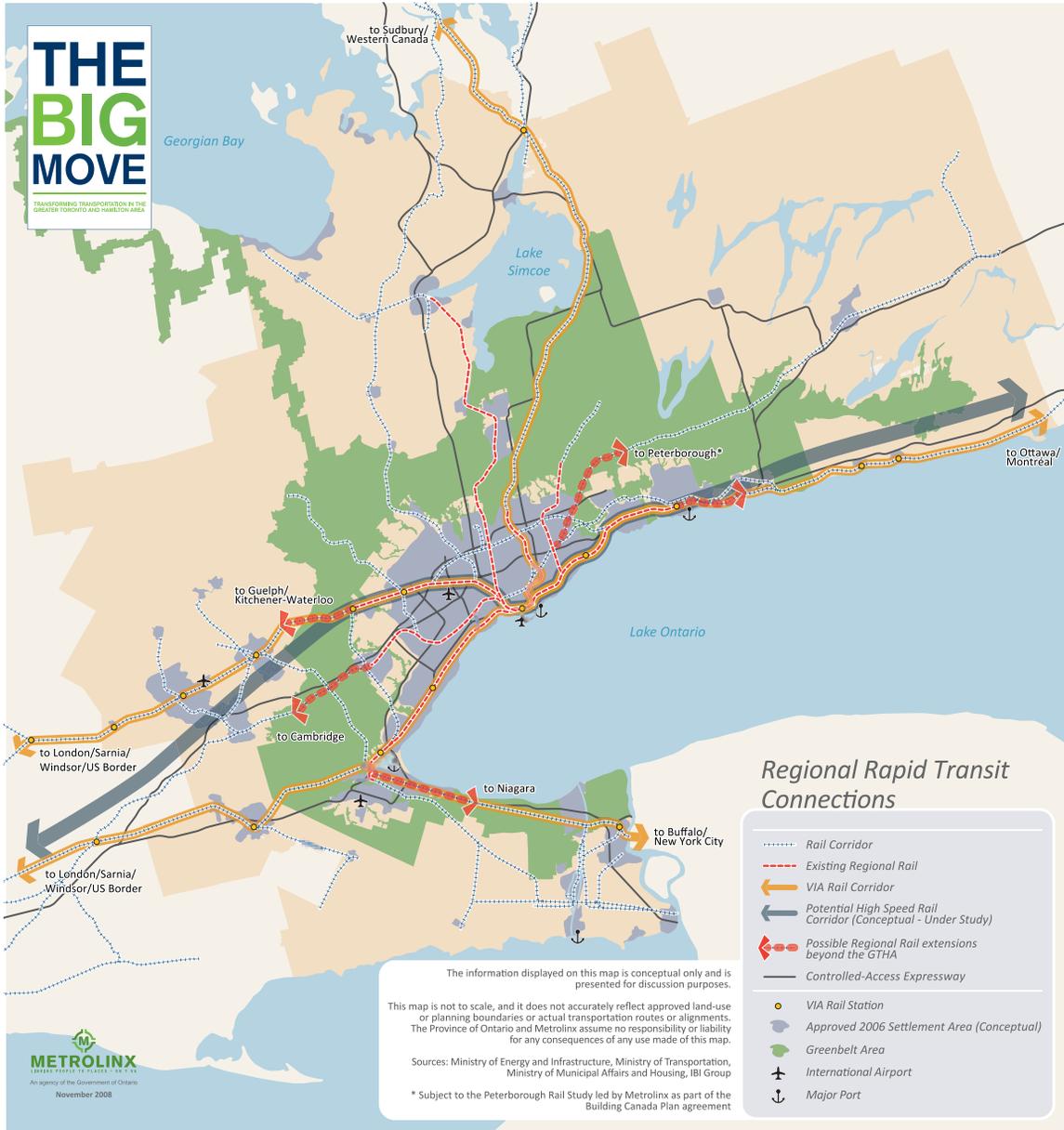
**APPENDIX A: EXISTING REGIONAL RAPID TRANSIT AND HIGHWAY NETWORK IN THE GTHA**



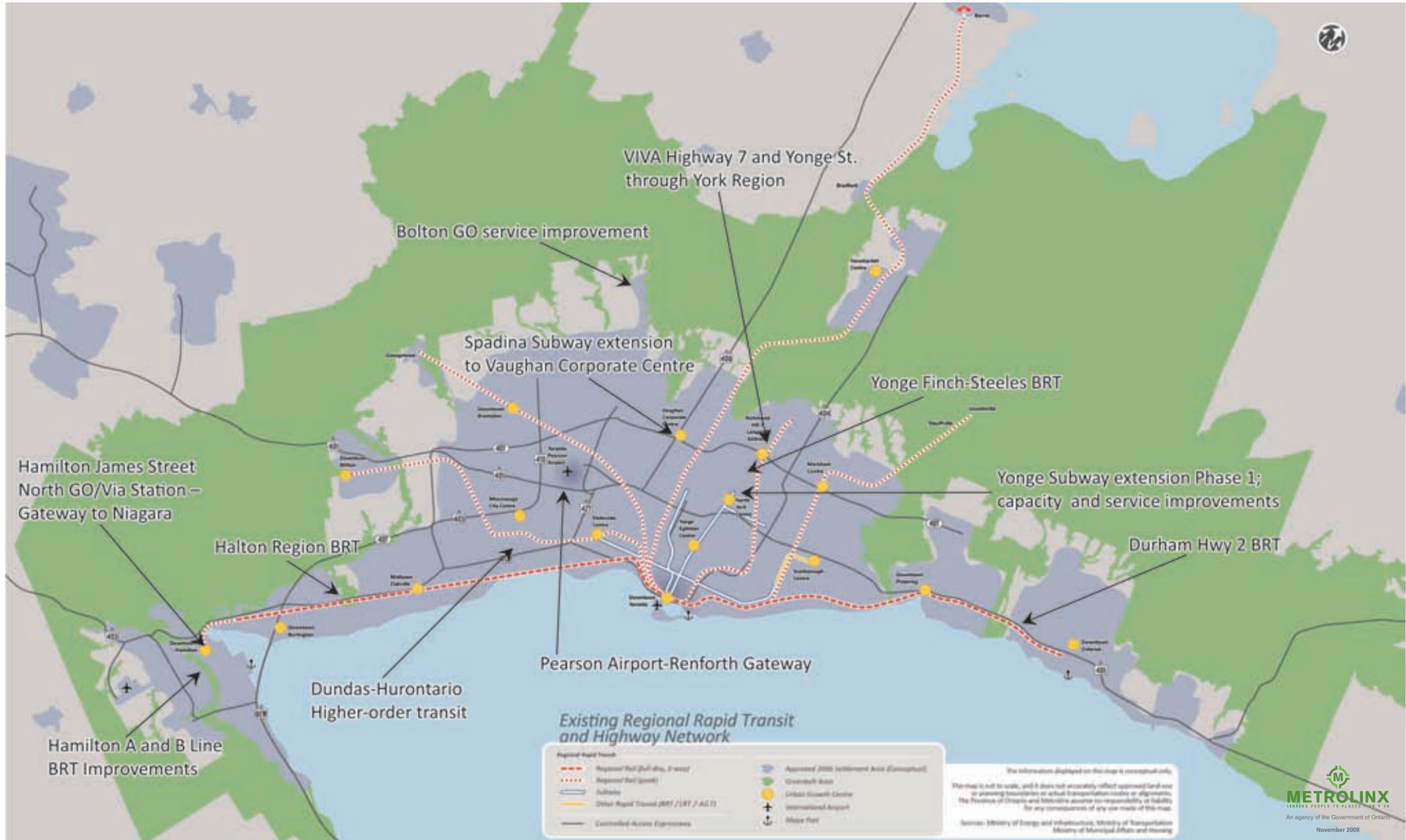
**APPENDIX B: AREAS OF SOCIAL NEED IN THE GTHA**



# APPENDIX C: REGIONAL RAPID TRANSIT CONNECTIONS OUTSIDE THE GTHA



**APPENDIX D: METROLINX QUICK WINS**



# APPENDIX E

## PHOTO CREDITS

Page	Description	Credit
3	Toronto Skyline	iStock 4163503
4	GTHA Context Map	Ontario Ministry of Energy and Infrastructure; Ministry of Natural Resources; Ministry of Public Infrastructure Renewal; findtheway.ca
5	Highways	Antoine Belaieff
8	Station	iStock 2892402
7	Inefficient Use of Roads	Viva- York Region
9	LRT	iStock 5605781
10	Photo Bike Lane	iStock 2340899
10	Transit Supportive Development	Antoine Belaieff
11	Station	iStock 7583961
12	Train	iStock 4127280
22	Bus Bypass Shoulder	City of Mississauga
22	Queue Jump Lane	Richard Drdul: <a href="http://www.flickr.com/photos/drdul/210647240/sizes/o/">http://www.flickr.com/photos/drdul/210647240/sizes/o/</a>
25	Union Station	GO Transit
25	Union Station	GO Transit
28	Yamanote Line	Gorgo: <a href="http://en.wikipedia.org/wiki/Image:Tokyo_yamanote-sen.jpg">http://en.wikipedia.org/wiki/Image:Tokyo_yamanote-sen.jpg</a>
28	Réseau Express Régional Paris	Eole99: <a href="http://upload.wikimedia.org/wikipedia/commons/8/80/Ms61R_2rames_boissy.jpg">http://upload.wikimedia.org/wikipedia/commons/8/80/Ms61R_2rames_boissy.jpg</a>
28	Bay Area Rapid Transit	lensovet: <a href="http://upload.wikimedia.org/wikipedia/commons/4/46/BART_Millbrae_train.jpg">http://upload.wikimedia.org/wikipedia/commons/4/46/BART_Millbrae_train.jpg</a>
29	River Line	David: <a href="http://upload.wikimedia.org/wikipedia/commons/a/a0/Gtw_riverline.JPG">http://upload.wikimedia.org/wikipedia/commons/a/a0/Gtw_riverline.JPG</a>
29	Deux-Montagnes Line	Antoine Belaieff
29	GO Train	Anonymous: <a href="http://upload.wikimedia.org/wikipedia/en/e/ee/GO_east.JPG">http://upload.wikimedia.org/wikipedia/en/e/ee/GO_east.JPG</a>
29	Toronto Subway	Gloom: <a href="http://en.wikipedia.org/wiki/Image:Toronto_Subway_Sheppard-Yonge.jpg">http://en.wikipedia.org/wiki/Image:Toronto_Subway_Sheppard-Yonge.jpg</a>
29	Tunnelbanan	Malter: <a href="http://en.wikipedia.org/wiki/Image:T-Centralen_C20.jpg">http://en.wikipedia.org/wiki/Image:T-Centralen_C20.jpg</a>
29	Metro	BenSchumin: <a href="http://en.wikipedia.org/wiki/Image:WMATA_metro_center_crossvault.jpg">http://en.wikipedia.org/wiki/Image:WMATA_metro_center_crossvault.jpg</a>
30	T3 Tram	Anonymous: <a href="http://upload.wikimedia.org/wikipedia/commons/6/69/Paris-tramway.jpg">http://upload.wikimedia.org/wikipedia/commons/6/69/Paris-tramway.jpg</a>
30	Rede Integrada de Transporte	Morio: <a href="http://en.wikipedia.org/wiki/Image:Bus_Stops_3_curitiba_brasil.jpg">http://en.wikipedia.org/wiki/Image:Bus_Stops_3_curitiba_brasil.jpg</a>
30	RandstadRail	Tukka: <a href="http://upload.wikimedia.org/wikipedia/commons/4/4d/RandstadRail_Den_Haag_073289.JPG">http://upload.wikimedia.org/wikipedia/commons/4/4d/RandstadRail_Den_Haag_073289.JPG</a>



<b>Page</b>	<b>Description</b>	<b>Credit</b>
31	Bike Lane- Toronto	Dylan Passmore
31	Velib	Rcsmit: <a href="http://en.wikipedia.org/wiki/Image:Velibvelo1.jpg">http://en.wikipedia.org/wiki/Image:Velibvelo1.jpg</a>
31	Pedestrian Bridge	Dylan Passmore
32	BikeLinx	Metrolinx
32	Indoor Bike Parking	Smart Commute
37	HOV Lane	City of Mississauga
39	Travel Information on Cellphone	Metrolinx
39	Real-time Transit Information/ Display at Station	Velaparatodo <a href="http://www.flickr.com/photos/velaparatodo/1069150734/sizes/o/">http://www.flickr.com/photos/velaparatodo/1069150734/sizes/o/</a>
39	Online Trip Planner	Google Transit
42	Presto Paying Machine	Presto
42	Octopus Card	Alicia Griffin: <a href="http://www.flickr.com/photos/aliciagriffin/2928611012/">http://www.flickr.com/photos/aliciagriffin/2928611012/</a>
42	Viva Station	Wyliepoon <a href="http://www.flickr.com/photos/wyliepoon/2680922627/">http://www.flickr.com/photos/wyliepoon/2680922627/</a>
44	Cobourg, King Street	Ontario Growth Secretariat, Ministry of Energy and Infrastructure
45	Atocha Station	Barry Hoggard: <a href="http://www.flickr.com/photo_zoom.gne?id=514028852&amp;size=l">http://www.flickr.com/photo_zoom.gne?id=514028852&amp;size=l</a>
45	St. Paul Transit Hub	Urban Strategies Inc.
46	S-Bahn Station	Antoine Belaieff
52	Kneeling Bus	City of Peterborough
54	PackStation	Klaus Mueller, 2006 : <a href="http://commons.wikimedia.org/wiki/Image:Packstation_winter.jpg">http://commons.wikimedia.org/wiki/Image:Packstation_winter.jpg</a>
74	Construction Photo One	John A. Ross
74	Construction Photo Two	Colin Keigher
74	Construction Photo Three	Outsanity
82	Train Schedule Information Display	Liquid Library 74P0406LL



**METROLINX**

LINKING PEOPLE TO PLACES • ON Y VA

An agency of the Government of Ontario

**20 Bay Street, Suite 901  
Toronto, Ontario M5J 2N8  
Phone 416.874.5900  
Fax 416.874.5901  
[www.metrolinx.com](http://www.metrolinx.com)  
[thebigmove@metrolinx.com](mailto:thebigmove@metrolinx.com)**



**METROLINX**  
LINKING PEOPLE TO PLACES • ON Y VA

An agency of the Government of Ontario