

Background Report

# Foundations Report

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York Region Transportation Master Plan



Prepared for Regional Municipality of York  
by IBI Group

June 2016

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# 1 Introduction

York Region is home to over 1 million people, the third largest municipality in Ontario, and one of the fastest growing urban regions in Canada, doubling in population since 1991. The Region is projected to grow by another 700,000 people and 400,000 jobs by 2041. This growth continues past trends of rapid expansion and urbanization of the Region, particularly in the southern municipalities.

The result of rapid growth is increased pressure on transportation infrastructure throughout the Region. Congestion continues to be an issue with impacts on travel times, economic productivity, and quality of life. In response, Regional Roads continue to be expanded to serve new communities. In existing communities, transit and other modes are playing a greater role as road expansion slows within constrained corridors. Rural areas of the Region, some facing development pressures, others protected by the Greenbelt, face divergent transportation challenges.

The purpose of this report is to provide the foundation upon which to base the vision and directions for the York Region Transportation Master Plan (TMP) update. It is a synopsis of the existing conditions, trends, and challenges for transportation in York Region.

## 1.1 Study Background

The 2002 York Region Transportation Master Plan (TMP) laid the groundwork to improve travel options and reduce auto dependency, in support of population and employment growth to 2031. It set the stage for many of the current infrastructure projects. The 2009 TMP Update built on the successes of the previous plan by calling for more refined policy directions and updating the proposed transit, road, and active transportation networks and strategies. The TMP Update will be the second update to the 2002 TMP. It will need to confirm, validate, and refine the bold vision, strategies, and policies set out in previous plans.

## 1.2 Report Structure

This report is structured around six chapters:

- Chapter 1 introduces the current context for the TMP Update;
- Chapter 2 provides a description of the TMP planning process and reviews the progress of policy implementation based on the 2002 TMP and 2009 TMP Update;
- Chapter 3 presents trends in transportation supply and demand and their potential impact to transportation in the Region;
- Chapter 4 provides a preliminary picture of York Region's future, focussing on population and employment growth;
- Chapter 5 focuses on the key issues that will need to be addressed in the TMP Update based on the preceding analysis; and
- Chapter 6 presents a defining direction and themes for the TMP update.

## 1.3 Next Steps

The TMP Update study is divided into three phases:

- Phase 1: Plan Foundations
- Phase 2: Scenario and Project Identification Testing
- Phase 3: Master Plan Development

This report focuses on the findings of Phase 1. The purpose of the plan foundation is to understand the problems and underlying assumptions about transportation in the Region. The intended outcome of this report is to guide the development of the Vision, Direction and Goals of the TMP Update.

In Phase 2, the study team will focus on developing network plans and testing solutions. This phase will include the creation of strategies that enhance conditions for transit, walking and cycling, and encourage their use. Travel demand models will be validated to test several growth scenarios and to identify the preferred network scenario.

In Phase 3, the study team will prepare an action plan, update the funding strategy, and develop performance measures. Project assessment sheets will be useful tools to communicate the purpose and impact of the recommended projects in the plan.

## 2 Making Progress: Outcomes of Past TMPs

### 2.1 2009 TMP Principles

A **Transportation Master Plan** is intended to articulate a vision for transportation in the Region that is consistent with the Regional Official Plan, the Sustainability Strategy and other guiding documents. The vision set out in the 2009 TMP update was expressed through principles that focus around the concept of sustainability and the three themes of Healthy Communities, Sustainable Natural Environment, and Economic Vitality. These principles include:

- Put Pedestrians and Transit First
- Provide Access and Mobility for Everyone
- Integrate Transportation and Land Use Planning
- Further Encourage Communications, Consultation and Public Engagement
- Protect and Enhance our Environment and Cultural Heritage
- Adopt Energy Efficient (Carbon Neutral) Transportation Systems
- Implement and Support Transportation Demand Management Initiatives
- Support our Economic Well-Being
- Ensure Fiscal Sustainability and Equitable Funding
- Implement and Support Transportation Supply Management Initiatives
- Conduct Ongoing Performance Measurement and Monitoring

Following the last update of the TMP, **Vision 2051** was approved in 2011 and is York Region's long-term, 40-year strategy document that sets the priorities to guide planning and decision-making across all Regional programs. The eight key elements of the vision are:

- A Place Where Everyone Can Thrive
- Liveable Cities and Complete Communities
- A Resilient Natural Environment and Agricultural System
- Appropriate Housing for All Ages and Stages
- An Innovation Economy
- Interconnected Systems for Mobility
- Living Sustainably
- Open and Responsive Governance

Though these broad strategic objectives were defined after the 2009 TMP Update, they build upon a shared vision in regards to mobility. In particular, Vision 2051 envisions a future York Region in which there is a seamless, multi-modal transportation network that encourages more healthy and active uses. This TMP update will integrate these vision elements into the directions, objectives, and policies.

In achieving the vision and objectives of the Transportation Master Plan, there have been successes, progress, and challenges. Exhibit 2.1 provides a snapshot of some of the Transportation Master Plan principles and their current status.

**Exhibit 2.1: Status of 2009 TMP Vision Elements**

Principles/Goals	Source	Status
York Region is committed to transportation planning as one component of a growth management system that also includes human services, the environment and fiscal capacity.	2009 TMP	<ul style="list-style-type: none"> <li>• TMP is tightly integrated with the Regional Official Plan</li> <li>• Continued coordination with other Regional services and processes</li> </ul>
York Region is committed to managing its transportation system in an efficient and cost-effective, socially and environmentally responsible manner.	2009 TMP	<ul style="list-style-type: none"> <li>• Heavy investment in public transit</li> <li>• Constrained road expansion</li> <li>• Fully accessible conventional transit, delivery of services as per approved service standards</li> </ul>
York Region will plan for and implement transportation infrastructure and services in an open, transparent and accountable manner based on broad consultation, citizen engagement and strong communications.	2009 TMP	<ul style="list-style-type: none"> <li>• Transportation Fact Book published every 2 years since 2009</li> <li>• Education materials on website for new types of facilities: bike boxes, roundabouts, etc.</li> <li>• Recognition of issues and leadership at all levels of policy and decision-making</li> </ul>
York Region is committed to value-for-money in delivering transportation services.	2009 TMP	<ul style="list-style-type: none"> <li>• Stability in transit revenue-cost ratio; still below 2006 Council target of 50%</li> <li>• Development Charges being leveraged for effective infrastructure investments to support growth</li> </ul>
York Region is committed to integrating transportation planning into an urban form that is compact, mixed-use and creates a sense of community.	2009 TMP	<ul style="list-style-type: none"> <li>• Recognized concept of “mobility hubs” in various planning documents</li> <li>• Conducted best practices review for planning centres and corridors in 2013</li> <li>• Lowered tax rates for multi-residential</li> </ul>
York Region is committed to ensuring all residents (especially those with low incomes, the disabled, recent immigrants, youth and the elderly) have barrier-free, reliable and affordable access to all aspects of the transportation system.	2009 TMP	<ul style="list-style-type: none"> <li>• Completed conversion of bus fleet to low-floor buses</li> <li>• New Vivastations and bus stop design guidelines designed to accessibility standards</li> <li>• Cash fares have increased, creating challenges for affordability</li> <li>• Updated Accessibility Policies in 2012 and 2013-2021 Multi-Year Accessibility Plan</li> </ul>
York Region will design a transportation system that is energy efficient and mitigates and adapts to the impacts of climate change.	2009 TMP	<ul style="list-style-type: none"> <li>• Support for Smart Commute to encourage carpooling</li> </ul>
York Region is committed to reducing single-occupant vehicle trips and promoting a preference for sustainable transportation choices by providing more reliable and convenient alternative modes of travel.	2009 TMP	<ul style="list-style-type: none"> <li>• Continued funding for Smart Commute</li> <li>• Education tools to encourage transit (myRide Travel Training, YO! Youth On-board, Cycling Maps, Kids Cycling Program, etc.)</li> </ul>

## 2.2 Advancing Policies and Strategies

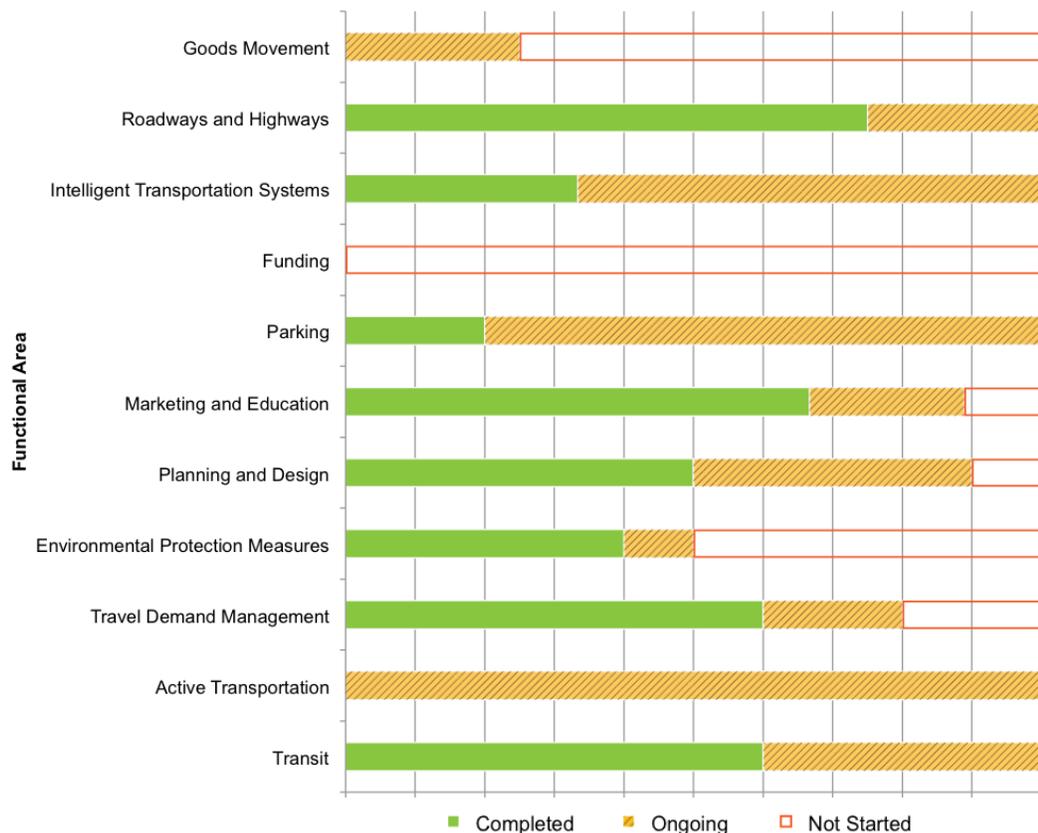
The 2009 TMP Update built upon the success of the 2002 TMP and reinforced the need to reduce the number of single occupancy vehicles by developing strategies that:

- reduce the need to travel;
- further enhance public transit; and,
- provide more alternative modes of travel.

Greater emphasis was placed on walking and cycling, integration of transit with other modes, and other supportive measures. Examples of these supportive measures included transit oriented and mixed-use development (TOD/MUD), transportation demand management (TDM), parking price policies, intelligent transportation systems (ITS), walkable site access design, communication of travel time information, carpool incentives, and limited road widening except for HOV lanes. Over 100 policies and strategies were developed and categorized under the 11 core principles of the vision. Among these policies and strategies were 18 Bold Directions.

Exhibit 2.3 provides a summary of progress on the actions identified in the 2009 TMP, organized under the 11 core principles. The exhibit provides an indication of whether action is underway on a particular policy, based on a review of programs and discussions with Regional staff. It is intended to serve as a snapshot of the policy areas that are demonstrating progress. Work is completed or underway for all except for funding, which included proposals for alternative funding sources which are dependent on provincial legislation.

**Exhibit 2.2: Conceptual Summary of Progress for 2009 TMP Policies and Strategies**



Policy implementation has progressed well in several areas since 2009 but there are still many gaps between the TMP Update’s goals and what has been achieved:

- Work supporting transit, roads and highways and Travel Demand Management is well underway.
- Policies supporting improved goods movement, funding and environmental protection measures, in particular, still require further action.

This assessment is based on a comprehensive review of Policy and Strategy Recommendations from the 2009 TMP update, shown in Exhibit 2.4. “Policy and Actions” reflect a review of recent actions that advance the recommendations of the TMP. The progress column, shown as unfilled or filled circles, is shown for indicative purposes of how successful the outcomes have been in addressing the recommendations.

Exhibit 2.5 follows a similar approach, but focusing on providing a status update on the 5-year Action Plan (2009 TMP Section 9.1) for transit, roadway, and policy improvements.

**Exhibit 2.3: Status of 2009 TMP Policy and Strategy Recommendations**

POLICY AND STRATEGY RECOMMENDATIONS	PHASE	POLICY AND ACTIONS	PROGRESS
<b>TRANSIT</b>			
Work closely with GO Transit to maximize YRT access to GO Transit facilities	Immediate	<ul style="list-style-type: none"> <li>• Ride to GO program offered by YRT/Viva, co-fare agreement in place</li> <li>• Conducted YRT passenger OD surveys in 2010</li> </ul>	●●●○
Co-ordinate YRT services with adjacent transit systems	Immediate	<ul style="list-style-type: none"> <li>• Connected services in York Region with 14 TTC routes and Brampton Züm; integrated fare policy on these routes</li> </ul>	●●●○
Work with Brampton Transit to integrate AcceleRide with YRT/Viva services along Highway 7	Immediate	<ul style="list-style-type: none"> <li>• Brampton Züm services connected to Vaughan Metropolitan Centre (VMC) and York University</li> </ul>	●●○○
Amend the Highway Traffic Act and Public Vehicles Act to allow the installation of bike racks on buses that cross Regional boundaries	Immediate	<ul style="list-style-type: none"> <li>• Outstanding as of September 2013</li> </ul>	○○○○
Working with other agencies to implement fare integration and eliminate the zone based fare system	Short-term	<ul style="list-style-type: none"> <li>• YRT/Viva fare accepted on TTC, Brampton Transit</li> <li>• Transfer accepted by transit agencies in Durham, Brampton, Mississauga, Oakville, Burlington, Hamilton and TTC-contracted routes in York Region</li> <li>• TTC passes valid on Viva Orange between Downsview and York University</li> </ul>	●●●○
<b>ACTIVE TRANSPORTATION</b>			
Implement the Regional and municipal pedestrian and cycling master plan policies	Immediate	<ul style="list-style-type: none"> <li>• Parts of the PCMP network built, other recommendations a part of centres and corridors planning</li> </ul>	●○○○
Encourage the study and implementation of local municipal pedestrian and cycling master plans	Immediate	<ul style="list-style-type: none"> <li>• Plans adopted in all local municipalities</li> <li>• Early stages of implementation</li> </ul>	●●●○

POLICY AND STRATEGY RECOMMENDATIONS	PHASE	POLICY AND ACTIONS	PROGRESS
Support the directions introduced in the Natural Heritage Discussion Paper	Immediate	<ul style="list-style-type: none"> <li>Development of Regional trails plans through PCMP</li> <li>Municipal partnership programs to enhance linkages to natural heritage features</li> </ul>	●●●○
<b>ENVIRONMENTAL PROTECTION</b>			
When planning transportation corridor improvements and transportation facilities, the surrounding natural environment should be either avoided or enhanced	Immediate	<ul style="list-style-type: none"> <li>Impacts to natural environment minimized or mitigated as part of the Municipal Class EA process</li> </ul>	●●●●
Co-ordinate the Region's road and transit networks as well as planning regimes with local and adjacent municipalities to minimize infrastructure needs and enhance the natural environment	Immediate	<ul style="list-style-type: none"> <li>Coordinated delivery of transit and road projects</li> <li>Implementation of HOV lanes as part of road widening</li> </ul>	●●○○
Take the opportunity to improve environmental functions and habitat connectivity through upgrades of existing crossing structures	Immediate	<ul style="list-style-type: none"> <li>New environmental legislation since the construction of these structures require these to be completed when rehabilitated (e.g. Navigable Waters Act, Endangered Species Act, etc.)</li> </ul>	●●●●
Develop a detailed roadway directional lighting strategy to minimize light pollution effects	Immediate	<ul style="list-style-type: none"> <li>No action – street lighting on Regional roads between intersections is currently under municipal jurisdiction</li> </ul>	○○○○
When planning new transportation facilities, consider all natural environment and heritage features	Short-term	<ul style="list-style-type: none"> <li>Impacts to natural environment minimized or mitigated as part of the Municipal Class EA process</li> </ul>	●●●●
Work with local municipalities and the construction industry to develop Environmental Best Management Practices to minimize environmental impacts	Short-term	<ul style="list-style-type: none"> <li>Integration into the Best Practices for Planning Regional Centres and Corridors</li> <li>Environmental best practices followed as matter of normal practice</li> </ul>	●●●○
Review and update the Region's winter maintenance management policies and practices according to best management practices	Short-term	<ul style="list-style-type: none"> <li>Winter maintenance program reviewed in 2012</li> <li>Region to develop a long-term Road Maintenance Operational Plan</li> </ul>	●●●○
<b>PLANNING AND DESIGN</b>			
Amend the ROP to include TOD guidelines as Regional policy to promote sustainable development for higher order transit	Immediate	<ul style="list-style-type: none"> <li>ROP amendments call for new communities to support walkable and transit accessible where possible</li> </ul>	●●●●
Connect all transit stops directly to sidewalks and adjacent buildings in urban areas	Immediate	<ul style="list-style-type: none"> <li>Recommended in the PCMP</li> </ul>	●○○○
Adopt the Canadian Institute of Transportation Engineers (CITE) Site Design Guidelines to promote sustainable transportation	Immediate	<ul style="list-style-type: none"> <li>Principles of CITE Site Design Guidelines reflected in other guidance adopted by the Region (e.g. New Communities Guidelines, Transit-Oriented Develop Guidelines, etc.)</li> </ul>	●●●●
Work with local municipalities to develop alternative Regional street design	Immediate	<ul style="list-style-type: none"> <li>Towards Great Regional Streets (2006) set policy to limit 6-lane widening only when adding HOV/transit</li> </ul>	●●●●

POLICY AND STRATEGY RECOMMENDATIONS	PHASE	POLICY AND ACTIONS	PROGRESS
parameters to encourage walking and cycling in Centres and Corridors		<ul style="list-style-type: none"> <li>Development of design guidelines for Context Sensitive Regional Streets</li> </ul>	
Ensure transit services and infrastructure are built into new subdivisions, employment areas and major commercial centres	Short-term	<ul style="list-style-type: none"> <li>YRT designates new bus routes that meet base route targets</li> <li>Developers required to provide transit pads</li> </ul>	●●○○
Co-ordinate zoning bylaws, urban design guidelines, parking standards and site plan controls to ensure consistency with TOD guidelines	Short-term	<ul style="list-style-type: none"> <li>New communities guidelines (2013) supports walkable, TOD design, and parking standards accordingly</li> </ul>	●●●●
Work with the local municipalities to implement a co-ordinated program of site design to fully accommodate transit and pedestrians	Short-term	<ul style="list-style-type: none"> <li>Done as a matter of normal practice</li> </ul>	●●●●
<b>TRAVEL DEMAND MANAGEMENT</b>			
Finalize the TDM strategy in consultation with municipal agencies, school boards, hospitals, colleges and major employers	Short-term	<ul style="list-style-type: none"> <li>TDM Program and Implementation Strategy developed in 2013</li> </ul>	●●●●
Develop a TDM promotional plan in conjunction with municipalities and key stakeholders	Short-term	<ul style="list-style-type: none"> <li>Preliminary actions taken to deliver TDM programs in new developments</li> </ul>	●○○○
Encourage all employers to implement TDM programs	Short-term	<ul style="list-style-type: none"> <li>Leading by example, Employee Trip Reduction program in place for Regional employees (awarded in 2007 and 2012)</li> <li>Continued funding for supporting agencies</li> <li>Smart Commute</li> </ul>	●●●●
Require TDM plans or strategies for major development applications	Immediate	<ul style="list-style-type: none"> <li>TDM Report may be required as part of site plan depending on the type of development proposed</li> </ul>	●●●○
<b>MARKETING AND EDUCATION</b>			
Actively work with the school boards and local municipalities to implement a number of programs which promote alternative and safe routes to school	Immediate	<ul style="list-style-type: none"> <li>Partners with both school boards and participates and STS of York Region Active and Safe Routes to School campaign; promotes and distributes education materials</li> </ul>	●●●○
Work with the municipalities to plan and implement regular car-free days to promote sustainability	Immediate	<ul style="list-style-type: none"> <li>Participates in Bike to Work Day and Carpool Week</li> </ul>	●●○○
Conduct a random sample public opinion survey with York Region residents and businesses every two years	Immediate	<ul style="list-style-type: none"> <li>Annual Environics survey for GTHA</li> <li>EKOS telephone survey conducted in 2008 about transportation and public transit issues</li> </ul>	●●○○
Work with the local media to develop op-ed pieces or other articles/segments highlighting the Region's sustainable	Short-term	<ul style="list-style-type: none"> <li>Various communications materials have been developed</li> </ul>	●●○○

POLICY AND STRATEGY RECOMMENDATIONS	PHASE	POLICY AND ACTIONS	PROGRESS
transportation initiatives developed in response to growing congestion			
Work directly with area community and cultural centres to promote relevant sustainable transportation initiatives	Short-term	<ul style="list-style-type: none"> <li>No specific actions identified</li> </ul>	●○○○
Work directly with large independent living facilities and retirement communities to promote relevant programs and initiatives	Short-term	<ul style="list-style-type: none"> <li>No specific actions identifies</li> </ul>	●○○○
<b>PARKING</b>			
Offer carpoolers preferential parking at all Regional facilities. Also offer preferential parking for vehicles powered by alternative fuels	Immediate	<ul style="list-style-type: none"> <li>Preferred parking spots for registered carpool employees</li> </ul>	●●○○
Work with local municipalities to establish a Parking Authority that would set parking policy within York Region	Short-term	<ul style="list-style-type: none"> <li>City of Markham exploring potential municipal parking authority for Markham Centre</li> <li>City of Vaughan recently reviewed its parking standards</li> </ul>	●○○○
Include on-street parking as part of the supply for development where possible	Short-term	<ul style="list-style-type: none"> <li>Development and site plan approvals under jurisdiction of local municipalities, limited role for the Region</li> </ul>	N/A
Investigate the parking requirements and utility of car-share programs in close proximity to YRT/Viva terminals, GO stations and major employment centres	Short-term	<ul style="list-style-type: none"> <li>Seven (7) YRT Park 'N' Ride Lots</li> <li>No car-share programs yet in York Region</li> </ul>	●●○○
<b>FUNDING</b>			
Request the province to modify the Development Charges Act to better support transit and sustainable transportation services in conjunction with Metrolinx	Immediate	<ul style="list-style-type: none"> <li>MMAH consulting in fall of 2014 with municipalities about changes to development charges system</li> <li>Metrolinx submitted review of development charges and recommendations in January 2014</li> </ul>	●○○○
<b>INTELLIGENT TRANSPORTATION SYSTEMS</b>			
Review the location of left turn lane detector loops on arterial roads	Immediate	<ul style="list-style-type: none"> <li>Public permitted to request a review of signal timing</li> </ul>	●●○○
Review the policy on pedestrian pushbuttons to improve tactile and visual response	Immediate	<ul style="list-style-type: none"> <li>No specific actions identified</li> </ul>	●●●●
Discontinue the use of pedestrian pushbuttons for pedestrian phases across the "minor" street that has a short pedestrian walk distance	Immediate	<ul style="list-style-type: none"> <li>No specific actions identified</li> </ul>	●○○○
Create a web-based delivery of real-time traffic information to assist drivers in determining times and routes for travel	Short-term	<ul style="list-style-type: none"> <li>Critical intersections monitored by CCTV</li> <li>Travel Alert App provides real-time traffic reporting of unexpected delays</li> </ul>	●●●●

POLICY AND STRATEGY RECOMMENDATIONS	PHASE	POLICY AND ACTIONS	PROGRESS
Expanding the Viva/YRT ITS program, to improve transit performance relative to single occupant vehicles	Short-term	<ul style="list-style-type: none"> <li>Partnered with INIT and Google Maps to offer real-time trip planning</li> <li>Computer-aided dispatch and automatic vehicle location provide next bus info at YRT/Viva stops</li> <li>On-time performance at start and arrival are monitored and compared to service level targets</li> </ul>	●●●○
<b>GOODS MOVEMENT</b>			
Work with the Province and Metrolinx to encourage and promote efficient, safe and sustainable goods movement	Immediate	<ul style="list-style-type: none"> <li>Engaged with Metrolinx in 2013 to develop a plan for urban goods movement data; Continue to participate</li> </ul>	●●○○
<b>ROADWAYS AND HIGHWAYS</b>			
Initiate HOV2+ lanes for all road segments scheduled for widening to 6 lanes	Immediate	<ul style="list-style-type: none"> <li>Towards Great Regional Streets (2006) set policy to limit 6-lane widening only when adding HOV/transit</li> <li>Policy to be revisited, Highway 50 widening to 6-lanes</li> </ul>	●●●○
Cap road widening at a maximum of 6 through lanes, including transit lanes	Immediate	<ul style="list-style-type: none"> <li>See above</li> </ul>	●●●●
Work with local municipalities to plan and design comprehensive collector roads to accommodate YRT service, walking and cycling	Immediate	<ul style="list-style-type: none"> <li>Done as a matter of normal practice</li> </ul>	●●●●
In areas of low pedestrian activity, considering roundabouts as an alternative to signaling an intersection	Short-term	<ul style="list-style-type: none"> <li>First roundabout constructed in December 2013 at York/Durham Line and Durham Road 5</li> </ul>	●●●○

Exhibit 2.4: 5-Year Action Plan Progress

IMPROVEMENT	YORK REGION RECOMMENDED ACTION	POLICY AND ACTIONS	PROGRESS
<b>TRANSIT INITIATIVES</b>			
Yonge North Subway Extension	<ul style="list-style-type: none"> <li>Continue to work with Metrolinx, the Provincial and Federal Governments to prioritize and fund this project.</li> </ul>	<ul style="list-style-type: none"> <li>Further design studies and addendums to the EA complete to 2013</li> <li>Staff continues to advocate for funding from senior levels of government</li> <li>Identified by Metrolinx as part of “The Next Wave” projects as part of the Investment Strategy</li> </ul>	●●○○

IMPROVEMENT	YORK REGION RECOMMENDED ACTION	POLICY AND ACTIONS	PROGRES S
Environmental Assessment (EA) Studies of new Rapid Transit Service	<ul style="list-style-type: none"> <li>Initiate and complete conceptual and functional planning studies to better define the alignments of the Bathurst-Dufferin Street and new Markham North-South corridors.</li> <li>Initiate and complete Municipal Class EA studies for rapid transit corridors identified in Chapter 7.2 to identify feasible technologies, alignment and station locations (excluding those EA's already undertaken).</li> </ul>	<ul style="list-style-type: none"> <li>Bathurst Street and Centre Street slated for construction as part of VivaNext between 2015 to 2019</li> <li>Markham North-South corridors slated for construction beyond 2019</li> </ul>	●●○○
Sustainable Travel Choices and EA Studies for the Transit Priority Network in Markham	<ul style="list-style-type: none"> <li>Complete the study to identify and assess options for the Transit Priority Network in the Town of Markham. Complete the associated transit priority improvement EA studies.</li> </ul>	<ul style="list-style-type: none"> <li>Superseded by current TMP update</li> </ul>	○○○○
New GO Transit Service	<ul style="list-style-type: none"> <li>Partner with GO Transit, Metrolinx and local municipalities to assess the feasibility of new park-and-ride stations along several existing rail lines.</li> <li>Develop further promotion of walking, cycling and transit connections to and from GO Rail Stations.</li> </ul>	<ul style="list-style-type: none"> <li>Potential station protected in land use planning process</li> <li>On-going promotion of walking, cycling, and transit as part of TDM programs, new bike parking installed at most GO Rail stations</li> </ul>	●●○○
<b>ROADWAY INITIATIVES</b>			
Highway 400/404 Link	<ul style="list-style-type: none"> <li>Work with the Province and Metrolinx to re-confirm the need for the Bradford Bypass, and ensure that this important freeway link is included in the Provincial growth plan.</li> </ul>	<ul style="list-style-type: none"> <li>Region involved with MTO Simcoe Area Transportation Study in 2012</li> <li>Bradford Bypass is not in the provincial Growth Plan, but staff will continue to work with the Province, Simcoe County and local municipalities in the future</li> </ul>	●●○○
GTA West Transportation Corridor	<ul style="list-style-type: none"> <li>Assist MTO and the City of Vaughan to determine the location of the alignment and interchange with Highway 400 and Highway 427 extension</li> </ul>	<ul style="list-style-type: none"> <li>Initial phase of Environmental Assessment complete in 2012 for GTA West Corridor (currently suspended pending provincial review)</li> <li>New corridor at Highway 400 alignment from Kirby Rd to King Vaughan Rd</li> <li>New corridor Highway 427 Extension alignment near Huntington Rd from Major Mackenzie Drive to Kirby Road</li> </ul>	●●●●

IMPROVEMENT	YORK REGION RECOMMENDED ACTION	POLICY AND ACTIONS	PROGRESS
Mid-York Region E-W Transportation Corridor	<ul style="list-style-type: none"> <li>Complete a needs assessment and initiate the corresponding environmental assessment studies.</li> </ul>	<ul style="list-style-type: none"> <li>Feasibility and preliminary engineering study was completed in 2012, King-Vaughan Rd is the preferred interchange location</li> </ul>	●●●●
Mid-block collector road crossings of 400-series highways	<ul style="list-style-type: none"> <li>Explore and report to Regional Council on an expanded Regional policy on these vital roadways</li> </ul>	<ul style="list-style-type: none"> <li>Hwy 404 Mid-block Crossing Study in Markham and Richmond Hill completed in 2012</li> <li>Funding 1/3 of eligible costs for mid-block crossings of Hwy 404; EAs for 2 crossings are on-going</li> <li>No policy or study for mid-block crossings of Hwy 400 and ETR 407</li> </ul>	●●●○
Highway 427 Extension	<ul style="list-style-type: none"> <li>Work with the Province in concert with the City of Vaughan and Peel Region to include this project in the Provincial highway 5-year capital plan (Southern Ontario Highway Program) as soon as the environmental assessment is approved.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental Assessment approved in 2010, and funding approved in 2013</li> <li>Construction of the extension planned to begin in 2017 and finish by 2020</li> </ul>	●●●●
Highways 400 and 404 HOV lanes	<ul style="list-style-type: none"> <li>Work with the Province to ensure that these HOV lane widenings are included in the Provincial highway 5-year capital plan for construction.</li> </ul>	<ul style="list-style-type: none"> <li>Widening of Hwy 400 underway, north of Teston Rd</li> <li>Province undertaking EA for widening Hwy 404 between Hwy 7 and Green Lane</li> <li>Temporary HOV lanes implemented on Hwy 404 as part of Pan Am Games in 2015</li> </ul>	●●○○
Integrated Intelligent Transportation System (ITS)	<ul style="list-style-type: none"> <li>Develop and implement an integrated ITS strategy that encompasses transit and traffic management systems as well as traveller information systems</li> </ul>	<ul style="list-style-type: none"> <li>ITS Strategy Plan in place Region continues to implement communication to motorist and transit users</li> <li>York Region Travel Alert App is a real-time traffic reporting system</li> </ul>	●●●○
<b>POLICIES AND STRATEGIES</b>			
Update policies regarding provision of sidewalks on Regional and key collector roads in urban areas.	<ul style="list-style-type: none"> <li>Consult with local municipalities to develop an extensive plan for the provision of sidewalks along all Regional roads where York Region Transit operates, as well as key collector roads with YRT routes. Identify Regional and local roads in</li> </ul>	<ul style="list-style-type: none"> <li>Jurisdictional issues still pose a challenge; to be reviewed as part of TMP update</li> <li>Municipal Partnership Program has led to early success in building needed</li> </ul>	●●○○

IMPROVEMENT	YORK REGION RECOMMENDED ACTION	POLICY AND ACTIONS	PROGRES S
	urban areas and along major roadways where sidewalks are currently lacking	linkages and streetscape improvements	
Create a site plan checklist to gauge TOD elements of a proposed development.	<ul style="list-style-type: none"> <li>Identify an internal team to develop the site plan checklist and review with local municipalities.</li> <li>Develop a checklist to assess the redevelopment potential of lands adjacent to transit stations within Regional Centres and Corridors where there is a good opportunity for TOD.</li> </ul>	<ul style="list-style-type: none"> <li>Checklists developed as part of the New Communities Guidelines</li> <li>TOD Implementation Checklist within TOD Guidelines</li> </ul>	●●○○
Require TDM plans or strategies for major development applications.	<ul style="list-style-type: none"> <li>Undertake a Best Practices of North American municipalities who require TDM plans for large businesses - to assess various approaches.</li> <li>Develop a Regional policy and amend the Official Plan to require plans or strategies for major developments</li> </ul>	<ul style="list-style-type: none"> <li>Best practices reviewed as part of the Centres and Corridors study (infrastructure, streets, parking, community, employment, housing an placemaking)</li> <li>TDM plan required for some major development applications</li> </ul>	●●○○
Transit Incentives	<ul style="list-style-type: none"> <li>Undertake a Best Practices of North American municipalities who have implemented similar incentive programs for employees, students, seniors and others.</li> </ul>	<ul style="list-style-type: none"> <li>PRESTO launched with fare discounts</li> <li>No progress on providing incentive programs to date</li> </ul>	●○○○
Coordinate with local municipalities to develop a Parking Authority that would set a parking policy within York Region.	<ul style="list-style-type: none"> <li>Undertake a Best Practices of North American municipalities who have Parking Authorities in place; identify roles, responsibilities and organizational arrangements.</li> <li>Explore the development of a Parking Authority in consultation with local municipalities and others.</li> </ul>	<ul style="list-style-type: none"> <li>No action to date</li> </ul>	○○○○
Cycling and Pedestrian Master Plan Recommendations	<ul style="list-style-type: none"> <li>Work with local partners to implement the short-term policies and recommendations in the Region's Pedestrian and Cycling Master Plan.</li> <li>Develop an annual assessment to evaluate the progress of the municipal pedestrian and cycling master plan implementation.</li> </ul>	<ul style="list-style-type: none"> <li>AT infrastructure implemented where feasible as part of Capital Program</li> <li>Monitoring report of PCMP progress produced in 2010; draft 2014 report recently completed</li> </ul>	●●○○

IMPROVEMENT	YORK REGION RECOMMENDED ACTION	POLICY AND ACTIONS	PROGRES S
Partner with Metrolinx and other agencies to implement Regional bike-sharing programs	<ul style="list-style-type: none"> <li>In partnership with Metrolinx, explore the opportunities and challenges to implement a bike-sharing program in York Region.</li> <li>Identify municipalities and specific areas or districts where a bike-sharing program may be practical. Identify potential funding sources for bike sharing program.</li> </ul>	<ul style="list-style-type: none"> <li>No bike-share program in York Region</li> </ul>	○○○○

## 2.3 Conclusions

Reviewing the policy goals of the 2002 TMP and 2009 TMP Update, there are many concrete actions that advance the Region’s goals of fostering a more sustainable, healthy and accessible transportation network. However, there are also areas in which further actions are clearly needed.

The goals established in 2002 and have been advanced not only by the 2009 TMP, but by successive Regional documents including the Sustainability Strategy, the Centres and Corridors Strategy, Vision 2051 and the York Region Official Plan (2010).

Virtually every policy area demonstrates both real achievements and room for improvement including:

- While carpoolers are now offered preferential parking spots at Regional facilities, no progress has been made on large-scale actions, like the establishment of a Regional parking authority. Regional TDM policies are also being pursued;
- Despite a continued lack of Provincial support for the Highway 400/404 Link, the Region has seen substantial progress on roadway initiatives, including the extension of Hwy. 427, preliminary work on the Mid-York East West Transportation Corridor and further study of the GTA West Corridor (note that in December 2015, the Ministry of Transportation suspended work on the environmental assessment in order to review the work undertaken to date and to ensure the project still aligns with recent changes in government policy and emerging technologies).
- Since it was recommended in the 2002 TMP, the Region has installed many bicycle racks at bus stops and on all YRT buses. However, the Province has not yet amended the Highway Traffic Act to allow buses crossing a municipal border to transport bicycles in the racks. In addition, preliminary steps to establish a bikeway network to connect to transit have been taken, such as the Highway 7 bike lanes;
- Regional connectivity in the road network and coordination with local municipalities remains a challenge. For example, the Region agreed to contribute 1/3 of funding for mid-block crossings of Hwy 404 but did not establish an over-arching policy that would apply to future mid-block crossings of Hwy 407 and/or Hwy 400; and,
- In a similar vein, Vaughan, Markham and Aurora have passed local cycling/active transportation master plans but implementation of the Region’s larger vision remains an ongoing effort. Recent initiatives, such as the York Region Bike Summit, have provided an opportunity for Region-wide stakeholders to discuss common challenges and opportunities.

## 3 How York Region Moves: Existing Conditions

### 3.1 Transportation Demand: How York Region Moves

York Region is a rapidly evolving municipality, and its transportation patterns are evolving to match. Origin and destination patterns, mode choice preferences, and the overall number of trips have changed as the Region has grown into a more urban place. Many of these changes have come since the Region's first TMP in 2002. Since then, AM peak period (6:30–9:30) trips have increased 30%, adding more than 100,000 new cars onto the Region's streets. More of these trips are also staying within Regional boundaries and more are being made by transit. This section will explore these trends in further detail.

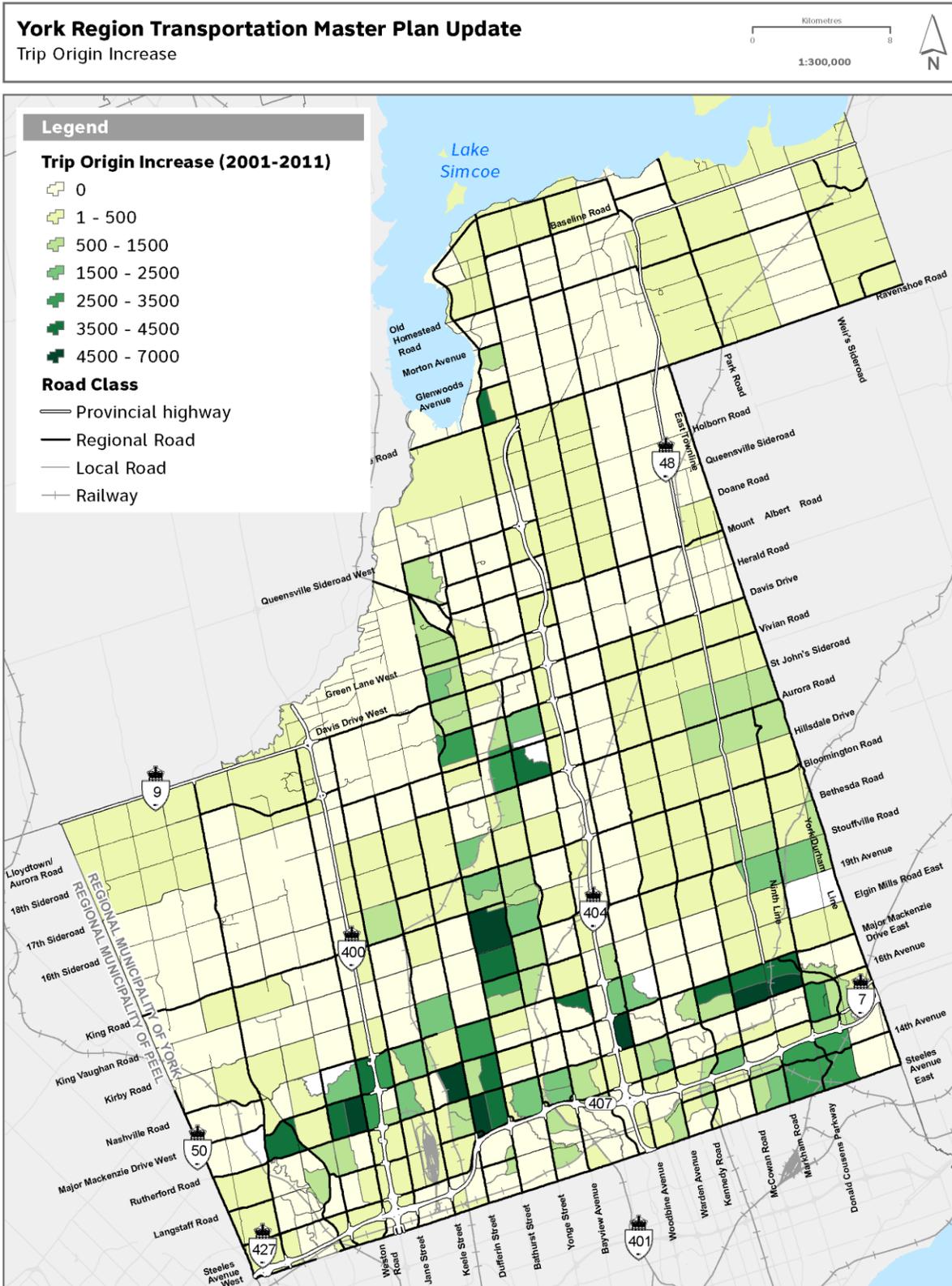
Exhibit 3.1 and Exhibit 3.2 show the patterns of AM peak period trip origin and destination increases, respectively, between 2001 and 2011. These patterns generally reflect the large amount of greenfield and infill development experienced in York Region over the last 10 years:

- The largest increases in trip origins can be found in new greenfield development locations. The northernmost neighbourhoods of Richmond Hill, Vaughan, and Markham all show very high growth, as do parts of Newmarket, Aurora, Stouffville, and Keswick. These latter two communities are rapidly changing from rural villages to suburban centres.
- Increases in trip destinations are most obvious in existing and emerging office and industrial parks. These include hubs in Concord, near the Highway 404/407 interchange in Markham and Richmond Hill, and in the vicinity of Industrial Parkway in Aurora.

Exhibit 3.3 shows how the distribution of trips within York Region has changed since 2001. As previously noted, overall trip growth to, from, and within the Region is approximately 30%, with more than three quarters of all new trips originating in Markham, Vaughan and Richmond Hill. On a percentage basis, however, the highest rate of growth is for trips from Whitchurch-Stouffville. The City of Vaughan saw the largest increase in trip destinations, and has nearly eclipsed the City of Markham as the largest destination for trips in the Region.

The most important trend evident here is that an increasing percentage of trips are remaining internal to York Region. In 1991, 44% of all AM peak period trips were internal. By 2001, this had grown to 48% and by 2011, 53%. This shows that York Region is developing into more of an established urban centre. It is also worth noting that an increasing number of trips are remaining inside their own local municipality, increasing from 29% in 2001 to 40% in 2011. Altogether, these trends suggest York Region is becoming an increasingly attractive place to live and work and that a greater proportion of people are adjusting their behaviour to bring their origins and destinations closer together.

Exhibit 3.1: Increase in Trip Origins by Traffic Zone—AM Peak Period (6:30-9:30)



Source Data: Transportation Tomorrow Survey 2001, 2011



**Exhibit 3.3: 2001-2011 York Region Trip Growth—AM Peak Period (6:30-9:30)**

2001	Vaughan	Markham	Rich. Hill	N & Aurora	King	W.-S.	Georg. & E.G.	Other GTHA	TOTAL
Vaughan	47,500	5,900	3,400	700	1,200	200	0	52,200	111,100
Markham	4,000	58,300	4,700	700	200	700	100	52,400	121,100
Richmond Hill	6,800	10,700	28,600	1,700	700	200	100	27,400	76,200
N. & Aurora	1,600	3,800	3,700	33,600	1,100	700	1,100	12,800	58,400
King	1,100	300	800	1,200	2,500	0	0	3,100	9,000
W.-S.	300	2,200	400	700	100	3,700	100	2,900	10,400
Georg. & E.G.	500	1,800	1,100	6,900	200	500	11,000	4,300	26,300
Other GTHA	46,100	49,600	11,900	7,700	2,100	2,200	1,500	-	121,100
<b>TOTAL</b>	<b>107,900</b>	<b>132,600</b>	<b>54,600</b>	<b>53,200</b>	<b>8,100</b>	<b>8,200</b>	<b>13,900</b>	<b>155,100</b>	<b>533,600</b>

Source: Transportation Tomorrow Survey, 2001/2011

2011	Vaughan	Markham	Rich. Hill	N & Aurora	King	W.-S.	Georg. & E.G.	Other GTHA	TOTAL
Vaughan	80,800	6,600	5,800	1,500	1,400	100	300	67,300	163,800
Markham	5,300	85,900	9,000	1,600	200	1,100	100	66,200	169,400
Richmond Hill	8,300	10,400	43,500	3,800	1,400	200	100	37,200	104,900
N. & Aurora	3,300	3,800	3,700	45,700	1,200	800	1,700	13,500	73,700
King	2,000	300	600	1,400	2,400	100	200	3,600	10,600
W.-S.	500	4,000	800	1,000	100	7,400	100	4,900	18,800
Georg. & E.G.	600	1,400	1,100	8,300	300	400	13,100	4,500	29,700
Other GTHA	50,600	48,700	13,200	9,900	2,800	2,000	2,200	-	129,400
<b>TOTAL</b>	<b>151,400</b>	<b>161,100</b>	<b>77,700</b>	<b>73,200</b>	<b>9,800</b>	<b>12,100</b>	<b>17,800</b>	<b>197,200</b>	<b>700,300</b>

Source: Transportation Tomorrow Survey, 2001/2011

Growth 2001-2011	Vaughan	Markham	Rich. Hill	N & Aurora	King	W.-S.	Georg. & E.G.	Other GTHA	TOTAL
Vaughan	33,300	700	2,400	800	200	-100	300	15,100	52,700
Markham	1,300	27,600	4,300	900	0	400	0	13,800	48,300
Richmond Hill	1,500	-300	14,900	2,100	700	0	0	9,800	28,700
N. & Aurora	1,700	0	0	12,100	100	100	600	700	15,300
King	900	0	-200	200	-100	100	200	500	1,600
W.-S.	200	1,800	400	300	0	3,700	0	2,000	8,400
Georg. & E.G.	100	-400	0	1,400	100	-100	2,100	200	3,400
Other GTHA	4,500	-900	1,300	2,200	700	-200	700	-	8,300
<b>TOTAL</b>	<b>43,500</b>	<b>28,500</b>	<b>23,100</b>	<b>20,000</b>	<b>1,700</b>	<b>3,900</b>	<b>3,900</b>	<b>42,100</b>	<b>166,700</b>

Source: Transportation Tomorrow Survey, 2001/2011

**Notes:**

- “N. & Aurora” = Newmarket and Aurora
- “W.-S.” = Whitchurch-Stouffville
- “Georg. & E.G.” = Georgina and East Gwillimbury
- “Other GTHA” includes Toronto, Hamilton, Simcoe County and Barrie

Exhibit 3.4 presents a breakdown of external trips to and from York Region in 2001 and 2011.

- The figures show a much higher increase in outbound trips than inbound trips, suggesting that York Region remains a popular location of residence for people working elsewhere.
- The primary destination for trips continues to be the City of Toronto. Trips to downtown Toronto have increased faster than trips to other Toronto employment centres despite a Regional trend towards employment decentralization. This has likely been facilitated by improvements to service on the GO Rail network and a recent boom in downtown office space. Trips to both Peel Region and Simcoe County also increased significantly on a percentage basis.
- In the reverse direction, Peel and Durham saw the largest growth as trip destinations for York Region origins. Counter-intuitively, trips from Toronto to York Region have actually *decreased* over the past decade despite increased congestion on major arterials connecting the two municipalities. It is worth noting trips from York Region to Region of Peel have grown at twice the rate of those from Region of Peel to York Region over this period.

**Exhibit 3.4: External Trips To and From York Region—AM Peak Period (6:30-9:30)**

	2001		2011		Growth 2001-2011	
	From York Region	To York Region	From York Region	To York Region	From York Region	To York Region
Downtown Toronto	31,200	2,500	46,800	3,300	15,600	800
Rest of Toronto	100,500	76,700	115,800	75,900	15,300	-800
Durham Region	4,200	13,700	6,000	16,000	1,800	2,300
Simcoe	2,200	10,000	3,600	11,100	1,400	1,100
Peel Region	15,200	15,600	22,800	19,400	7,600	3,800
Halton and Hamilton	1,900	2,600	2,300	3,600	400	1,000
<b>TOTAL</b>	<b>155,100</b>	<b>121,000</b>	<b>197,300</b>	<b>129,400</b>	<b>42,200</b>	<b>8,400</b>

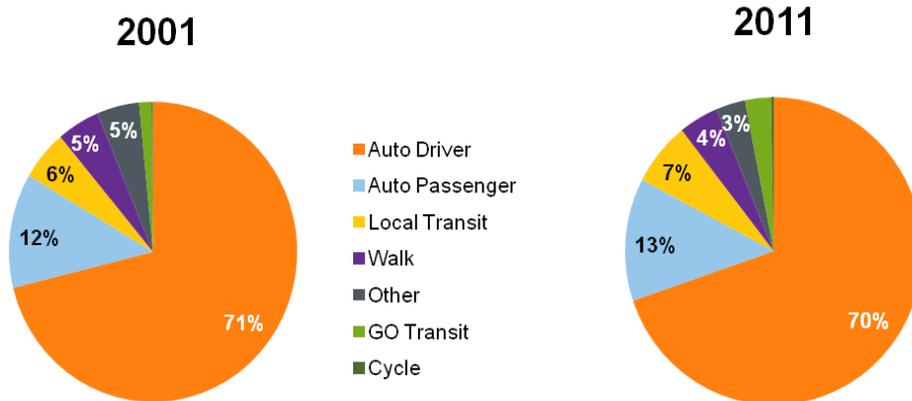
Source: Transportation Tomorrow Survey, 2001/2011

Exhibit 3.5 compares mode share for trips to, from, and within York Region in 2001 and 2011. On the whole there has been little change in mode choice patterns since 2001. With 83% of all AM peak trips in 2001 and 2011, the private car continues to be the Region’s most popular method of transportation. This has resulted in more than 100,000 new auto trips hitting the Region’s roads since 2001. Among other modes:

- On a percentage basis, cycling trips increased substantially, but their overall share remains less than 1% of the AM peak period total.
- Overall transit share (GO+YRT/Viva) increased from 7% to 10%, a testament to the success of Viva and improvements to GO rail service. However, the vast majority of these new trips are destined for Toronto. Trips within York Region—the fastest growing market according to Exhibit 3.3—have only a 3% transit mode share.
- Auto passenger trips increased proportionally faster than auto driver trips.

As noted above, auto is the dominant mode of travel in York Region during peak hours. Outside of peak times, this is even more evident. Exhibit 3.6, which plots mode share throughout the day based on the hour of trip departure, shows a significant peaking of demand for transit, walking, and other sustainable modes during the morning and afternoon peak hours (6:30–9:30 and 15:00–18:00, respectively). At midday (11:00–13:00) auto trips make up 92% of all travel.

**Exhibit 3.5: 2001 and 2011 York Region Mode Share Trends—AM Peak Period (6:30-9:30)**

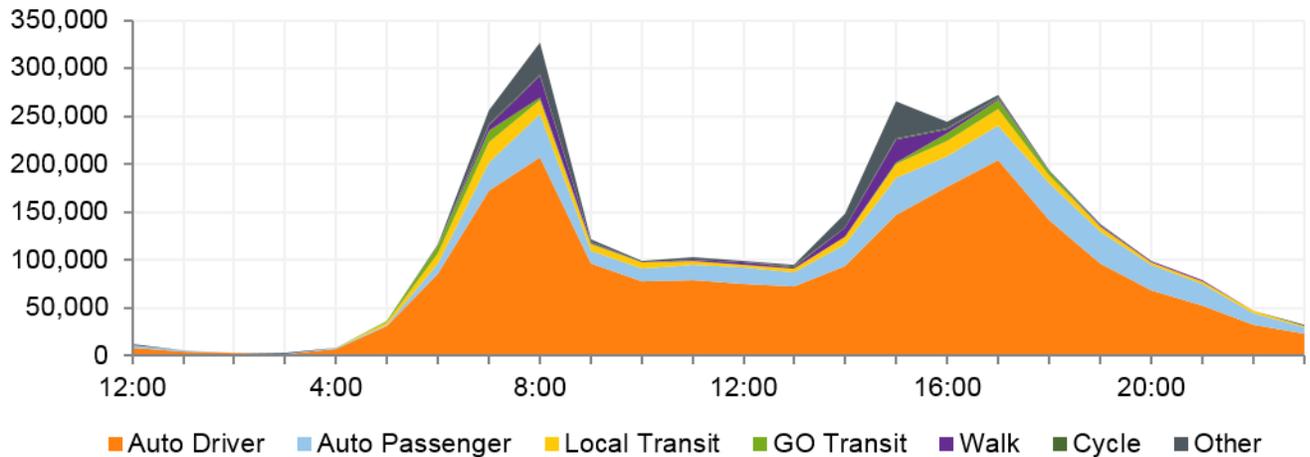


	Trips			Mode Share		
	2001	2011	Change	2001	2011	Change
Auto Driver	379,600	488,900	109,300	71%	70%	-1%
Auto Passenger	65,800	90,100	24,300	12%	13%	+1%
Local Transit	28,900	47,000	18,100	5%	7%	+2%
Walk	25,700	30,200	4,500	5%	4%	-1%
Other	25,400	22,400	-3,000	5%	3%	-2%
GO Transit	7,300	19,800	12,500	1%	3%	+2%
Cycle	900	2,100	1,200	<1%	<1%	+<1%
<b>TOTAL</b>	<b>533,600</b>	<b>700,500</b>	<b>166,900</b>	<b>100%</b>	<b>100%</b>	<b>-</b>

**Source:** Transportation Tomorrow Survey 2001/2011

**Notes:** “Other” includes school bus, motorcycle, taxi, and unclassified modes; Data presented is for trips within York Region and trips between York Region and elsewhere in the GTHA/Simcoe

**Exhibit 3.6: 2011 Mode Share Throughout the Day**



Despite this, however, transit trips are growing at a faster rate than auto trips. As shown in Exhibit 3.7, annual transit trips on YRT/Viva have nearly tripled since 2002, as have the number of trips per capita. Although this ridership growth has directly followed increases in service, it is admirable that ridership growth has kept pace with service growth. In most practical applications, this is rarely achieved. Cycling trips are also increasing at an extremely rapid rate (130% growth from 2001 to 2011) concurrent with recent investments in cycling infrastructure.

**Exhibit 3.7: Transit Ridership Trends**

	2001*	2006	2011**	2001-2011 Growth
<b>YRT/Viva</b>				
Annual Trips	8,432,384	17,108,258	19,784,179	11,351,795
Service Hours per Capita	0.56	1.05	0.98	0.42
Trips per Capita	10.52	18.00	18.74	8
<b>GO Rail Daily Boardings (York Region stations only)</b>				
Richmond Hill Corridor	4,817	6,444	8,944	4,127
Barrie Corridor	4,993	7,886	11,995	7,002
Stouffville Corridor	3,726	7,590	10,969	7,243

**Source:** GO Transit Cordon Counts, Canadian Urban Transit Agency

**Notes:** \* York Region Transit formed in 2001; YRT statistics are from 2002

\*\* Service interrupted by 69-day strike

Exhibit 3.8 provides a summary of a variety of other transportation trends pertinent to the TMP. They show signs that the Region is maturing, albeit with challenges:

- Travel patterns are becoming more varied. More trips are contained within the Region, there are fewer trips per person and a greater share of trips not destined for work or school in the AM peak.
- Across the Region, travel distance to work is increasing as new homes continue to develop at the urban fringe. However, the trend among residents living and working in the Region has reversed from 2006 to 2011.
- From 2006 to 2011, the distance to work among live-work residents has decreased (as opposed to the increase seen between 2001 and 2006). This trend, together with improved transit service, is an opportunity to target.
- Transit is becoming a more competitive option, especially for people commuting to downtown Toronto. However among live-work residents, transit use remains very low (3.5%). This trend is particularly concerning given the growing live-work population.
- While the number of trips on foot and by bike is growing, the mode share has decreased from 2006 and 2001 levels. In addition, the number of cars trips less than 2 km is on the rise.
- Other trends indicate continuing auto dependency. Household car ownership rates decreased between 2001 and 2006 but bounced back in 2011. The number of adults with a driver's license is also growing. Some of these trends (i.e. decreases in 2006) may be attributable to economic conditions.
- Despite indications of continuing auto dependency, there are other positive trends. The share of residents holding transit passes rose from 4% to 8%, possibly indicating growing confidence in transit service. Morning peak transit mode shares in both Markham Centre and Newmarket have increased every five years.
- Except for trips to and from Toronto, truck volumes and truck mode shares are growing across all boundaries. Most notable is the growth of truck traffic to and from Simcoe.

Exhibit 3.8: Overview of Key Travel Demand Trends

TRENDS FROM TRANSPORTATION FOR TOMORROW SURVEY AND 2011 CORDON COUNT SURVEY	2001	2006	2011
<b>Region-wide travel patterns</b>			
Number of daily trips	1.6 M	1.9 M (+13%)	2.2 M (+20%)
...Number of morning peak trips	415,300	486,500 (+17%)	576,300 (+18%)
...% of daily trips during morning peak	24%	25%	25%
Number of trips per person (age 11+)	2.7	2.5	2.5
Average distance to work (straight line km)	16.5	16.8	17.0
...among live-work residents	...10.8	...11.0	...10.6
...among those destined for Downtown Toronto	...26.4	...26.4	...27.0
...among those destined for outside York Region	...16.3	...16.6	...16.6
% residents who live and work in York Region		50%	60%
% self-contained trips	63%	64%	66%
% AM peak trips not for work or school	26%	32%	32%
<b>Transit-first</b>			
AM Peak transit mode split	7.0%	8.6%	10%
...among live-work residents	...2.5%	...3.2%	...3.5%
...among those destined for Downtown Toronto	...56%	...68%	...75%
YRT/VIVA Revenue Ridership (per CUTA)	8.4 M	17.1 M	19.8 M
% people holding a transit pass	4%	5%	8%
Number of transit trips per capita	0.12	0.15	0.17
<b>Walking and Cycling</b>			
Daily walk + bike trips	65,400	74,100 (+13%)	88,800 (+20%)
% walk mode share for trips 5km or less	7.9%	8.8%	7.5%
% bike mode share for trips 10km or less	0.4%	0.4%	0.6%
% car trips that are 2km or less	26%	26%	27%
Number of auto trips < 2km	375,400	420,200 (+12%)	507,000 (+20%)
<b>Evidence of auto dependent choices</b>			
% AM peak trips by auto driver	67%	66%	67%
% daily work trips made by car	87%	86%	86%
% daily non-work trips made by car	97%	96%	96%
Number of cars per household	1.90	1.84	1.89
% householders with 2+ cars	69%	66%	67%
% people with driver's license (24-65)	-	67%	70%
% < 24 with a driver's license	78%	-	73%
Auto occupancy	1.16	-	1.16
<b>Goods movement</b>			
Trucks York Region-Toronto	6.0%	-	5.4%
Trucks York Region-Peel	7.0%	-	9.1%
Trucks York Region-Durham	11%	-	13%
Trucks York Region-Simcoe	8.0%	-	11%

## 3.2 Transportation Supply: Building the Network

This section describes York Region's existing transportation network and highlights changes since the 2009 TMP Update. Below, Exhibit 3.9 summarizes some of these key changes to the active transportation, local transit, GO Transit, and road networks.

**Exhibit 3.9: Transportation Supply Trends—2009 to 2014**

	2009	2014	Growth 2009-2014 (%)
<b>Active Transportation Network</b>			
Bike Lanes (one-way km)	4	32	28 (+700%)
Paved shoulders (centreline km)	-	243	243 (-)
Multi-use path (linear km)	63	43	154 (+244%)
Boulevard Trails (linear km)		174	
Sidewalks (linear km)	486	683	197 (+41%)
<b>TOTAL</b>	<b>553</b>	<b>1,175</b>	<b>622 (+112%)</b>
<b>Local Transit Network</b>			
YRT Service Hours	838,649	946,595	107,946 (+13%)
Viva Service Hours	237,910	256,284	18,374 (+8%)
<b>TOTAL SERVICE HOURS</b>	<b>1,076,559</b>	<b>1,202,879</b>	<b>126,320 (+12%)</b>
<b>GO Rail Network</b>			
Richmond Hill Corridor AM peak trips	4	5	1 (+25%)
Barrie Corridor AM peak trips	4	5	1 (+25%)
Stouffville Corridor AM peak trips	5	7	2 (+40%)
<b>TOTAL AM PEAK TRIPS</b>	<b>13</b>	<b>17</b>	<b>4 (+31%)</b>
Richmond Hill Corridor AM peak seats	6,340	7,700	1,360 (+21%)
Barrie Corridor AM peak seats	7,925	11,704	3,779 (+48%)
Stouffville Corridor AM peak seats	6,340	8,008	1,668 (+26%)
<b>TOTAL AM PEAK SEATS</b>	<b>20,605</b>	<b>27,412</b>	<b>6,807 (+33%)</b>
<b>Road Network</b>			
6-lane roads (km)	40	46	6 (+15%)
4-lane roads (km)	375	424	49 (+13%)
2-lane roads (km)	692	648	-44 (-6%)
<b>TOTAL LINEAR KM</b>	<b>1,050</b>	<b>1,090</b>	<b>40 (+4%)</b>
<b>TOTAL LANE-KM</b>	<b>3,399</b>	<b>3,532</b>	<b>133 (4%)</b>

### 3.2.1 Active Transportation Network

There have been substantial changes to York Region's pedestrian and cycling networks since the last TMP update. The Region's Pedestrian and Cycling Master Plan (PCMP) proposed to build 34 km of multi-use trail, 76 km of bike lanes, and 185 km of paved shoulders within 5 years. Since then, the network has grown by 154 km of multi-use trail, 28 km of bike lanes and 243 km of paved shoulders. Specific initiatives include:

- Finalizing the Lake-to-Lake Cycling Route and Walking Trail corridor (August 2013).

- Continuing implementation of the Pedestrian and Cycling Municipal Partnership Program, which shares up to 50% of cost for construction. This has led to the approval of 25 projects approved worth \$4M between 2007 and 2014.
- Incorporating buffered bike lanes, bike boxes, and other advanced cycling features in Viva Rapidway corridors.

Exhibit 3.11 shows the Region’s AT network as of 2014.

### 3.2.2 Transit Network

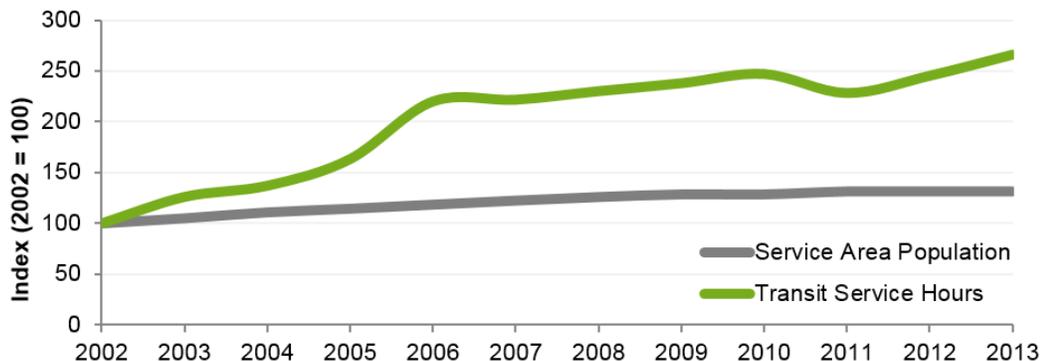
The 2002 TMP called for the implementation of rapid transit service within 5 years to connect York Region to major transportation hubs including York University and the Finch, Downsview and Sheppard subway stations. This resulted in the 2005 launch of Viva. The 2009 TMP Update called for further progress towards realizing the Yonge Subway Extension, as well as a transit priority network in Markham and new GO transit stations on existing lines. Although these goals have not been fully realized, the Region has made significant progress in the implementation of its median Rapidways for Viva service:

- The Highway 7 east rapidway is almost complete and currently in operation between Yonge Street and Warden Avenue;
- The Davis Drive rapidway opens at the end of 2015;
- The Highway 7 west rapidway will open in stages between 2016 and 2019; and
- The Yonge Street rapidway is to start construction this year and open in 2018.

The Toronto-York Region Spadina Subway Extension from Downsview Station to Vaughan Metropolitan Centre is nearing completion, with planned opening at the end of 2017. This will be the first subway extension into York Region; YRT/Viva services will be reoriented to feed into the subway.

In addition to progress on rapid transit, Exhibit 3.10 shows that total transit service hours have been increasing at a far higher rate than the growth in service area population.

**Exhibit 3.10: YRT/Viva Service Hours and Service Area Population**



There has also been a considerable increase in GO rail and bus service in York Region since 2009. All three rail lines have had new trains added during peak periods, while Highway 407 bus service has seen substantial increases in service. GO Transit service is planned to increase further as the province moves forward with its plan to introduce two-way all-day services on all GO lines and Regional Express Rail. Exhibit 3.12 presents the current Regional transit network.

Exhibit 3.11: Existing Active Transportation Network

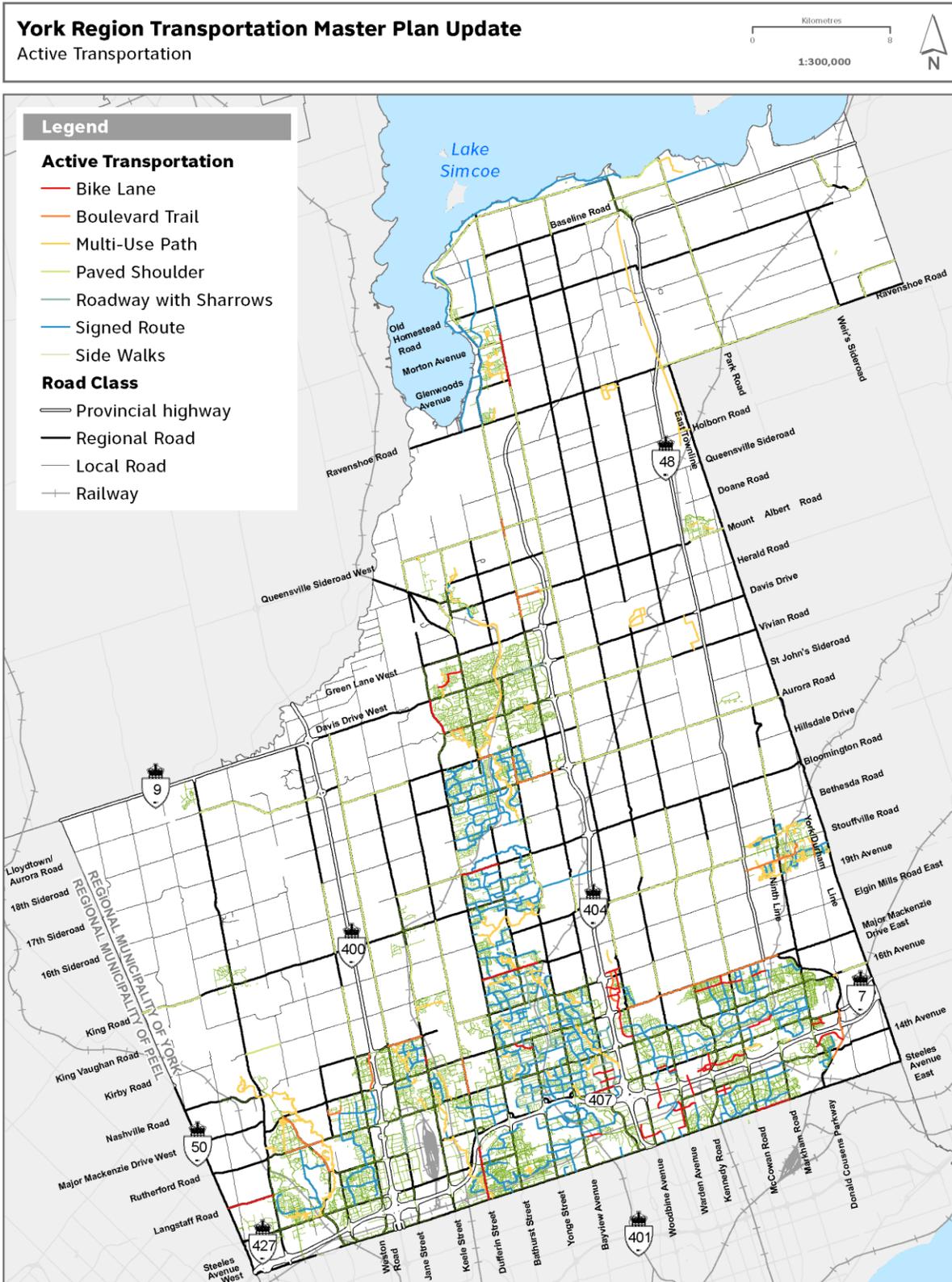
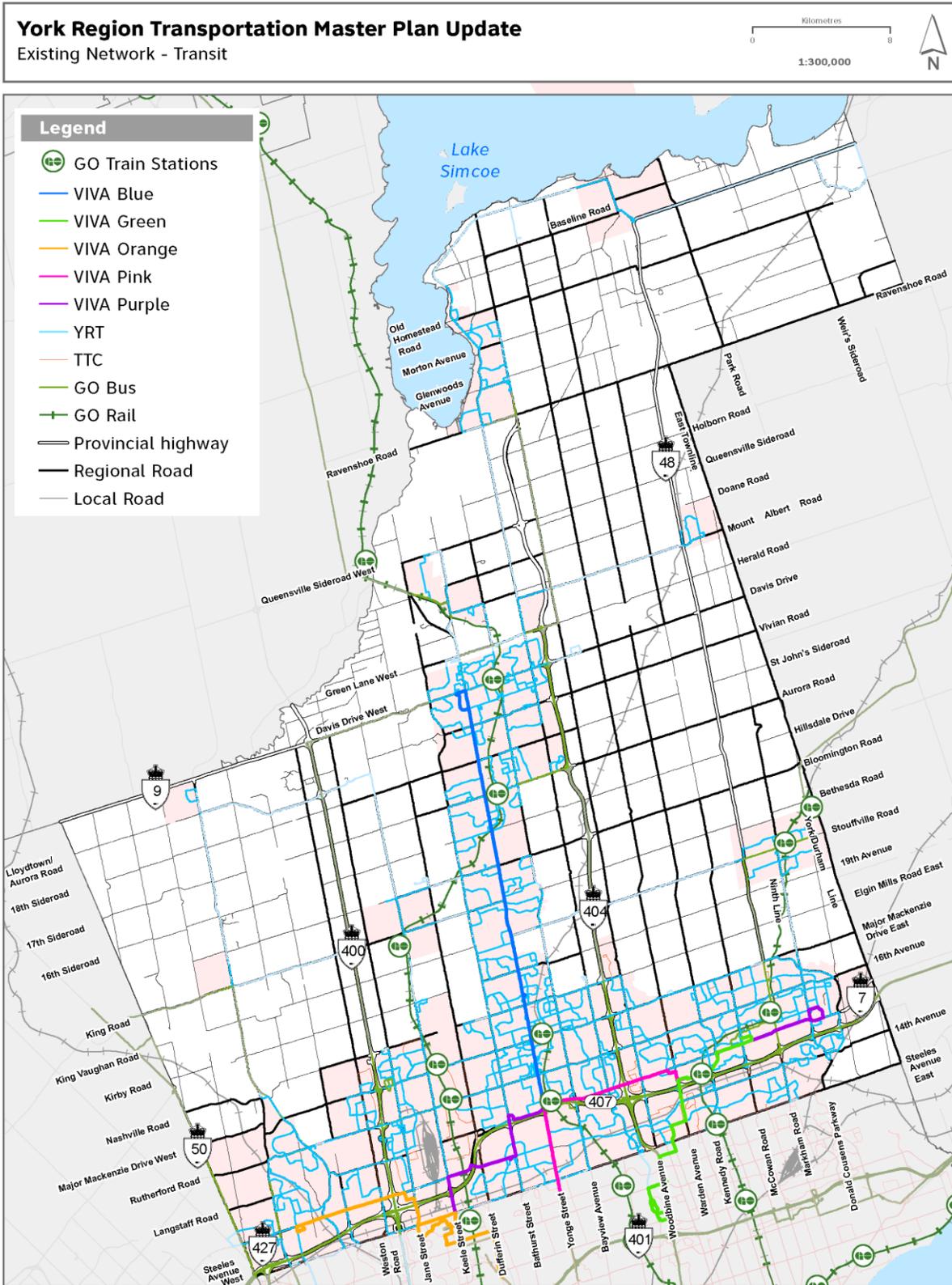


Exhibit 3.12: Existing Transit Network



### 3.2.3 Road Network

The 2009 TMP prescribed a range of roadway work totalling more than 500 km of widening, reconstruction, and new roads. Initiatives to be completed within five years included major widening projects to Bloomington Road, Bathurst Street, Warden Avenue, and Stouffville Road.

In total, 45 of the 59 projects in the 2009 TMP's five-year plan are complete or are under construction, while the remainder remain unstarted or cancelled. A summary of this progress is shown in Exhibit 3.13.

An overview of York Region's road network is mapped in Exhibit 3.14, showing provincial, Regional, and local roads.

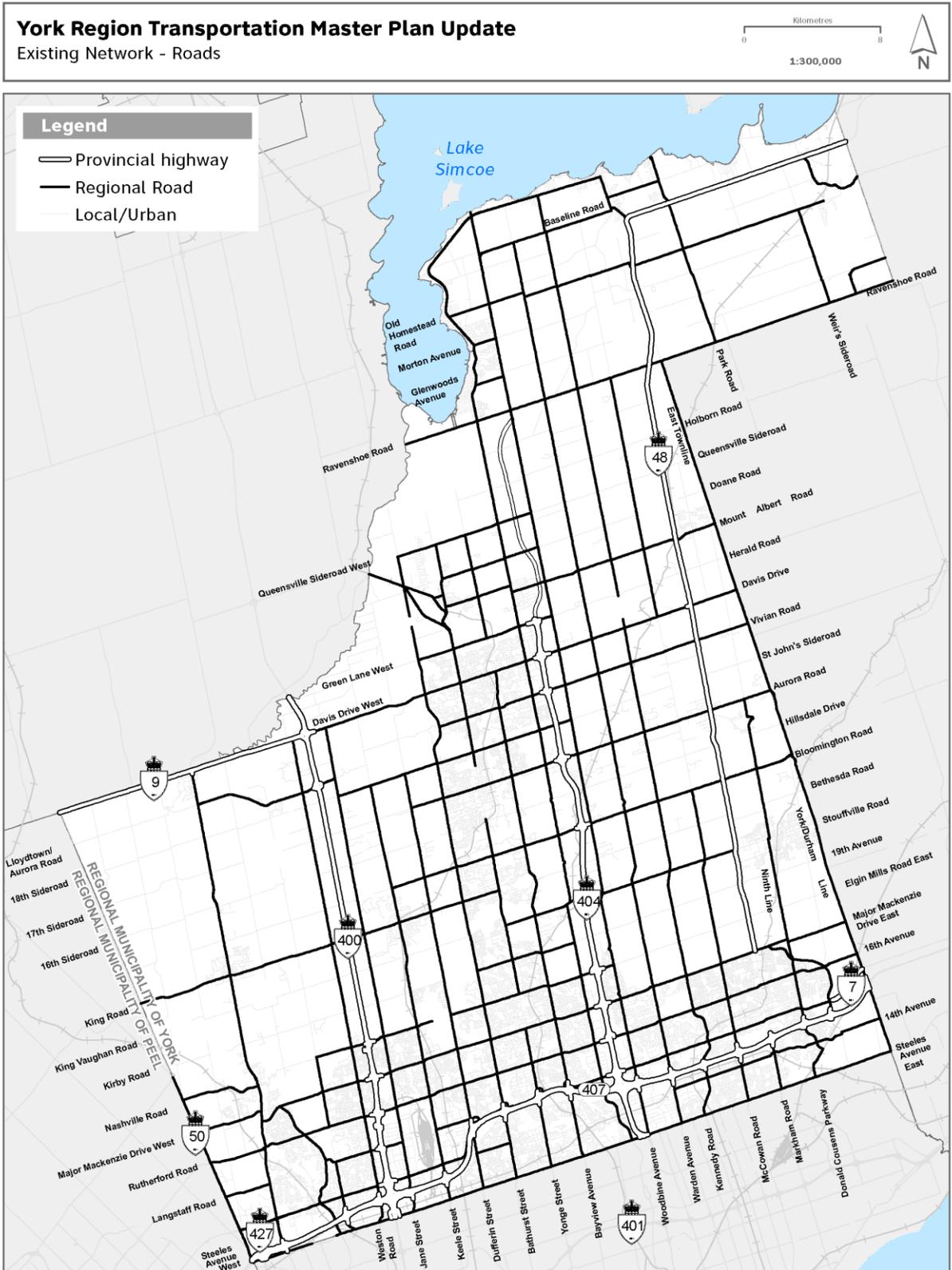
**Exhibit 3.13: Progress of Road Projects**

Type Of Project	2009 TMP (km)	Complete & U/C (km)	In Progress or On Hold (km)	In Capital Program <sup>1</sup> (km)	Not In Capital Program <sup>1</sup> (km)
Reconstruction of 2 lane road	113	10	4	9	90
Widening from 2 to 4 lane road (for capacity only)	183	34	9	61	79
Widening from 2 to 4 lane road (part of transit priority network)	31	12	3	7	9
New 4-lane road	19	5	1	11	2
Other transit improvements (no widening)	30	-	-	17	13
Widening from 4 to 6 lane road (for capacity only)	8	6	-	-	2
Widening from 4 to 6 lane roads (part of transit priority network)	136	3	40	72	21

**Note:**

<sup>1</sup> Includes project beyond the ten-year horizon of the capital plan

Exhibit 3.14: Existing Road Network



### 3.3 Existing Network Conditions

#### 3.3.1 Active Transportation Network

As described in the previous section, York Region has an extensive network of walking and cycling facilities. However, low active transportation mode shares indicate that there is a need for further improvements.

Overall, sidewalk coverage in the Region is high, with all new urban developments and many existing neighbourhoods having appropriate facilities to separate pedestrians from traffic. However, shortcomings exist along major arterial corridors, and particularly at major intersections. The nature of these spaces—high traffic volumes and speeds—are not ideal environments for pedestrians and may be perceived as unsafe by the travelling public. This speaks to the need to improve connectivity within and between neighbourhoods without relying on the arterial road network.

The cycling network has similar issues. The nature of the road network means that the quickest path between two points often involves using arterial roads, but high traffic volumes and speeds on these roads are deterrents from cycling without the appropriate infrastructure. Facilities separated from traffic do exist, but there are far fewer than on-road and mixed traffic facilities. A continuous pedestrian and cycling network is needed on arterials, particularly in urbanizing neighbourhoods with increasing densities.

Exhibit 3.15 shows that cycling demand in the Region is heavily oriented towards north-south travel—particularly to and from Toronto. The screenlines shown represent imaginary boundaries denoted by the roads presented in the exhibit. The figures represent the number of cyclists that were counted crossing that boundary in one day in 2011.

**Exhibit 3.15: 2011 Bicycle Count Data**

Screenline	Limits	Daily Cyclists
<b>North-South Travel</b>		
Steeles West	Highway 427 to Yonge	1,046
Steeles East	Willowdale to Reesor Road	1,044
King-Vaughan Road/Stouffville Road	Highway 27 to Ninth Line	91
<b>East-West Travel</b>		
Highway 400	Highway 407 to Bass Pro Mills Drive	204
Highway 404	John Street to Green Lane	591

**Source:** York Region Cordon Count Data

This analysis has revealed the following issues with the Region’s active transportation network:

- **Safety:** The shortest path between two points in York Region often requires using the arterial road network. Doing so has real and perceived safety issues without appropriate infrastructure.
- **Connectivity:** In many urban neighbourhoods, the pedestrian and cycling network lacks the connectivity to make trips by foot or bike attractive. For example, exiting some residential neighbourhoods requires a circuitous and lengthy trip, making travel by car more attractive.
- **Facilities:** Although the map shown in Exhibit 3.11 presents a highly comprehensive cycling network, only a small percentage of the network is a dedicated, on-street facility. While the provision of signed routes is a step in the

right direction, further dedicated infrastructure is required to encourage travel by bike.

### 3.3.2 Transit Network

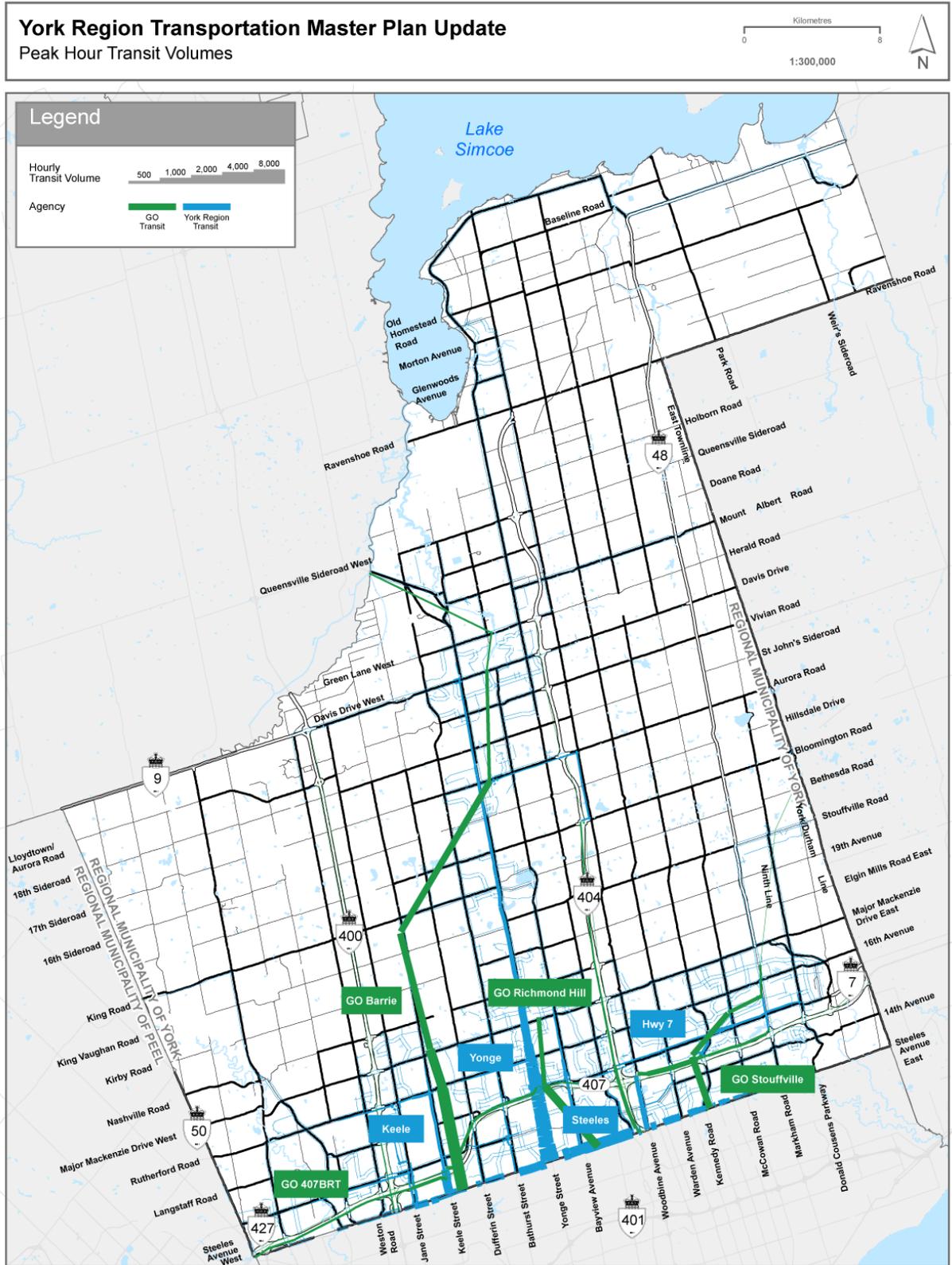
Exhibit 3.16 presents simulated 2011 transit trips from the York Region Travel Forecasting Model assigned to the YRT/Viva and GO transit networks.

The map shows a very strong north-south orientation to transit demand, with Yonge Street seeing by far the highest volumes in the YRT/Viva network. The Barrie, Richmond Hill, and Stouffville GO rail lines also see very high demand in peak periods, further emphasizing the Toronto-oriented nature of transit demand. Finally, there are moderate transit demands on roads leading to York University, a major destination for the Region's student population.

These demand patterns highlight the following issues in the transit network:

- **Resource allocation:** Weak demand for public transit service along east-west arterials effectively forces YRT to re-allocate resources to higher-demand areas. This, in turn, lowers service levels and further discourages transit use in these corridors.
- **Network accessibility:** The Region's wide grid road network makes access to high-quality transit difficult from residences or businesses located well into the grid. Travellers must choose between walking a considerable distance to high-frequency service or waiting for closer low-frequency service. For those with a choice, it is much more attractive to drive.
- **Traffic congestion:** The Region is taking steps to segregate its Viva service from traffic through the implementation of Rapidways. However, other corridors could benefit from isolated priority measures such as queue jump lanes and improved signal priority.

Exhibit 3.16: 2011 Transit Network Volumes—AM Peak Period (6:30-9:30)



Source: York Region Travel Forecasting Model

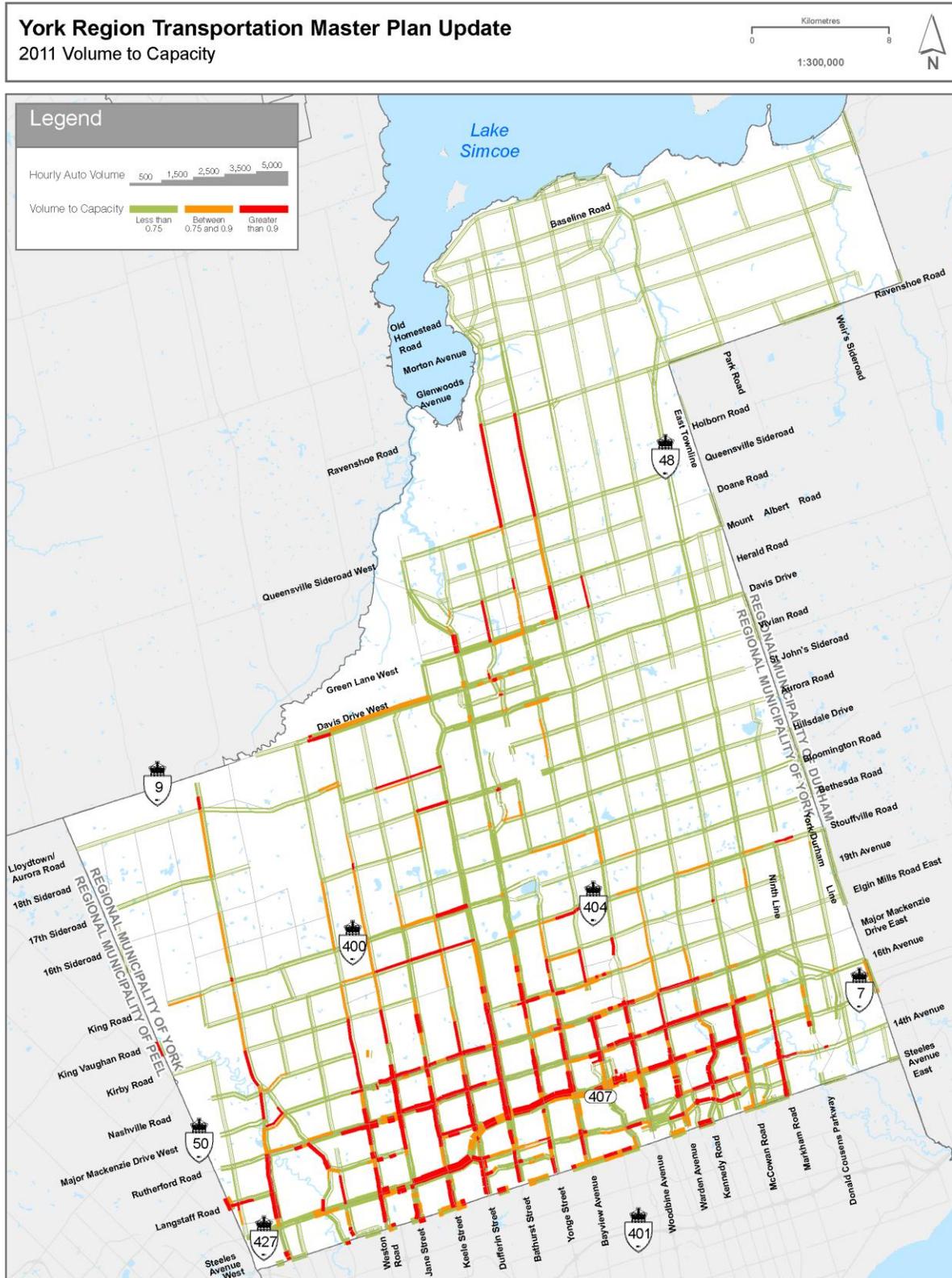
### 3.3.3 Road Network

As illustrated in Exhibit 3.17, road congestion continues in York Region, particularly in the urban area near the border with Toronto. The map shows both volume (line thickness) and congestion levels (line colour) derived from the Region's travel forecasting model to provide a picture of where the Region's worst congestion can be found. For the sake of clarity, the map does not include 400-series highways or local municipal roads, although it is understood that provincial highways are among the most congested in the region. The results illustrate that congestion primarily affects north-south corridors in the peak hour, although some east-west corridors also show signs of congestion.

On the following page, Exhibit 3.18 provides a list of some of the Region's most severe congestion "hot spots". The list was derived based on an analysis of the regional travel forecasting model, count data, Google Maps congestion patterns, and anecdotal evidence. Travel time data from Google—derived from travel speeds recorded by GPS units in Android devices—was used as a sense check against which to compare model data. In the Google interface, historical traffic speed is classified into four categories ranging from "fast" to "slow". These classifications are provided by time of day and by day of week, so different combinations of these time periods were tested to gain a sense of the overall congestion impact. Only road network links classified in the worst two congestion categories were carried forward as hotspots.

It should be noted that this list is by no means comprehensive and will be refined in the development of the preferred network and in conversation with Region staff.

Exhibit 3.17: 2011 Road Network Performance—AM Peak Hour (7:30–8:30)



Source: York Region Travel Forecasting Model

**Exhibit 3.18: Key Congestion Hotspots**

Roadway	Limits
<b>Vaughan</b>	
Highway 400	Highway 407 to Teston Road
Highway 7	Jane Street to Keele Street
Rutherford Road	Highway 400 to Keele Street
Bathurst Street	Steeles Avenue to Major Mackenzie Drive
<b>Markham</b>	
Highway 404	Steeles Avenue to Elgin Mills Road
Highway 7	Leslie Street to Woodbine Avenue
Highway 7	Birchmount Road to Kennedy Avenue
Bayview Avenue	Steeles Avenue to Major Mackenzie Drive
McCowan Road	Highway 407 to 16 <sup>th</sup> Avenue
<b>Richmond Hill</b>	
Yonge Street	Highway 7 to Major Mackenzie Drive
Leslie Street	Steeles Avenue to Major Mackenzie Drive
<b>Aurora</b>	
Yonge Street	At Wellington Street
Wellington Street	Yonge Street to Bayview Avenue
<b>Newmarket</b>	
Yonge Street	At Davis Drive
<b>East Gwillimbury</b>	
Green Lane	At Main Street

## 4 Where York Region is Going: Future Conditions

### 4.1 Population and Employment

As of the end of 2015, 1.2 million people live in York Region. In the 25 years between 1986 and 2011, the Region's population tripled from 350,600 to 1,065,500 at an average rate of 5% per year. In the upcoming 30 years (2011 to 2041), rapid growth in the Region will continue with a projected increase of 646,000 people, or growth of almost 2% per year, as summarized in Exhibit 4-1.

**Exhibit 4-1: York Region Population Growth—1986 to 2041**

Population	1986	2011	2041	Average Annual Growth	
				1986-2011	2011-2041
<b>York Region</b>	<b>350,600</b>	<b>1,065,500</b>	<b>1,790,000</b>	<b>4.6%</b>	<b>1.7%</b>

Source: 1986 data from Census, 2011 and 2041 data from York Region.

A substantial proportion of the growth has occurred in the southern municipalities of York Region in Markham, Vaughan and Richmond Hill, a trend that will continue. Historically, the City of Vaughan has been the fastest growing at an average of over 6% per year. Looking forward, the Town of East Gwillimbury will become the fastest growing municipality with an average growth of 6% per year.

Employment, measured as the number of jobs in York Region, has also been growing rapidly within the Region although not quite at the same pace as population. In the 20 years between 1991 and 2011, employment has more than doubled. Even so, the average annual rate of growth of 3% is significantly less than that of population at 5% annually.

Over the next 30 years (2011 to 2041), the pace of employment growth will exceed that of population, with over 393,000 jobs created as shown in Exhibit 4-2. The major employment centres are currently located in the southern municipalities of Markham and Vaughan. However, employment in East Gwillimbury has been growing the fastest and will continue to lead growth over the next 30 years.

**Exhibit 4-2: York Region Employment Growth—1991 to 2041**

Employment	1991	2011	2041	Average Annual Growth	
				1991-2011	2011-2041
<b>York Region</b>	<b>224,200</b>	<b>510,000</b>	<b>900,000</b>	<b>2.8%</b>	<b>1.9%</b>

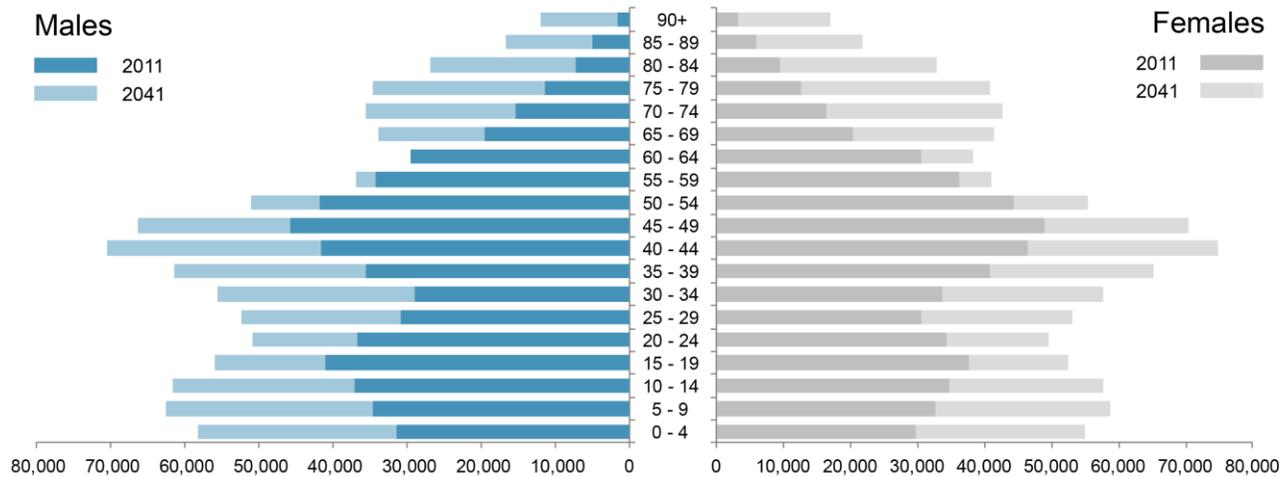
Source: 1991 data from TTS (1986 TTS did not collect place of work data), 2011 and 2041 data from York Region.

These forecasts also provide an indication of the likely changes in resident-worker balance that will, in turn, influence travel patterns in the future. Today, there are 2.08 residents for every job in York Region. This is forecast to decrease to 1.98 residents per job in 2031, meaning that there will be proportionally more jobs for each resident in the future than there are today. This will have the likely impacts of increasing the proportion of residents that live and work in York Region as well as increasing the number of workers in-commuting from other parts of the GTHA.

Exhibit 4.3 shows how the age breakdown of York Region residents will change over the next 30 years. These forecasts show that there will be a significant increase in two age groups: young people and old people. This will have impacts on the provision of transportation services for the Region. Younger and older residents are more dependent on public transportation to get around and occasionally require specialized services to transport them (e.g. school buses and

paratransit). It is also interesting to note that residents in late middle-age (aged 50–65)—residents who are at the peak of their earning potential and are most likely to drive—will not grow substantially in the next 30 years.

**Exhibit 4.3: York Region Age Distribution by Gender—2011 and 2041**



**Source:** MTO/Hemson Consulting

Exhibit 4.4 is a summary of other recent population and employment trends that could potentially impact future transportation service delivery.

**Exhibit 4.4: Summary of Population and Employment Trends**

Population and Employment	2001	2006	2011
<b>No. of People</b>	<b>725,500</b>	<b>892,500 (+23%)</b>	<b>1,032,500 (+16%)</b>
Median age	36.0	37.5	39.3
% over 65 years old	9%	10%	12%
% born outside Canada	39%	42%	46%
% households with children	47%	46%	44%
<b>No. of Jobs</b>	<b>385,000</b>	<b>462,400 (+20%)</b>	<b>485,400 (+5%)</b>
% unemployment	4.5%	5.4%	7.3%
% who live and work in York Region	52%	50%	60%
Outside residents working in York Region	144,600 (38% of total)	154,400 (33% of total)	162,200 (33% of total)

The following trends are noted:

- The proportion of people born outside of Canada grew 7 per cent from 2006 to 2011. York Region has the third highest proportion of immigrants in its population (45%) after Peel Region (50%) and Toronto (49%). As the Region becomes more culturally and racially diverse, both the needs and expectations for transportation in the Region will change. For example, research undertaken by Statistics Canada has shown that recent immigrants are more likely to rely on public transit as part of their journey to work.
- According to Statistics Canada, York Region has one of the most highly educated labour forces in Canada. The proportion of the Region's labour force with college or

university training is 12% higher than the Canadian average, while the proportion of residents with some post-secondary training (including trades) is the highest among Canada's largest census divisions. More adults have a college or university education today than in 2001. This trend may have implications towards attracting more employers to move to the Region, which may present opportunities to concentrate new employment around Regional centres and corridors.

- While couples with children make up the majority (46% in 2006 and 44% in 2011) of household types in York Region, other types are growing. These include: couples without children (20%), one-person (13%), lone-parent families (8%) and multiple families (5%). This changing pattern within households will have an effect on the travel needs and behaviours.
- The number of people travelling from outside York Region to work in the Region is growing (+17,600 since 2001). Additionally, the number and share of people who live and work in the Region has grown from 52% in 2001 to 60% in 2011. (Though York Region maintains the second lowest live-work percentage in the GTHA after Halton Region). To stay on track with the goals of the previous plans, competitive transit service and significant uptake of other alternatives such as carpooling will be necessary to manage the increasing number of trips destined for the Region.
- York Region is relatively affluent with the second highest median household income (\$89,100) in the Greater Toronto Area; a figure that continues to grow. Because more affluent households are less likely to be captive markets for transit, making transit a competitive choice for them is a key priority. However in 2011, over 100,000 households (32%) had income below \$60,000. Both lone parent families and one-person household (which comprise 24%) have a lower median income than couple households. Accessible and affordable transportation options will become more important as these populations increase.

## 4.2 Development

Exhibit 4.5 provides a snapshot of the land use trends in York Region. Over the last decade, York Region continues to become more urbanized particularly in the southern municipalities. From 2006 to 2011, over 80% of the new residents and 78% of new jobs are collectively located in Markham, Vaughan and Richmond Hill.

Intensification is also reflected in the percentage of households living in townhouses or apartments, which has increased from 17% in 2001 to 21% in 2011. This is reflective of the increasing trend of condominium and townhouse construction throughout the Region, but particularly along the Yonge Street and Highway 7 corridors. This development pattern further supports objectives to make transit accessible to more people, work places and other services. Growth trends in Regional Centres and Corridors are shown in Exhibits 4.6 and 4.7.

**Exhibit 4.5: Land Use Trends—2001 to 2011**

	2001	2006	2011
<b>Households</b>	223,200	275,700 (23%)	323,500 (17%)
% population living in urbanized areas	88%	-	92%
% single detached homes	75%	-	66%
% townhouse or apartment	17%	18%	21%
<b>Urban density (people + jobs per ha)</b>	-	7.7	8.7
Population density per ha	4.1	5.1	5.9
Employment density per ha	-	2.6	2.8

In Richmond Hill and Aurora, there is relatively equal growth both near and away from Regional corridors. There are many examples of intensification along the Regional corridors. However, low-density residential developments have also occurred west of Bayview Avenue in Aurora, or in the Yonge Street corridor between established settlements in Richmond Hill and Aurora.

A greater proportion of population growth occurred outside of Centres and Corridors in Vaughan, reflecting the higher supply of greenfield development in the past decade, while Richmond Hill and Markham have relied more heavily on infill development. Vaughan is expected to have substantial growth in Vaughan Metropolitan Centre over the next decade with the completion of the Toronto-York Region Spadina Subway Extension in 2016.

Another significant growth area outside of the Centres and Corridors is in Whitchurch-Stouffville, which grew by 12,800 people and 1,500 jobs since 2006. This growth is in the same scale of increases seen in Newmarket and Aurora since 2001. Just like the rest of York Region, the growing majority of people are choosing to work within the Region. Convenient connection to the corridors and centres will be an important factor in the availability of viable travel options and future travel behaviour.

Exhibit 4.6: Urban Density Growth in Regional Centres—2001 to 2011

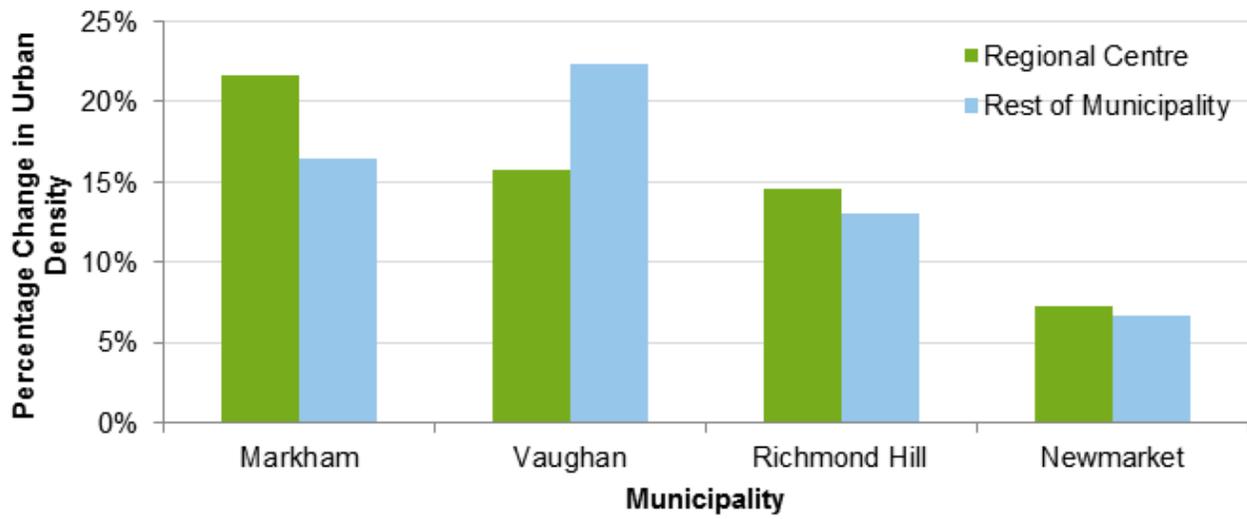


Exhibit 4.7: Urban Density Growth in Regional Corridors—2001 to 2011

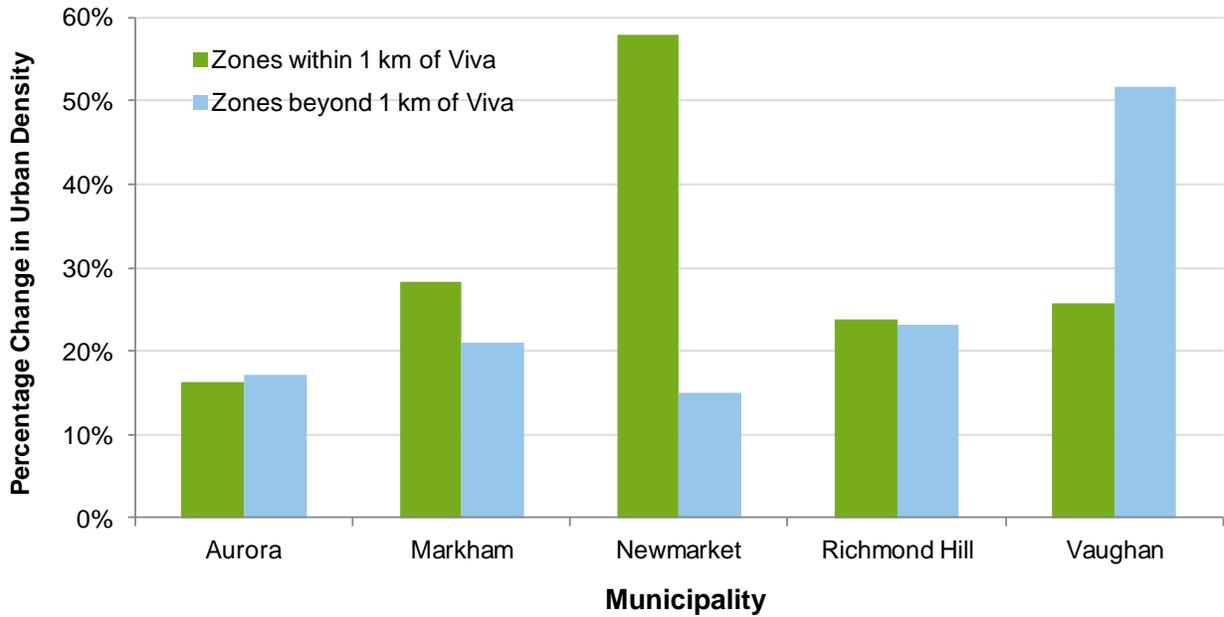
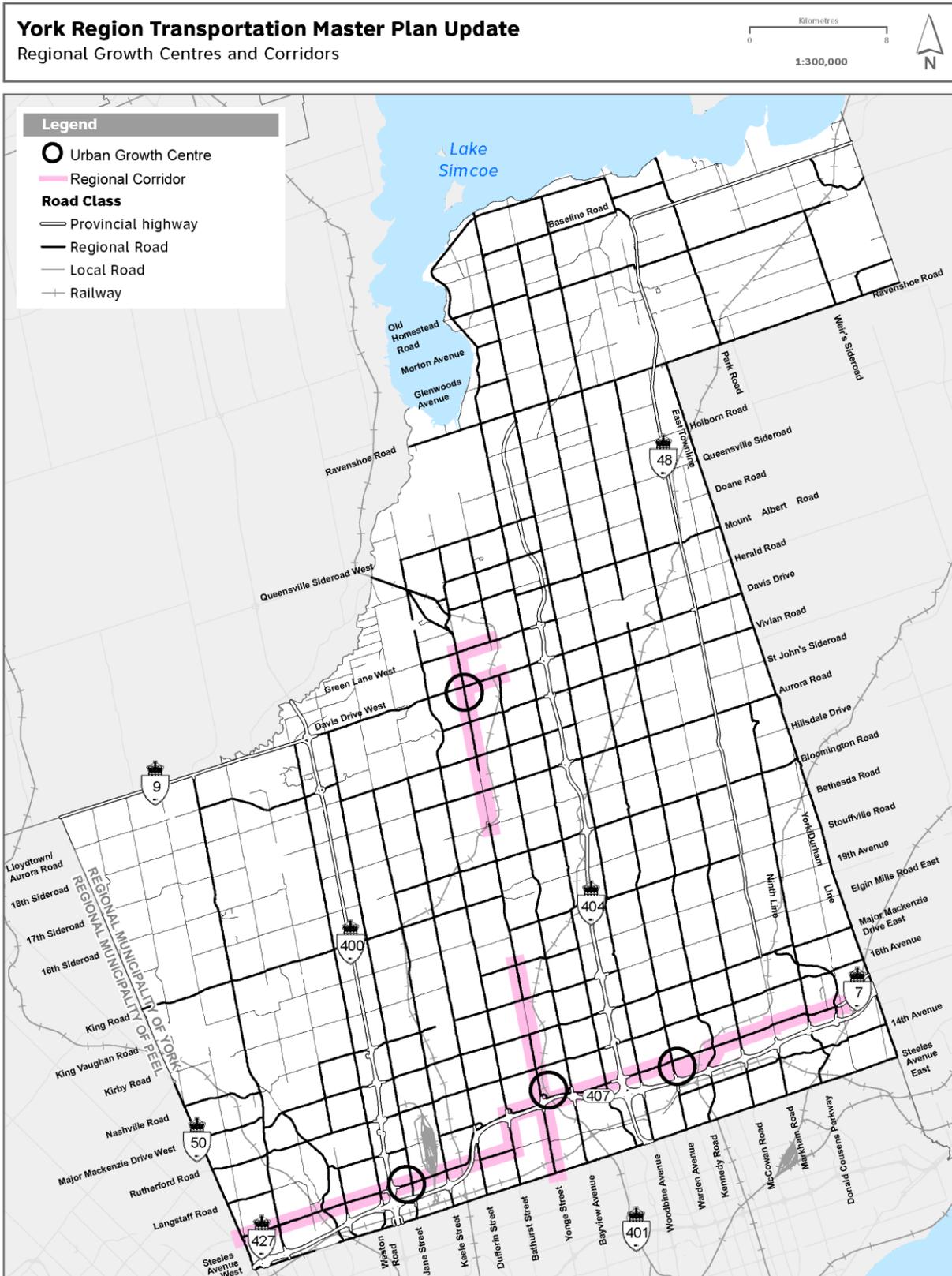


Exhibit 4.8: Regional Growth Centres and Corridors



#### 4.2.1 Snapshots of Community Travel Behaviour in York Region

Mode share varies between communities based on several factors, including:

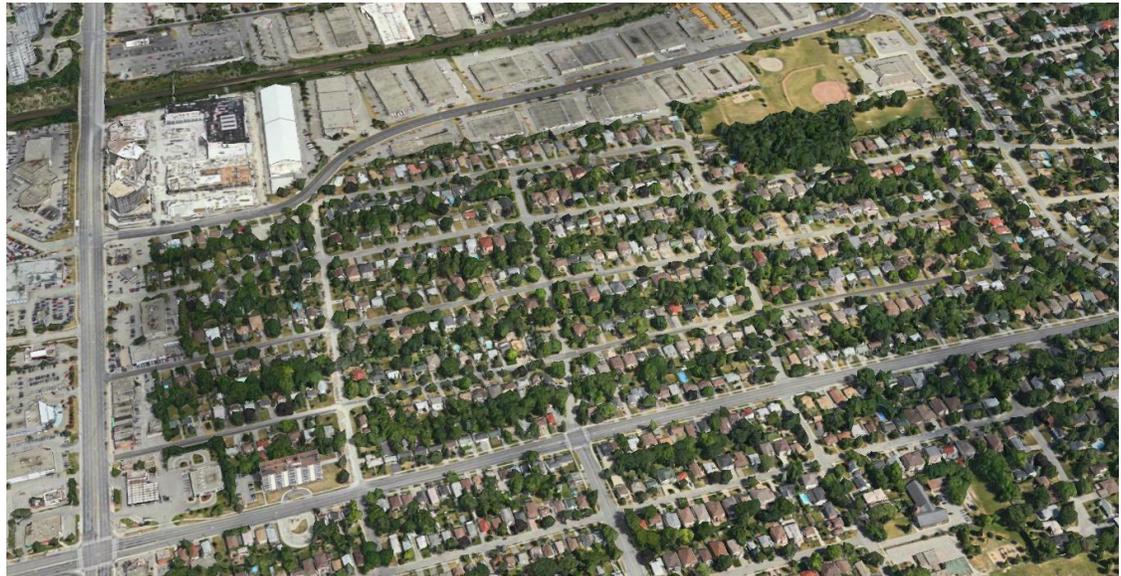
- Proximity to existing transit services;
- Walkability of community – both in design and distance to destinations; and,
- Household characteristics, such as income.

Several communities in York Region were examined using data from the Transportation Tomorrow Survey to identify potential community factors that affect mode share.

##### **Grandview**

The TTS zone with the lowest all-day auto mode share in York Region is the Grandview community, located in the northeast quadrant of the Yonge-Steeles intersection. Only 46% of all-day trips are by auto driver, while 27% trips are on transit and 17% are by active modes.

**Exhibit 4.9: Aerial Image of Traffic Zone 2351**



Factors influencing the mode shares in this area include:

- proximity to high-quality transit services on Yonge Street and Steeles Avenue;
- access to Toronto transit without the need for an additional fare; and,
- grid street pattern conducive to walking, with schools and retail within walking distance.

**New Urbanist Neighbourhoods: Vellore Village and Cornell**

Vellore Village is a newer suburban community designed following “new urbanist” principles, returning to a modified grid street pattern and integrating mixed uses. TTS data indicates that all-day auto mode shares are slightly lower in Vellore Village compared to older neighbourhoods to the south.

**Exhibit 4.10: Comparison of Mode Shares, Vellore Village and Nearby Communities**

COMMUNITY	AUTO	TRANSIT	ACTIVE TRANSPORTATION
Vellore Village (TTS Zone 2055)	89%	7%	4%
Velmar Downs/Weston Downs (TTS Zone 2057)	94%	5%	1%
Ansley Grove/Woodbridge (TTS Zone 2058)	92%	5%	3%

Similarly, Cornell sees lower auto mode shares and higher active mode shares compared to nearby communities. In particular, Box Grove was developed during the same period as Cornell, but sees a significantly lower share of transit and active trips.

**Exhibit 4.11: Comparison of Mode Shares, Cornell and Nearby Communities**

COMMUNITY	AUTO	TRANSIT	ACTIVE TRANSPORTATION
Cornell (TTS Zone 2454)	84%	11%	4%
Box Grove (TTS Zone 2447)	91%	7%	2%
Quantztown (TTS Zone 2419)	88%	10%	2%

**Exhibit 4.12: Aerial View of Box Grove**



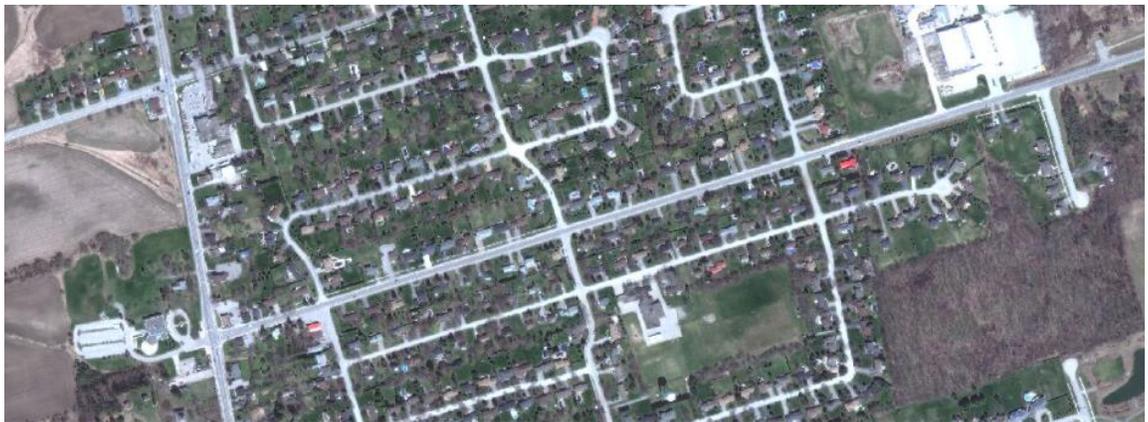
**Exhibit 4.13: Aerial View of Cornell**



**Rural Communities: Sharon**

Rural areas have substantially different travel behaviour than communities in urban areas of York Region. With more limited travel options and longer travel distances, transit and active transportation are less attractive. The two TTS zones located in Sharon, northeast of Green Lane and Leslie Street in East Gwillimbury, have high auto mode shares and, due to a lack of amenities within walking distance, no active transportation trips. Much of the transit mode share is from school bus trips; less than 1% of trips are on YRT/Viva or GO Transit.

**Exhibit 4.14: Aerial View of Sharon**



## 5 Critical Issues and Opportunities

Through the review of existing and future conditions, several key themes arise around emergent issues and opportunities for transportation in York Region. The TMP Update will address these through proposed strategies, networks, and projects in subsequent phases of the study.

### 5.1 Emergent Issues

#### **Congestion on the Regional road network**

Congestion on the roadway network remains a growing issue across the Region. However, it is important to note that traffic congestion is a concern across the Greater Toronto and Hamilton Area resulting from dispersed travel patterns, dominance of auto-dependent land uses, and lack of alternative transportation choices.

Expanding roads can also no longer be depended upon to address congestion, particularly in York Region's mature urban areas where a lack of corridor space constrains road widening. Investment in new roads will still be necessary to serve new communities and employment areas, but these decisions need to be made with recognition of downstream impacts.

The Province continues to move toward the expansion of the Provincial highway network within York Region, the completion of which will have major implications for travel patterns, Regional connectivity, land uses, and development pressures. Extensions to Highways 427 and 404 will make it easier for long-distance travel to northern parts of the Region and beyond while encouraging continued outward development. The proposed Highway 400/404 Link, connecting Highway 404 to Highway 400, can potentially provide an alternative to east-west Regional corridors in York Region. Finally, the future GTA West corridor (under suspension pending provincial review) could play a role in improving intermodal goods movement in western parts of York Region, providing connectivity to southwest Ontario.

As part of the TMP update, it will be essential to reinforce the reality that congestion on the road network will continue, even with significant investment in roadway expansion and transit. Instead, the TMP will focus on reducing the friction on auto travel in the Region by managing intersection congestion, addressing bottlenecks, and improving connectivity. Defining how Regional road corridors evolve, with clear warrants and guidance for road widening, HOV lanes, and reserved bus lanes, will be part of the TMP analysis.

#### Key Questions to be Explored in the TMP

- How can the Region and Regional partners work together to develop solutions to GTHA-wide congestion?
- How will Regional road corridors evolve over time?
- Can jurisdictional issues be overcome to maximize the potential of the existing road network?

## Need for broad and attractive travel choices

One of the primary contributors to traffic congestion in York Region is the inadequacy of travel choices; auto dependency of land uses is a primary challenge for travel alternatives that are attractive, efficient, and cost-effective. The same proportion of people is travelling by car now as 10 years ago. This challenge is present in both residential and employment areas in the Region.

The Region has achieved some progress in providing more mode choices by investing heavily in rapid transit through vivaNext, the Toronto-York Region Spadina Subway Extension, and expanded service hours on transit. GO Transit continues to expand bus and rail service, with Highway 407 bus service offering an attractive long-distance east-west travel option. New HOV lanes on 400-series highways and Regional roads such as Dufferin Street support the Region's initiatives through Smart Commute for ridesharing.

Older, mature communities are a particular challenge for expanding travel choice as it is difficult to retrofit existing block patterns, streets, and land uses to be more supportive of transit, walking, and cycling. Newer communities are increasingly built with ideals of mixed-uses, transit-supportive densities, and walkable streets; however, travel choices continue to be challenged due to inadequate transit service and auto-dependent forms at destinations, such as major shopping and employment destinations.

Access to transit is also a challenge in many communities, where walking to transit stops is either unattractive or not possible. GO Transit relies heavily on park and ride with success; YRT/Viva is exploring similar approaches through its park and ride study. Improving access to transit, whether improving cycling and pedestrian connections or increasing park and ride will be a consideration as part of the TMP update.

The TMP update will explore continued incremental steps, such as those recently achieved, to expand travel choices in the Region. Targeting and tailoring measures to specific types of trips, markets, and destinations will be important to produce tangible progress. One such target will be increasing mode choice for the fastest growing trip market, trips internal within York Region.

### Key Questions to be Explored in the TMP

- How can the TMP encourage better ways to get to and from work?
- Are there strategies the Region could tailor and adopt for a specific type of trip, such as short- or medium-distance trips?
- How can the Region encourage transit use? Walking and Cycling?

## Constraints to connectivity in Regional transportation network

Much of York Region's Regional Road network is a legacy of the system of concession roads utilized during Canada's founding to provide access to settlement lots. In York Region, these concession roads form square blocks roughly 2 kilometres in length. Many of these roads are now designated as Regional roads; within urban areas, communities are largely contained within each of the historic concession blocks.

The consequence of this roadway pattern is the wide spacing of Regional arterial roadways, located two kilometres apart, serving the bulk of through traffic. Access into communities is provided through mid-block local collector roads; these are limited in number as to not impede flow of Regional arterials, resulting in congestion at these intersections. This generally discourages local collectors from being utilized as through routes.

Recent communities have integrated more numerous access points; however, the trade-off is that these accesses do not provide through travel. There are some exceptions, such as Vellore Village in Vaughan, which has a finer grid of collector and local streets that provide through access (although still generally discouraged).

The impacts of the lack of a finer-grid Regional road network include:

- the ability for transit to serve communities efficiently (by requiring indirect routing);
- the walkability of the community (increased block sizes and limited access); and,
- congestion at arterial intersections and community access points.

The TMP will explore approaches to improving connectivity in York Region to mitigate these impacts. It will evaluate existing examples as well as best practices in designing new and retrofitting existing communities for improved connectivity. Also, practices in other GTHA municipalities in designating Regional roads will be reviewed to determine if there are lessons learned.

#### Key Questions for the TMP:

- How can communities in York Region make it easier to get around by all modes?
- How can a finer grid network be achieved in existing and new communities?

### **Jurisdictional roles on Regional roads**

Currently on Regional roads, local municipalities have responsibility for certain elements of the boulevard, including the provision of sidewalks, pedestrian amenities, and illumination (except at intersections). This makes it more difficult for the Region to achieve its active transportation objectives and improve access to transit.

The Region currently supports municipal sidewalk and Active Transportation (AT) projects on Regional roads and corridors through two programs. The Pedestrian and Cycling Municipal Partnership Program allows the Region to share up to 50% of construction costs for local pedestrian and cycling projects that serve a Regional context. Between 2007 and 2014, the Region contributed \$4.0-million to 25 projects. The second program, the Municipal Streetscape Partnership Program (MSPP), helps to fund up to 50% of locally-initiated streetscape design enhancements on Regional roads, which can include sidewalks and other boulevard improvements. Between 2007 and 2013, the Region has contributed \$5.3-million to 21 projects.

Despite the success of the MSPP, the status quo will need to be examined to determine how the Region should proceed in the future, in terms of responsibilities and roles within the Regional road rights-of-way. The TMP update will explore alternative approaches, based on a review of best practices from other jurisdictions and the consideration of Regional priorities. The preferred approach will require direction from Regional Council.

#### Key Questions for the TMP:

- How can the roles and responsibilities within Regional road rights-of-way evolve to achieve transportation and corridor objectives?

### **Parking Management in Regional Centres and Corridors**

Over the past decade, intensification in Regional Centres and Corridors has increased. New residential and employment uses, attracted by investment into rapid transit and supportive land use policies, line Yonge Street and Highway 7 throughout the Region. The opportunities presented by this intensification are explored in Section 5.2.2.

One of the challenges and issues presented in the Regional Centres and Corridors is parking supply and management. The availability and cost of parking heavily influence travel behaviour; managing parking requires an examination of parking standards and governance. Currently, the Region plays no role in parking supply and management and relies on each local municipality to develop supportive parking policies.

The role of the Region in parking supply and management will be examined as part of the TMP update. This will require consultation with municipal stakeholders to determine potential approaches.

#### Key Questions for the TMP:

- Does the Region have a role to play in parking supply and management within Regional Centres and Corridors to achieve transportation and land use objectives?

### **Affordability of the transportation system**

Over the past decade, the Region has invested an unprecedented amount into the transportation system, a large proportion toward rapid transit, including the Toronto-York Region Spadina Subway Extension and vivaNext. Federal and Provincial funding have also played a role in these projects. Over 130km of new or expanded roadways identified in the 2009 TMP are either complete or under way. The Region also is investing into the active transportation system.

Although growth-related transportation projects are partially funded by development charges, an implementation and funding backlog remains. Furthermore, infrastructure built in the Region's early days will continue to age and will eventually require rehabilitation or replacement. Funding for rehabilitation will be more reliant on tax-supported capital funding or funding from upper levels of government. The combined impact will place additional pressures on debt financing.

The Region already utilizes life cycle costing, which takes the long-term maintenance and operations costs into the assessment of transportation investments. The TMP update will build upon this approach when identifying, costing, and assessing network and project alternatives.

#### Key Questions for the TMP:

- How should the Region prioritize investment in the transportation system?
- How will the Region pay for future investments?
- How can the Region integrate life-cycle costing into its funding envelope and project prioritization process?

### **Impacts of demographic change**

Demographic change will continue to play a significant role in York Region's growth and travel behaviour, which in recent decades was fuelled by families seeking affordable housing and a suburban lifestyle. This continues to be a predominant driver to urban growth in the Region, particularly as the "echo boomers", who predominantly grew up in earlier suburbs such as those in York Region, start their families and seek a similar lifestyle. Growth in the urban fringes, particularly in Newmarket and East Gwillimbury, reflect this trend. The transportation network will need to respond to this growth by continuing to expand to serve new communities, which will face challenges such as long distances and travel time to work.

Meanwhile, the population in older communities in York Region is aging and many are approaching retirement. The aging population is predicted to be more affluent and active than those of previous generations; some plan to stay in their homes while others will be looking to downsize within their communities. Living longer, there will be a need for alternatives for driving and easy access to health care and other services. The transportation system will need to adapt to meet these needs. Accessibility will be a key consideration.

Finally, a large proportion of population growth in the Region will continue to be a result of immigration. The Region is already home to many first-generation and second-generation Canadians, with about half of recent immigrants arriving from China, India, Iran, South Korea, and Russia. Challenges faced by immigrants that have implications on transportation include

language barriers (ability to become oriented to the transportation system), lower income (ability to afford cars/transit), and access to services.

The TMP update will take into account demographic changes to identify strategies and policies to respond to trends and future needs. It will work with the Municipal Comprehensive Review to ensure that the future transportation network is prepared for population changes.

#### Key questions for the TMP:

- As the population ages, how should the transportation system respond?
- What barriers are faced when travelling in York Region for persons with disabilities? For new immigrants? How can accessibility be improved?

## 5.2 Key Opportunities

### Increasing self-containment of employment

York Region's early growth was primarily residential, bedroom communities for workers in Toronto. With a critical mass of population, employers began to establish in York Region's business parks and employment areas. This trend has accelerated in recent years with large employment centres now located throughout the Region. The result of this is an increase in the ability of residents to live and work in York Region. The proportion of work trips that begin and end within York Region, also known as self-containment, has increased from 42% to 53% over the past 20 years. Consequently, the number of people commuting into York Region from elsewhere in the GTHA has also increased.

The increase in self-containment can be largely attributed to an increase in places of employment; however, it can also be a result of overall Regional growth. In addition, York Region spans a large geographic area, approximately three times the City of Toronto's. "Internal" trips within the Region may require travel over long distances, as demonstrated by the increase in average travel distance to work over the same 20-year period.

Nevertheless, the continued trend of self-containment of employment is an opportunity for the Region and the TMP update. A large proportion of the Region's employment growth is forecast within the Regional Centres and Corridors, which provide an opportunity to leverage high transit accessibility afforded by rapid transit investments. In addition, the TMP can influence how future employment areas are planned and built to support multi-modal travel.

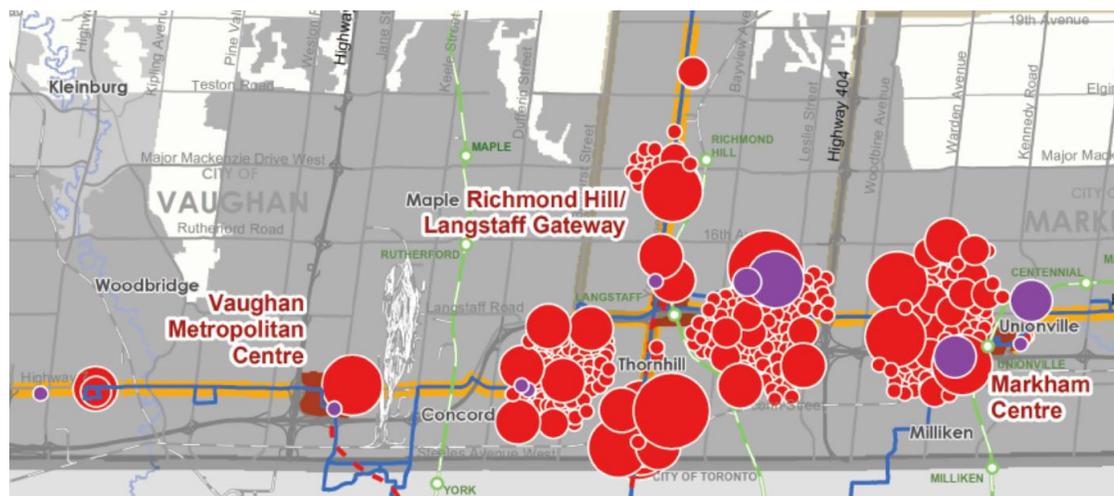
#### Key questions for the TMP:

- How can the Region improve multi-modal access to employment areas?

### Continuing intensification along Regional Centres and Corridors

As previously noted, one of the Region's growth successes is the intensification taking place in the Regional Centres and Corridors. Exhibit 5.1 illustrates the extensive residential (red dots) and employment (purple dots) development in the Centres and Corridors within the southern part of York Region since 2006. These are being supported by Provincial growth policies and investment in rapid transit, including vivaNext Rapidways and the subway extension to Vaughan Metropolitan Centre.

**Exhibit 5.1: Residential and Employment Projects in Regional Centres and Corridors Since 2006**



By 2031, the Region is targeting 135,000 residents and 110,000 jobs in its four Regional Centres – Markham Centre, Newmarket Centre, Vaughan Metropolitan Centre, and Richmond Hill Centre/Langstaff Gateway. To date, Markham Centre has made the most progress, with over 80% of residential and 60% of employment targets achieved through existing, under-construction, or under-application projects in 2013.

The forecast growth in the Regional Centres and Corridors represent an unprecedented opportunity to influence travel behaviour. Within the intensified corridors, high quality transit and active transportation environments will make it easier for residents and workers to travel by modes other than the car. The TMP update will need to look at ways to strengthen the conditions that encourage walking, cycling, and transit. This will require an examination of parking policies, transit service, and how streets in Centres and Corridors will evolve.

**Key Question for the TMP:**

- How will growth in Regional Centres and Corridors change York Region’s travel patterns?
- How can transportation services be planned and programmed to ensure that the Regional Centres and Corridors develop at a pace as planned in the York Region Official Plan to gain the full benefits of Centres and Corridors as soon as possible?

**Coordinating with major transit investments such as Regional Express Rail**

Over the past decade, an unprecedented investment in public transit has taken place, including the renewal of transit fleets, additional GO Transit service and rail extensions, the subway extension to VMC, and Viva Rapidways. Momentum is building for further investments into the transit network, with plans for the Yonge North Subway Extension awaiting funding and the recent focus on the development of a Regional Express Rail (RER) network.

Regional Express Rail was first identified in Metrolinx’s *The Big Move* in 2009. It envisioned a network of higher-frequency, electrified rail services across the Greater Toronto and Hamilton Area. Following the 2014 Provincial election, the Provincial government signalled the intention to expedite the implementation of RER. This was followed by SmartTrack, a centrepiece of the successful Toronto mayoral campaign in late 2014, which would utilize the Kitchener, Lakeshore, and Stouffville Line corridors for RER-type services.

The TMP update will take place concurrently with ongoing planning for RER and SmartTrack. It will need to identify potential responses to support RER implementation, which represents a potential paradigm shift in transit and transportation in York Region.

The TMP update will also look at the next steps and phases for existing transit investment proposals, such as the Yonge North Subway extension to Richmond Hill and the Highway 407 Transitway, to determine steps to continue to support their implementation as well as interim measures to improve transit in these corridors.

### **Leveraging new technologies**

When the 2002 TMP was developed, only 30% of Canadians subscribed to cellular phones<sup>1</sup>, the first mass-market smartphones were still years away, and hybrid vehicles were just entering the market. Today, cellular penetration is approaching 100% and over half of Canadians own a smartphone<sup>2</sup>. Most drivers have access to GPS navigation; transit arrivals are provided in real-time; and taxis can be hailed, tracked, and paid for using smartphones. These trends are fundamentally changing the way people live, work, and travel.

The TMP update will likely be as successful as the 2002 plan in predicting technological trends of 2031 and 2041; however, it will take into account recent technological advances and others that are imminent. The update will take advantage of “Big Data” – information on travel patterns and demand previously unavailable – to develop a responsive and flexible plan.

The TMP update will explore and leverage opportunities technology provides in facilitating alternative approaches to service delivery, encouraging alternative modes of travel such as ridesharing and transit, and improving the management and operation of the transportation system. Trends such as autonomous vehicles, alternative fuels, and telework will also be examined to determine potential impacts to transportation in York Region.

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<sup>1</sup> [http://cwta.ca/wordpress/wp-content/uploads/2011/08/SubscribersStats\\_2000-2004.pdf](http://cwta.ca/wordpress/wp-content/uploads/2011/08/SubscribersStats_2000-2004.pdf)

<sup>2</sup> <http://services.google.com/fh/files/misc/omp-2013-ca-en.pdf>

## 6 Initial Directions

This report has described how the state of York Region's transportation system has changed in the recent past and how it is projected to change in the future. As these changes occur, opportunities for improvement will arise, and it is important for the TMP to provide strategic guidance on how best to capitalize on them to the benefit of the York Region residents. This needs to consider recent public and stakeholder consultation, the needs of current and future residents, and the strategic guidance of the Region's Official Plan.

The following sections outline some initial themes that will be explored in the TMP.

### 6.1 Transportation and Land Use: Working Together

The TMP should emphasize the need to shape land use and transportation concurrently. Building compact, complete communities with a supportive land use mix, density and design will help to enable efficient transit service, make walking and cycling more attractive, and reduce overall trip lengths and congestion on Regional roads. At the same time, an effective rapid transit service will enable the success of the Region's centres and corridors development pattern, and convenient walking and cycling routes will help neighbourhoods remain home to residents throughout all ages and stages. The Region has many planning tools at its disposal to help shape land use, although collaboration with local municipalities will remain critical for some key development features such as collector road layout, site design and parking management.

#### **Areas for Direction:**

- Transit-Oriented Development in centres and corridors;
- Finer grid network/complete grid;
- Complete communities;
- Site design; and
- Parking management.

### 6.2 Walking and Cycling

Active transportation is a fundamental part of healthy, sustainable communities. The TMP will integrate and build on key elements of the Region's Pedestrian and Cycling Master Plan, and will strive to make active transportation a safe, convenient and popular choice for residents to meet at least some of their daily mobility needs. It will identify and strengthen the Region's role in providing on-road and off-road facilities for walking and cycling with a focus on building Regional networks, improving access to public transit services, and encouraging consistency among local municipalities.

#### **Areas for Direction:**

- Trails;
- Roles and responsibilities on Regional roads;
- Walking facilities and walkable environments;
- Cycling facilities;
- Safety;
- Promotion; and
- Planning and collaboration issues.

## 6.3 Public Transit

Public transit is the key to keeping York Region livable as it grows, by helping residents reduce their reliance on cars. Long-term success in attracting transit users will require the expansion of rapid transit services, as well as a range of short-term initiatives that enhance the competitiveness of both rapid transit and conventional routes. It will also require effective integration of York Region Transit with services offered by Metrolinx and other public transit providers in the GTHA. Areas that will be addressed through transit service policies include employment zones, new neighbourhoods and rural communities.

### Areas for Direction:

- Regional integration;
- Commuter parking;
- Rapid transit;
- Transit priority;
- Conventional transit; and
- Specialized transit.

## 6.4 Roads

Growing congestion due to rapid growth in the movement of both people and goods, is a threat to the livability and economic competitiveness of York Region. However, the Region can best address congestion not by simply expanding the road network, but by making smarter use of roads today while also building smarter roads for tomorrow. This approach is made possible through advancements in technology, and made necessary by the fact that public health and safety, the need to accommodate transit and active modes on Regional roads, and environmental concerns are all emerging as priorities that will determine the optimal use of Regional rights-of-way. The concept of complete streets can help the Region manage congestion in a balanced way, and will be complemented by approaches to improve the connectivity of Regional and local collector road networks.

### Areas for Direction:

- Complete streets;
- Road network;
- Fixing bottlenecks;
- Traffic management;
- Road safety; and
- Goods movement.

## 6.5 Influencing Behaviour

The TMP will recognize that improving transportation supply is only part of the solution to shifting travel behaviours, and will integrate key elements of the Region's *TDM Implementation Strategy*. Transportation demand management (TDM) initiatives can build individuals' awareness and understanding of their travel options, shape their preferences, and encourage them to try new ways of getting around. The Region has an important role to play in leading local municipalities and non-governmental stakeholders in TDM efforts that include development approvals, public education, and outreach programs in workplaces, homes and schools.

**Areas for Direction:**

- Shaping new developments;
- Outreach to workplaces, homes, and schools; and
- Information and promotion.

## 6.6 Implementation

The TMP will provide direction in a number of cross-cutting areas to both guide and enable its successful implementation. Foremost among these is the need to collaborate effectively with other orders of government, institutions, the private sector, and the general public. The Region will also need to seek stable, adequate funding for the TMP's many infrastructure and service elements. As it implements the plan, the Region will strive to meet high levels of environmental protection, and to inform and consult with residents and stakeholders in a meaningful way. Finally, the TMP will identify ways that the Region can both optimize its success and maintain accountability by monitoring and reporting on its actions and their outcomes over time.

**Areas for Direction:**

- Detailed action plan;
- Collaboration;
- Funding;
- Environmental protection;
- Public engagement; and
- Performance measurement.