

Background Report

Pedestrian and Cycling Plan Development Report

York Region Transportation Master Plan Update



Regional Municipality of York
by IBI Group
June 2016

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1 Introduction

York Region's 2016 Transportation Master Plan (TMP) is an update to the 2009 Transportation Master Plan and the 2008 Pedestrian and Cycling Master Plan (PCMP). It is the Region's plan to achieve the transportation related goals of Vision 2051, the objectives of the York Region Official Plan (2010) and the 2015 to 2019 Strategic Plan. The TMP is shaped by Provincial policy, aligned with existing Regional and local policies and informed by stakeholder input. It will guide planning and investment in the Region's transportation network, policy implementation and service development.

1.1 Pedestrian and Cycling Objectives in the TMP

The TMP has five main objectives. Those related to active transportation, i.e. walking and cycling, are described in detail below.

Objective 2 – Develop a Road Network Fit for the Future

A Road Network Fit for the Future will use technology and innovation to optimize the Road Network by leading in traffic management, urban design and *provide opportunities to support all modes of travel* within the Region's right-of-way.

The road network supports local, regional and provincial economies by *carrying people*, cars, cyclists, buses and commercial vehicles. Roads are an integral part of the public transit system and are important for the movement of goods by linking rail and air transport systems. *The Region's road network is the foundation upon which transit and active transportation services are built.*

Objective 3 – Integrate Active Transportation in Urban Areas

Focused attention on improving the viability of Active Transportation in York Region's urban areas is key to ensuring sustainable transportation alternatives.

The Region is supporting and encouraging a change in personal travel choices and providing a range of transportation options. The Region recognizes many benefits of a variety of transportation options, alternative modes of transportation, including improved health to residents, improved air quality and reduced greenhouse gas emissions, a more connected and efficient transportation network, reduced traffic congestion and reduced dependence on the automobile. The promotion of alternative travel modes such as walking, cycling, transit and carpooling will help the Region reach its sustainable transportation objectives to reduce single-occupant vehicle trips.

Objective 5 – Make the Last Mile Work

The "last mile" refers to the point or moment when consumer decisions are actually made. It refers to the *tactics used to increase adoption of transit and active transportation* while lowering the amount of single occupant vehicle use especially during peak periods.

1.2 Pedestrian and Cycling Development Report

1.2.1 Key Active Transportation Strategies

The Pedestrian and Cycling Development Report details the work undertaken to inform the strategies, policies, actions and "big moves" identified in the TMP related to walking and cycling. The work undertaken to update the 2008 PCMP focuses on the analysis supporting or resulting in the following TMP Strategies:

TMP Strategy 6.3.4 "First and Last Mile" Connections

Successful public transit systems need to offer safe and accessible connections to transit stops and stations for both pedestrians and cyclists. Historically, cycling facilities are provided as roads are reconstructed per the Ten-Year Roads Capital Plan. The resulting

cycling network often lacks connectivity and coherence. In order to achieve the objectives of the TMP, a more rigorous, complementary approach to network build-out is needed in addition to continued support for education and promotion. It is considered critical to accelerate the implementation of the cycling network by developing a shorter term Strategic Cycling network.

The Pedestrian and Cycling Development Report documents the work undertaken to identify the Strategic Cycling Network. It is largely a shift in implementation rather than a marked departure from the active transportation network planning in the 2008 PCMP. An emphasis on feasibility will ensure that lines on a map become facilities on the ground as soon as possible, thereby supporting modal shift. The strategic cycling network maximizes the value of investments by identifying infill links that improve the connectivity of existing and planned facilities.

Various pedestrian and cycling facility types were presented in the 2008 PCMP. Since then, new practices are being implemented:

- Standards for accessible sidewalks and street crossings have been approved through the Accessibility for Ontarians with Disabilities Act (AODA)
- A method for selecting comfortable cycling facilities based on roadway characteristics is available in the Ontario Traffic Book 18 Cycling Facilities
- A wider range of separated cycling facilities are now being implemented in North America

The Pedestrian and Cycling Plan Development Report outlines the new types of cycling facilities and the updating of cycling facility types for Regional road corridors identified in the 2008 PCMP cycling network.

TMP Strategy 6.3.5 Regional Trails

A system of off-road trails serves both transportation and recreation needs by linking neighbourhoods in York Region. Trails allow cyclists and pedestrians to bypass busy streets and traverse natural barriers to reach key destinations. Trail users may have to make inconvenient detours to find safe crossings of increasingly congested Regional roads. They can also be hindered by gaps in the network and inconsistent designs between trails owned by different jurisdictions.

The Pedestrian & Cycling Plan Development Report documents the work undertaken to identify Regionally-significant trails within local municipal plans.

1.2.2 Additional Policies

In addition to the components related to the “First and Last Mile” Connections and Regional Trails strategies, policies from the PCMP were reviewed and updated. These policies relate to various TMP strategies including:

- TMP Strategy 6.3.1 Municipal Partnership Programs
- TMP Strategy 6.3.2 Boulevard Jurisdiction Strategy
- TMP Strategy 6.3.6 Network Improvements Strategy
- TMP Strategy 6.3.7. Education and Promotion Strategy

2 Background

The Pedestrian and Cycling Plan Development Report is informed by the documents described below.

2.1 Pedestrian & Cycling Master Plan (2008)

In 2008, York Region completed its first Pedestrian and Cycling Master Plan (PCMP). The plan was developed to guide the Region in implementing a comprehensive pedestrian system and on- and off-road Region-wide cycling network over a 25-year period. The Regional-scale network integrated with local municipal AT infrastructure and public transit service connecting communities and people of all ages with where they live, work and want to go.

It consists of the following facilities:

- **1,035 km on-road, 209 km off-road cycling network** consisting of paved shoulders / bike lanes, signed routes and multi-use trails
- **683 km of sidewalks** on both sides of Regional roads in urban areas, one side of Regional roads in suburban areas and shoulders along Regional rural roads

The PCMP also includes a set of supporting policies and programs to promote walking and cycling in the Region with 40 outreach recommendations, in addition to the nine infrastructure and 19 implementation strategy recommendations. Progress on the recommendations is summarized in Exhibit 2-1.

Exhibit 2-1: Progress Made on the 2008 PCMP Recommendations

	2008 PCMP RECOMMENDATIONS	
	Achievements	Outstanding
OUTREACH	▶ www.york.ca/cycling ▶ Regional Cycling Map ▶ Various brochures ▶ Smart Commute ▶ Personal travel planning pilot ▶ CAN-BIKE cycling education programs ▶ Active and Safe Routes to School ▶ Traffic Safety Group ▶ Bike racks on YRT/viva, GO Transit buses ▶ Bike parking at carpool lots ▶ Events for York Region employees ▶ Tourism through Lake-to-Lake Cycling Route & Walking Trail & Greenbelt Route	▶ Way-finding signage ▶ Pathway safety ambassador ▶ Bike Bus program (portable bicycle training program) ▶ YRP enforcement ▶ Tax incentives ▶ Bicycle User Groups
INFRA-STRUCTURE	▶ Implement network with roads construction program ▶ New operational measures ▶ Lake-to-Lake Cycling Route & Walking Trail and Greenbelt routes ▶ Adopt Designing Great Streets guideline	

IMPLEMENTATION STRATEGY	▶ Pedestrian & Cycling Planning & Design Guidelines ▶ Senior Active Transportation Specialist ▶ Inter-Municipal Working Group ▶ Road projects to include bikeways ▶ Streetscaping Municipal Partnership Program ▶ \$0.5 million/year Pedestrian and Cycling Municipal Partnership Program ▶ \$0.5 million/year standalone cycling projects ▶ Development Charge funds for cycling facilities ▶ PCMP annual report and Transportation Fact Book every two years ▶ Cyclist counters	▶ 10-year implementation plan is on-going but the resulting network often lacks connectivity ▶ Public Advisory Committee ▶ Cost-sharing opportunities ▶ Performance monitoring
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2.2 Vision 2051 and the Strategic Plan

Vision 2051 defines York Region's desired future state and provides overall direction on how to achieve it. It includes eight goals, with three goals directly related to active transportation:

- Liveable Cities and Complete Communities
- Interconnected Systems for Mobility
- Living Sustainably

The **2015 to 2019 Strategic Plan – From Vision to Results** is the roadmap emphasizing the Region's priorities over the next four years to strive towards **Vision 2051**. This plan aligns with this term of York Region Council and contains specific, measurable, achievable and time-based objectives and action plans. One of the performance measures identified in the plan is related to active transportation:

3. Making our communities more welcoming and inclusive:

- 3.3. Implement Active Transportation Network – increase the number of bike lane and paved shoulder kilometres

2.3 Other Related Studies

The **Greening Strategy** (2012) focuses on creating and maintaining natural environments that foster healthy, sustainable communities for current and future generations through:

- Environmental land securement
- Enhancement and rehabilitation
- Leadership, innovation and knowledge
- Stewardship and education

The Greening Strategy report recommended that York Region undertake a Natural Heritage Plan that would identify Regional natural trail linkages that could support active transportation.

York Region finalized the preferred route for the **Lake to Lake Cycling Route and Walking Trail** (the Route) in the 2013 comprehensive design and feasibility study. Progress has been made with several partners to implement sections of the Route.

Designing Great Streets – Building Roads that Build Community (2013), for internal use and being updated in 2015, updates the Regional road design process to better integrate road design and land use context. The guiding principles include planning for multiple transportation modes. Six new Regional road typologies are introduced. Attributes identified for each typology include elements that affect pedestrians and cyclists such as:

- Operating speed

- Boulevard treatment, landscaping and width
- Crossing provisions and intersection spacing
- Cycling provisions

For all six typologies, sidewalks are required with the exception of “rural road” (it requires paved shoulders that can be used by pedestrians); bike lanes, buffered bike lanes, cycle tracks, multi-use path or paved shoulders are required with the exception of “rural hamlet”. Urban road typologies include crossings spaced 250 to 400 metres; rural road typologies require crossing spacing to match existing conditions.

York Region is currently updating the **Transportation Study Guidelines for Development Applications** that will provide guidance on the technical requirements of developing mobility plans in support of new community plans. The mobility plans are a requirement of the York Region Official Plan to ensure that designs support the successful implementation of a multi-modal transportation system.

York Region is currently preparing **Design Standards for Pedestrian and Cycling Facilities in York Region**. This document will update the design guidelines presented in the 2008 Pedestrian and Cycling Master Plan. It will also include site design for schools, intersection treatments, Highway 7 monitoring program, and way-finding signage.

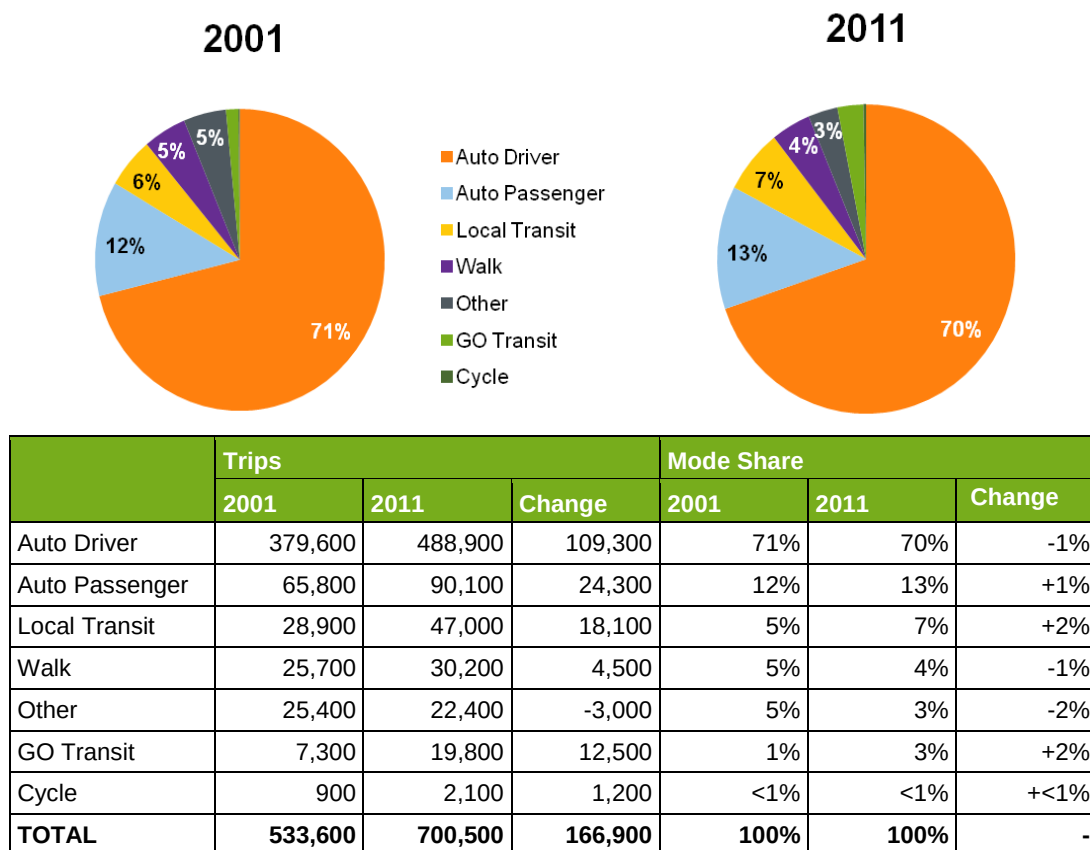
2.4 How York Moves: Walking and Cycling

A comparison of the percent of trips to, from and within York Region by the various modes of transportation for the years 2001 and 2011 is provided in Exhibit 2-2. On the whole, there has been little change in mode choice patterns since 2001. With 83% of all a.m. 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 a.m. peak period total
- Overall transit share (GO and 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 2-4—have only a 3% transit mode share.
- Auto passenger trips increased proportionally faster than auto driver trips
- Cycling trips are increasing at an extremely rapid rate (130% growth from 2001 to 2011) concurrent with recent investments in cycling infrastructure

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 2-3, 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 2-2: 2001 and 2011 York Region Mode Share Trends—a.m. Peak Period (6:30-9:30)



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 2-3: 2011 Mode Share Throughout the Day

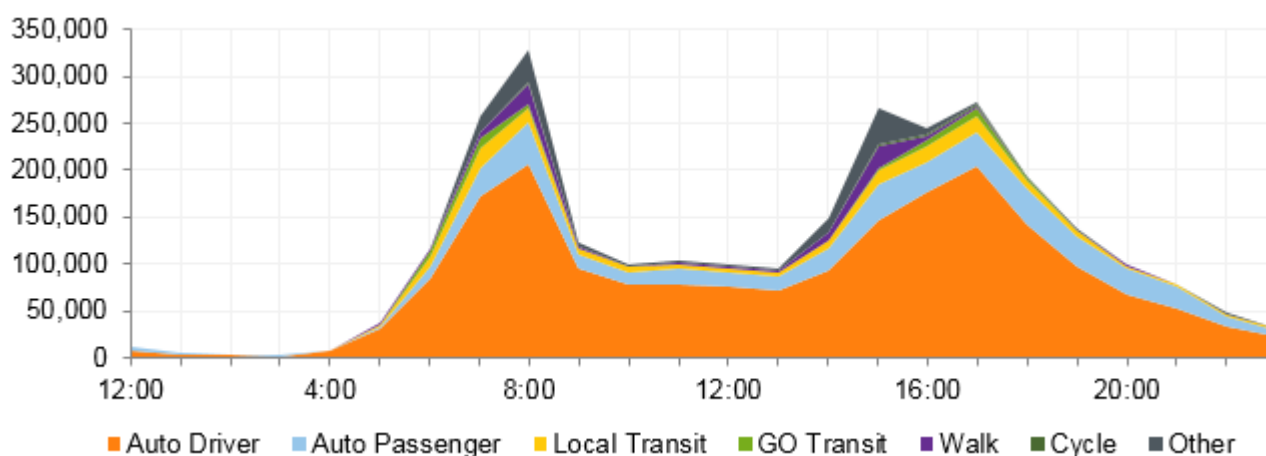


Exhibit 2-4 provides a summary of a variety of other transportation trends pertinent to the TMP. They show signs that the Region is maturing, though with challenges:

- 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 a.m. peak period.
- 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. However, the number of cars trips less than 2 km is on the rise, trips that could easily be done by these active modes.

Exhibit 2-4: Overview of Key Travel Demand Trends

TRENDS FROM TRANSPORTATION FOR TOMORROW SURVEY AND 2011 CORDON COUNT SURVEY	2001	2006	2011
Region-wide travel patterns			
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%
% a.m. peak trips not for work or school	26%	32%	32%
Transit-first			
a.m. 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
Walking and Cycling			
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%)
Evidence of auto dependent choices			
% a.m. 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%

Exhibit 2-5 shows that cycling demand in the Region is heavily oriented towards north-south travel—particularly to and from Toronto. The figures represent the number of cyclists that were counted crossing that “screenlines”, consisting of boundaries made up of one or more roads, in one day in 2011.

Exhibit 2-5: 2011 Bicycle Count Data

SCREENLINE	LIMITS	DAILY CYCLISTS
North-South Travel		
Steeles West	Highway 427 to Yonge Street	1,046
Steeles East	Willowdale to Reesor Road	1,044
King-Vaughan Road/Stouffville Road	Highway 27 to Ninth Line	91
East-West Travel		
Highway 400	Highway 407 to Bass Pro Mills Drive	204
Highway 404	John Street to Green Lane	591

Source: York Region Cordon Count Data

2.5 The Existing Pedestrian and Cycling Network

This section describes York Region’s existing transportation network and highlights changes since the 2009 TMP Update. Below, Exhibit 2-6 summarizes some of these key changes to the active transportation and the road networks.

Exhibit 2-6: Active Transportation Supply Trends—2009 to 2014

	LENGTH IN 2009	LENGTH IN 2014	GROWTH 2009-2014 (%)
Active Transportation Network			
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%)
TOTAL	553	1,175	622 (+112%)
Regional Road Network			
6-lane roads (km)	40	46	6 (+15%)
4-lane roads (km)	375	424	49 (+13%)
2-lane roads (km)	692	648	-44 (-6%)
TOTAL LINEAR KM	1,050	1,090	40 (+4%)
TOTAL LANE-KM	3,399	3,532	133 (4%)

There have been substantial changes to York Region’s pedestrian and cycling networks since the last TMP update. The Region’s active transportation network as of 2014 is illustrated in Exhibit 2-7 and Exhibit 2-8.

Exhibit 2-7: Existing Cycling Network

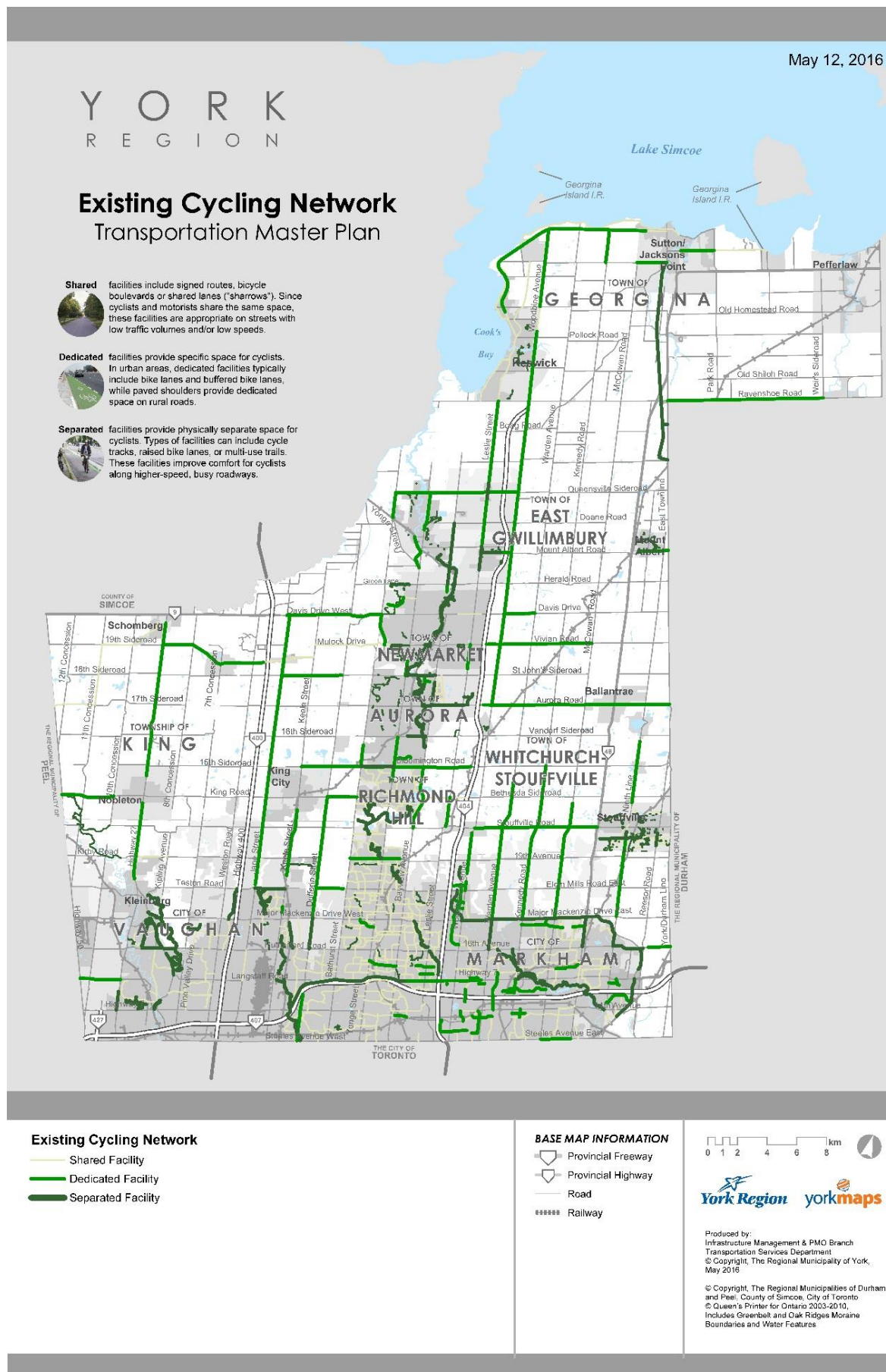
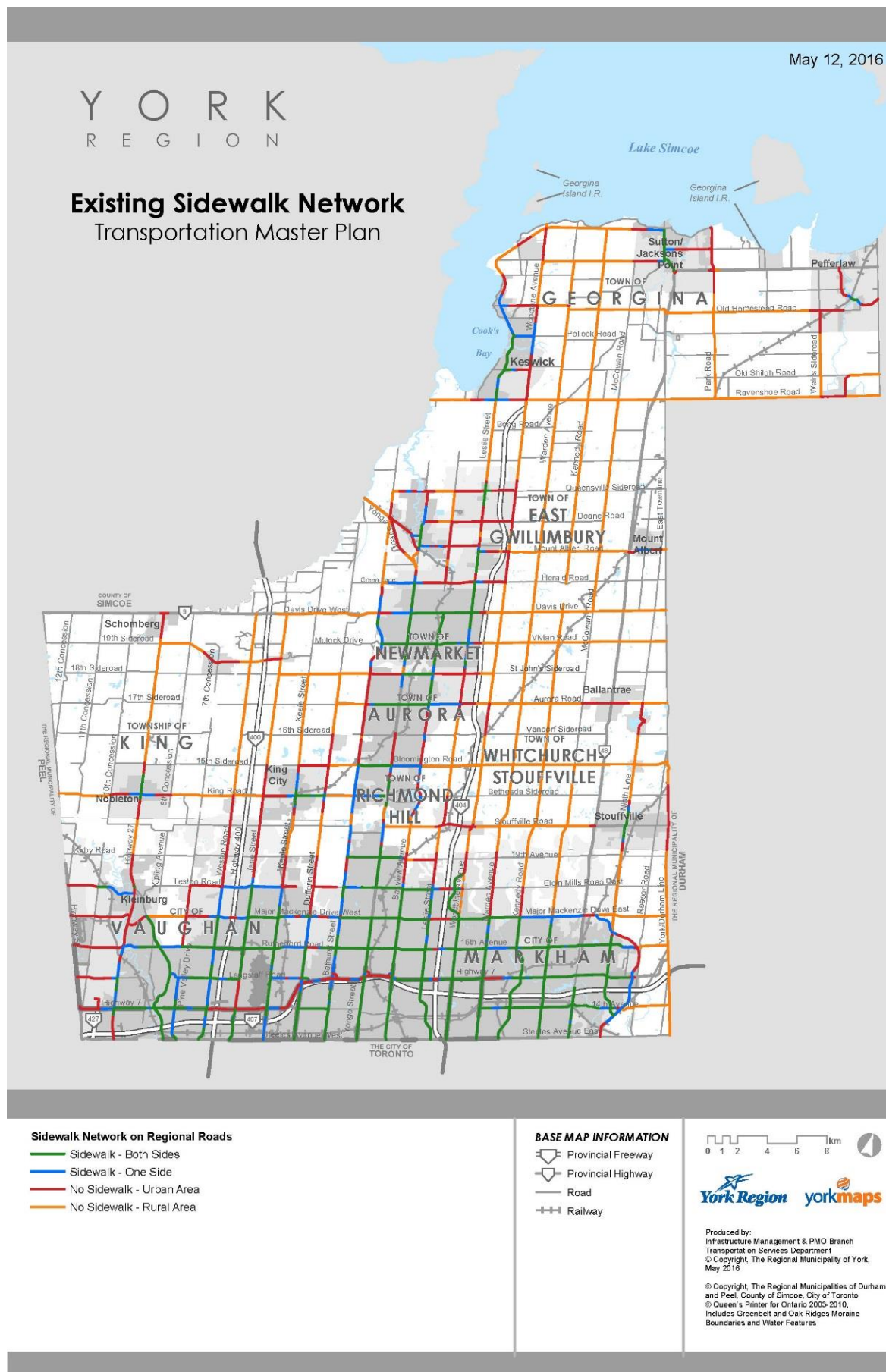


Exhibit 2-8: Sidewalk Gaps on Regional Roads



The Region's Pedestrian and Cycling Master Plan (PCMP) proposed an ultimate cycling network of 1244 kilometres made up of 209 kilometres of multi-use trail, 295 kilometres of bike lanes, 511 kilometres of paved shoulders, and 230 kilometres of signed routes. The current network includes:

- 74 kilometres of bike lanes
- 74 kilometres of shared paths
- 185 kilometres of off-road, multi-use trails
- 233 kilometres of paved shoulders
- 428 kilometres of signed routes

Specific initiatives include:

- Finalizing the Lake-to-Lake Cycling Route and Walking Trail corridor alignment and proposed network elements (August 2013)
- Continuing implementation of the Pedestrian and Cycling Municipal Partnership Program, which provides Region funding for up to 50% of the cost of construction. This has led to the approval of 25 projects approved worth \$4 million between 2007 and 2014.
- Incorporating buffered bike lanes, bike boxes, and other advanced cycling features in Viva Rapidway corridors

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. The sidewalk network is depicted in Exhibit 2-8. However, shortcomings exist along major arterial corridors, and particularly at major intersections. The nature of these arterial corridors—high traffic volumes and speeds—are not ideal environments for pedestrians and can be intimidating to the travelling public. This speaks to the need to improve connectivity within and between neighbourhoods, in addition to 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, however there is a lack of connectivity along many arterial roadways. A continuous and cycling network is needed on arterials, particularly in urbanizing pedestrian neighbourhoods with increasing densities.

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. A lack of appropriate infrastructure to make walking and cycling more comfortable results in real and perceived safety concerns.
- **Connectivity:** In many urban neighbourhoods, the pedestrian and cycling networks lack 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 2-7 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 or separated facilities on busier roads is required to encourage travel by bike.

3 “First and Last Mile” Connections: Strategic Cycling Network

Vision 2051 sets out a number of key objectives guiding York Region, including goals related to mobility. The TMP draws on Vision 2051 guiding principles and develops a series of objectives. TMP Objective 3 is to **integrate active transportation in urban areas**. This implies a need to deviate from the status quo in order to advance actions to improve walking and cycling more rapidly than has been done in the past.

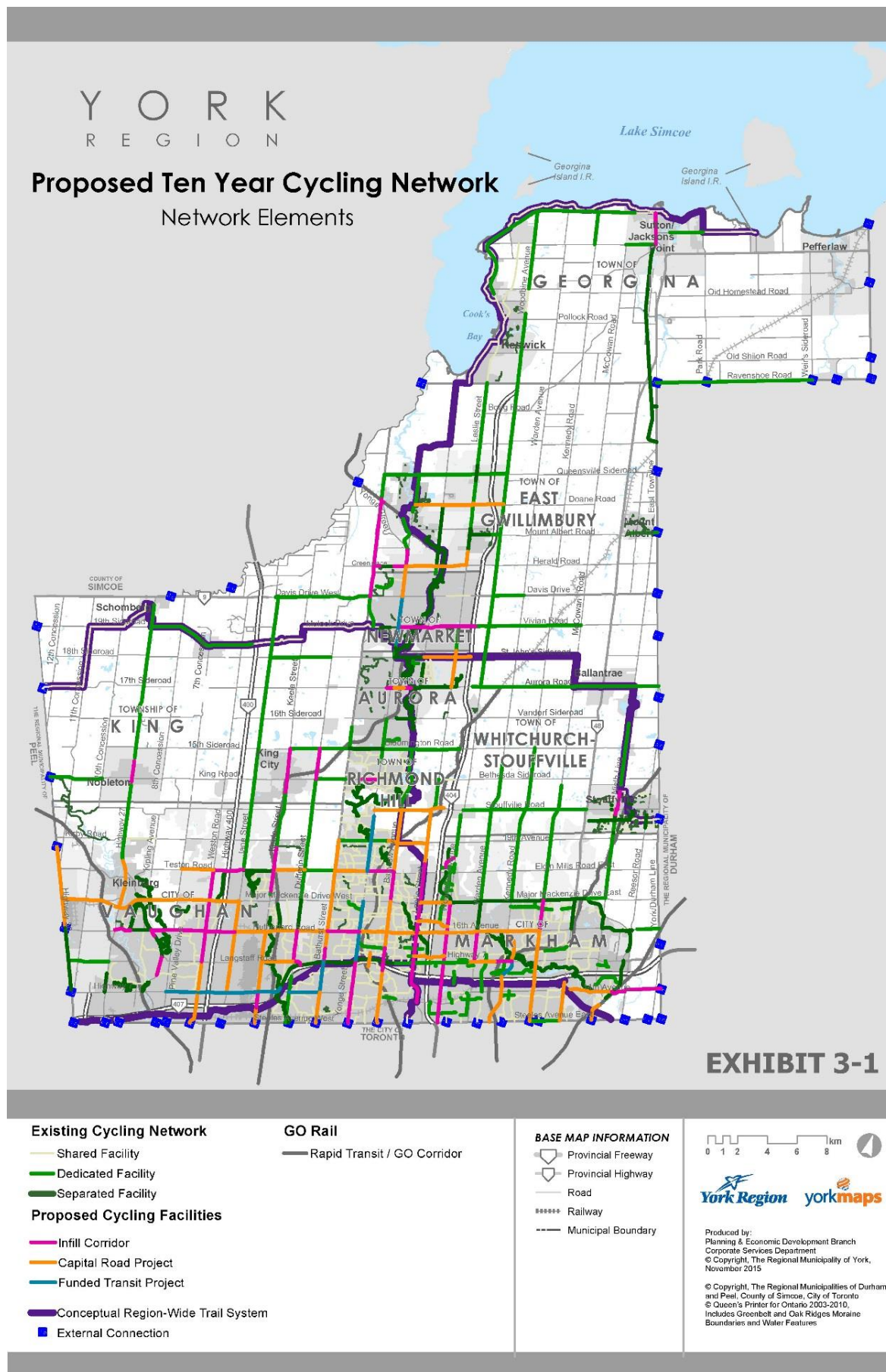
The status quo in York Region is to construct cycling facilities as roads are reconstructed per the Roads Capital Plan program. However, the resulting cycling network often lacks connectivity and coherence. In order to achieve the objectives of the TMP, a more rigorous, complementary approach to network build-out is needed in addition to continued support for education and promotion. It is considered critical to accelerate the implementation of the cycling network by developing a shorter term Strategic 10-Year Cycling Network. The intent of the Strategic Cycling Network is to provide a high-quality, connected short-term network to support more immediate modal shift.

The Strategic Cycling Network has been developed based on several components:

- **Planned Capital Investment** – In keeping with on-going practice, the 10-year capital plan provides an opportunity to provide cycling facilities as roads are reconstructed. In addition to links identified in the current capital plan, new road and funded transit corridors projects identified in Phase 1 or Phase 2 of the TMP are included in the network.
- **Conceptual Region-Wide Trail System** – For such a geographically large area, a Regionally-connected network of active transportation spines will form the backbone of the active transportation network, supporting a wide variety of users. A Region-wide trail system may include some on-road facilities along key routes (i.e. sections of the Greenbelt Route & the Lake to Lake Cycling Route and Walking Trail) and will be developed outside of the scope of the TMP. A preliminary review of potential municipal trail corridors to be included in the conceptual Region-wide trail system is included in Section 4 of this report.
- **Key Infill Corridors** – These infill links are the primary new components of the strategic network, identified to enhance connectivity to key destinations, specifically:
 - **Regional Centres & Corridors** – Regional Centres have been designated in York Region as nodes of commercial, employment, and residential activity. In addition, these areas are intended to support multi-modal connections, with major transit investments. Ensuring strong active transportation networks are available in these Regional Centres is important to achieve Regional goals.
 - **Major transit** – Access to major transit hubs via active transportation enhances the potential value of investment in both transit and active transportation. The analysis defined transit hubs to include major regional transit facilities including GO Transit and Viva Stations.
 - **External cycling networks** – Connecting to networks outside of York Region, particularly to the City of Toronto in the south is critical to ensuring a connected network that supports commuting.

The strategic network and its components are illustrated in Exhibit 3-1. A map & summary of strategic network links is included in Appendix A.

Exhibit 3-1: Strategic Cycling Network showing capital, transit & infill projects



3.1 Infill Corridor Analysis

An initial list of potential infill corridors was developed based on the following criteria:

- Links that connect to existing facilities or Regional trail spines at multiple points along the project
- Links that provide access to transit hubs, Regional Centres or external neighbouring municipal networks

These guidelines were intended to highlight corridors that are critical from a network perspective but which are feasible within fiscal constraints. After several iterations and feedback from staff, the infill network shown above in Exhibit 3-1 was identified.

Since the infill projects are the key departure from the status quo, further analysis of these infill corridors was carried out. In order to justify the strategic network and to enable comparisons of the relative value of one infill link over another, a priority infill analysis tool was developed using ArcGIS. This list of criteria used and evaluated by the methodology is presented below in Exhibit 3-2.

Exhibit 3-2: Infill Corridor Analysis

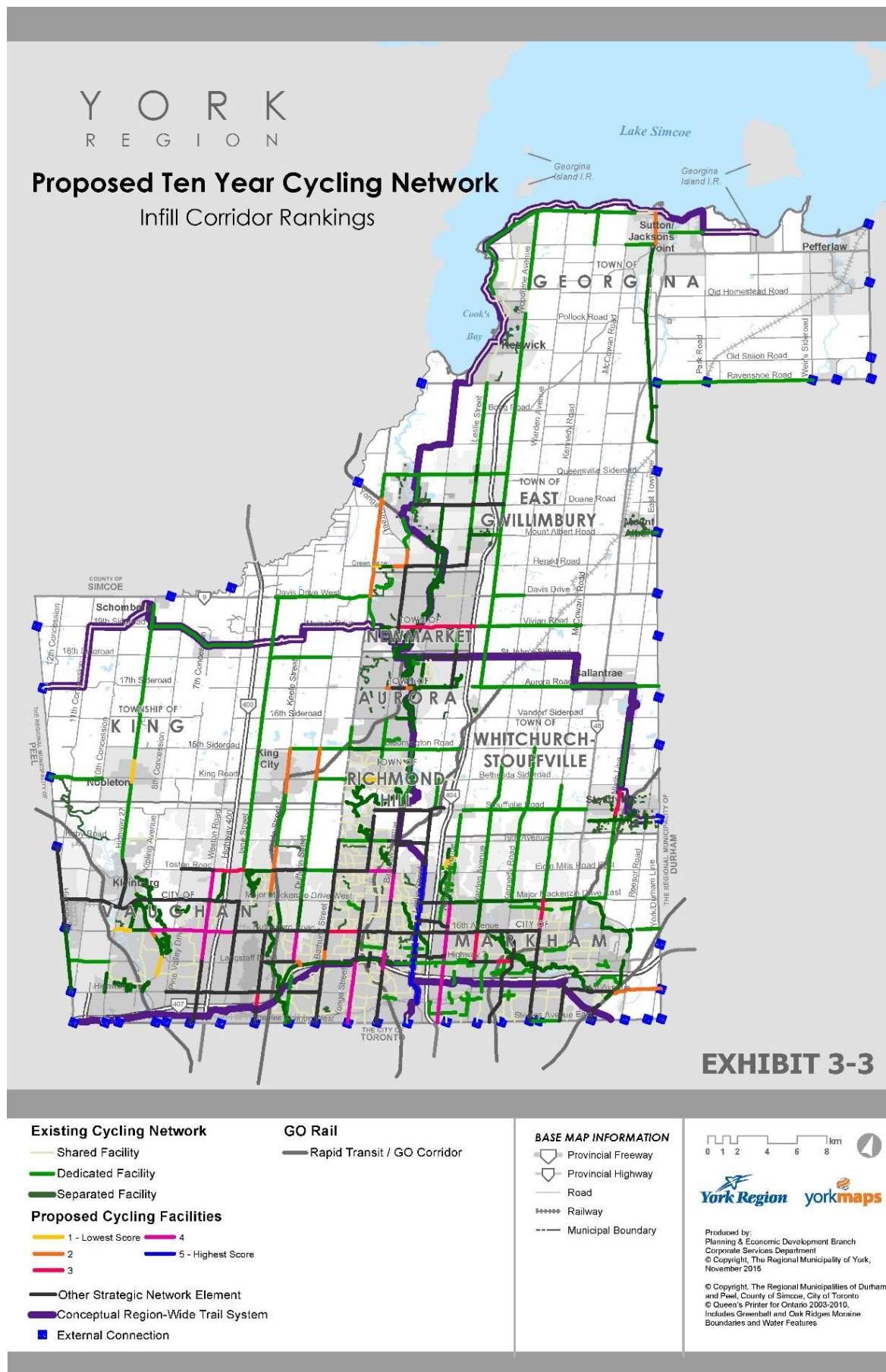
CRITERION	RATIONALE	EVALUATION OVERVIEW	CALCULATION
Connectivity	The primary purpose of the infill corridors is to help to connect existing and planned pieces of cycling infrastructure in order to improve the usability of standalone links and to provide a connected network that encourages cycling for transportation purposes.	The number of links that connect on either end of an infill corridor or midway through the link are calculated and used to determine its rating for the criteria. A link scores differently for connecting to different types of facilities (i.e. existing versus planned) since existing facilities are already in place (less uncertainty around project phasing) and already have established users (expanded reach of network).	The following points are assigned for a connection to each of these facilities: • Existing network = 3 pts (excludes shared facilities) • Capital plan road / funded transit projects = 2 pts • Other infill corridor = 1 pt
Density	Population and employment density can support additional active transportation trips. Areas of higher population and employment density often have built form and land use patterns that support active transportation. In other cases, they may represent strategic locations for investment in multi-modal connections due to their trip generation potential i.e. major employment areas.	A 500 metre buffer of the infill corridor is created. A total density is calculated based on area within a buffer and the density of the zone in that area. Thresholds based on the average density are used to determine the rating for the criteria. The analysis assumes that density is evenly distributed throughout the zone.	The following points are assigned based on density thresholds: • <15 people + jobs /ha = 0 pts • 15 – 40 people + jobs / ha = 2 pts • >40 people + jobs /ha = 5 pts
Potential Demand (Short Trips)	Trips of 5 km or less are generally considered to be appropriate for cycling by most people. As a result, areas where there are many short trips currently being made by autos likely have high cycling potential.	A 500 metre buffer of the infill corridor is created. A weighted number of existing auto short trips is calculated based on the area within a buffer and the number of trips in that area. Thresholds based on the number of short trips are used to determine the rating for the criteria. The analysis assumes that the number of short trips is evenly distributed throughout the zone.	The following points are assigned based on the total number of short trip thresholds: • < 2,000 = 2 pts • 2,000 – 4,000 = 4 pts • 4,000- 6,000 = 6 pts • > 6,000 = 8 pts

CRITERION	RATIONALE	EVALUATION OVERVIEW	CALCULATION
Major Trip Generators	Major trip generators such as transit hubs, schools, and recreation/community centres should be accessible by active transportation so that residents have options when accessing essential services.	Major trip generators are identified: - Regional centres - Major transit stations (higher order transit stations) A 500m buffer is assigned around each corridor and the number of trip generators within the buffer is used to determine its rating for the criteria.	Each major generator is assigned 3 pts.
Barriers	Major barriers such as rail corridors, water bodies or highways can impede active transportation travel substantially. Priority infill that crosses a major barrier can be considered to provide a critical linkage. Often, the types of projects that cross barriers are particularly costly to implement, but it is important to recognize the value added to the network from a connectivity perspective for the additional capital cost.	Major barriers are identified: - Freeways (400, 401, 404, 407, 427) - Rail corridors The number of barriers that each infill corridor crosses is used to determine its rating for the criteria.	Each barrier is assigned 3 pts, up to a maximum of 12 pts.
Gateway Connections	The neighbouring municipalities surrounding York Region have key pieces of cycling infrastructure that form important links. Notably, there is significant commuting activity to Toronto, so forming connections along the Southern edge of York Region is critical for encouraging active transportation to reduce single-occupant vehicle use.	Major gateway connection points were identified for the regions and municipalities surrounding York Region using existing and planned cycling networks in the City of Toronto, Region of Durham, Region of Peel and the County of Simcoe.	The following points are assigned for links that connect to each of these gateway types: - Existing major gateway = 5 pts - Planned major gateway = 2 pts

The rankings allows for the adjustment of priorities depending on the available funding for the infill corridors. The results of the analysis are presented in Exhibit 3-3. A summary table documenting the results by corridor has also been provided in Appendix B.

This analysis provides a useful methodology for evaluating and comparing infill corridors within the cycling network. The tool can be used to finalize the infill network, to provide a strong data-based argument for the importance of these links to the overall cycling network and to identify the potential for cycling along these corridors.

Exhibit 3-3: Cycling network analysis of infill corridors



3.2 Network Facility Types

Network facility types for the Strategic Cycling Network were assigned based on the following three categories:

- **Shared** – Shared facilities include roadways or streets where cyclists and motorists use the same road space. Types of shared facilities include signed routes, bicycle boulevards or shared lanes (“sharrows”). Since cyclists and motorists share the same space, these facilities are appropriate on streets with low traffic volumes and/or low speeds.
- **Dedicated** – Designated or dedicated facilities are those that provide space on the road intended for use by cyclists only. They are generally adjacent to motor vehicle lanes and defined by pavement markings. In urban areas, dedicated facilities typically include bike lanes and buffered bike lanes, while paved shoulders provide dedicated space on rural roads.
- **Separated** – Separated bikeways are separated from traffic by more than just a painted line. Separation may consist of bollards or delineators, mountable or barrier curbs, planters, concrete medians, etc. Types of separated facilities can include cycle tracks, raised bike lanes, or multi-use trails. These facilities improve comfort for cyclists along higher-speed, busy roadways.

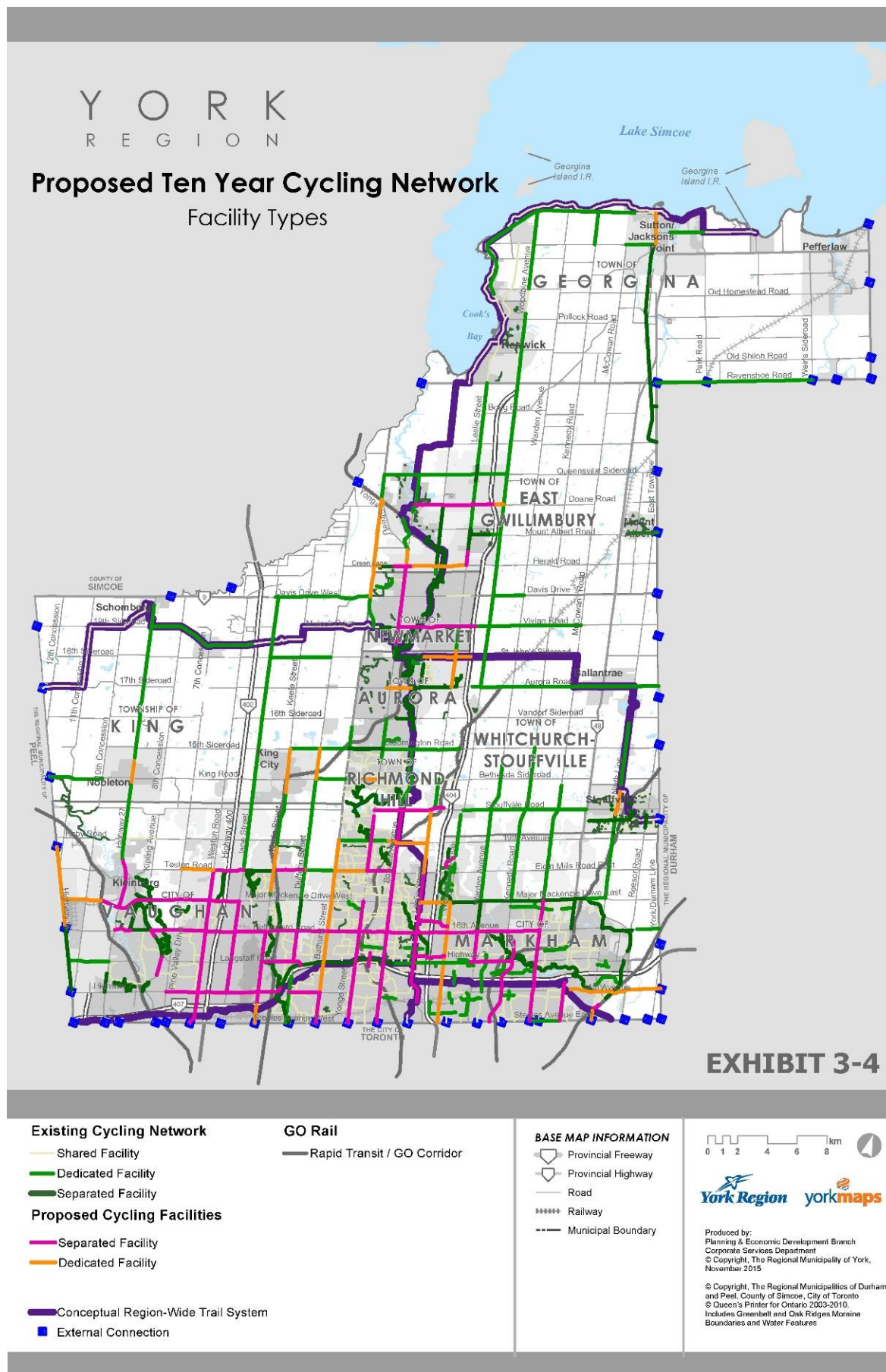
Determining high-order facility types based on these roadway characteristics is consistent with the philosophy presented in OTM Book 18 on cycling facilities. On urban roads, classes of facilities were assigned based on the roadway characteristics including Annual Average Daily Traffic (AADT), number of lanes, operating speeds. This means that in each case, the facility class is based on the appropriate degree of separation for cyclists. In some cases, facility types were assigned based on what has been committed through the capital planning process (i.e. through a completed EA). It is important to note that facility types should be re-considered prior to implementation to ensure the final design reflects the most recent information on vehicular volumes, speeds and roadway characteristics.

By determining the facility class, rather than a specific facility type (i.e. cycle track or bicycle lane) the user experience is established. This allows for improved flexibility as projects move into planning & design phases without compromising the intended quality of the facility as it relates to traffic characteristics along the corridor. As part of the development of the Strategic Cycling Network, it is recommended that active transportation staff from the Region be directly involved in the planning and design phases of these projects (rather than only as reviewers in the design phase) to ensure that facilities are of a high quality.

The assigned facility types represent the minimum desirable facility class. A higher order facility would also be acceptable. Instances where the decision may be made to provide a higher order cycling facility along a corridor include routes which serve school-aged children, routes that provides access to an important community destination such as a school, hospital, community centre or major retail, or where the roadway design changes significantly from what was originally envisioned during the TMP.

A map illustrating the facility types for the strategic network is shown in Exhibit 3-4. In the case of the strategic network, no shared facilities were warranted due to the generally high volumes and speeds of the roadways.

Exhibit 3-4: Strategic Network Facility Types



3.3 Network Phasing

The strategic network has not been assigned phasing since it is intended to be entirely completed within the 10-year horizon. The phasing of the network within the 10-year period should follow a logical development of the network, as well as consider opportunities for cost savings. For example, where an infill corridor is proposed between a capital project and an existing facility, the infill corridor could be implemented following or in conjunction with the capital project.

3.4 Funding Considerations

The Strategic Cycling Network requires additional spending on cycling infrastructure beyond corridors identified in the 10-year capital plan. The additional spending is used to help maximize the value of significant investments already being made, for example infill projects connect to the existing network, which extends the reach of the existing network and may provide access to communities previously isolated from existing regional facilities. Infill projects also connect cycling infrastructure provided through the capital program to existing facilities and also to major destinations such as major transit and regional centres, thereby maximizing the value of the capital project investments. In the same way that it wouldn't make sense to build an isolated transit corridor or road link, the cycling network must be developed in a connected manner in order to maximize potential use.

The projected costs of the strategic cycling network are dependent on the total number of infill projects that are selected for the network. If the full network identified in the current strategic network is constructed, about 87 projects made up of 80 km of dedicated facilities and about 170 km of separated facilities would be built. The infill component of the network is just over 90 km (refer to Exhibit 3-5). Based on rough cost estimates (which consider high quality infrastructure and assume cycling facilities are provided independently from other road work), the projected financial implications of the infill projects would be just under \$3.5 million annually (capital costs only) over the ten-year period beyond capital plan expenditures. This represents an increase from the current \$500 thousand which is spent annually. It should be noted that the actual cost of implementing the infill network is highly variable and ultimate depends on the implementation strategy for each link. Further cost estimates should be prepared as each link is pursued.

Exhibit 3-5: Approximate network lengths

	CAPITAL PLAN	FUNDED TRANSIT	INFILL	TOTAL NETWORK
Dedicated	42	3	37	82
Separated	93	22	54	169
Total Network	135	25	91	251

3.5 Related Policies, Actions and Big Moves in the TMP

The development of the Strategic Cycling Network represents an important strategy for advancing a cohesive cycling network in York Region within a short term horizon. Developing a short term network while continuing to advance the longer term vision is critical to maintaining momentum in active transportation, particularly from a user perspective.

The identification and implementation of the 10-year cycling network is connected with the following policies, actions and big moves from the TMP:

- P23 Continue to participate in the Municipal Liaison Committee with the objectives of sharing information among jurisdictions, enabling integrated active transportation planning and highlighting issues where Regional integration has significant benefits
- P24 Collaborate with local municipalities as they develop and implement their own plans to improve active transportation

- | | |
|----------|--|
| P31 | Include paved shoulders for cyclists as part of all new construction and rehabilitation projects and consider them for inclusion in resurfacing projects on Regional roads in rural areas |
| P32 | Maintain a 10-Year Capital Plan for the proactive implementation of strategic cycling facilities in Regional rights-of-way, giving priority to cycling network elements in areas of high demand |
| P34 | Designate Regionally-significant cycling routes and require consistent design standards and connectivity between them |
| A40 | Integrate walking and cycling infrastructure needs into the Region's Ten-Year Roads Capital Plan so that opportunities for seamless, low-cost development of active transportation infrastructure are captured |
| A45 | Develop a transit station way-finding plan – sign routes up to one kilometre from stations with distances and walking times |
| A46 | Create a dedicated, sustained source of Regional funding for the construction and maintenance of active transportation facilities on Regional roads |
| Big Move | Support the last mile |
| Big Move | Accelerate active transportation facilities that connect communities to transit spines Regional Centres |
| Big Move | Provide safe and convenient walking/cycling opportunities to mobility hubs |

4 Regional Trails Strategy

4.1 Background & Overview

The trail system in York Region provides key off-road links between neighbourhoods and plays a dual role as a key transportation infrastructure element and as a place for recreation. In many cases, crossing natural features such as streams and protected green space with trail infrastructure is easier to implement and maintain than with roads. Trails can therefore provide direct connections for both cyclists and pedestrians by cutting through the street network and natural barriers to link major destinations and municipalities. The importance of a Regional network of trails throughout York Region has been emphasized throughout planning and policy documents.

Initial work to create and identify a conceptual trails network was carried out by long range planning staff as part of a Natural Heritage Concept Study in 2011. The resulting conceptual long term potential Regional Trail corridor system is shown in Exhibit 4-1.

Since then, some of the conceptual trails corridors have been envisioned in more detail. The identification of the preferred route for the Lake to Lake Cycling Route and Walking Trail in the 2013 comprehensive design and feasibility study and ongoing implementation of the route marks an important step forward in advancing the concept into on-the-ground facilities.

The natural progression of the conceptual trail network plan is to create and chair a Regional Trails Coordinating Committee, with representatives of local municipalities that will designate a network of strategic Regional trails and oversee a program to improve their continuity, design and maintenance. This is one of the key recommendations of the TMP. The identification of strategic Regional trails will assist the Region with **prioritizing funding and cost-sharing opportunities for trails projects by identifying a network of connected, Regionally-significant trails** that support both transportation and recreation goals. Trails included in the Regional Trails Strategy should be designed and developed to a high standard consistently across the Region, forming a network of safe, comfortable and convenient trails. These trails will complement and support increased use of active transportation facilities along road corridors.

A similar approach has been used successfully in other communities. Durham Region established the Durham Trail Coordination Committee in 2011 with the goal of expanding, enhancing and promoting a public regional trail system connecting Durham's municipalities that supports active and healthy community lifestyles. The committee is comprised of up to sixteen voting members with a minimum of five area municipalities participating. A Regional Councillor as well as one member of the public are appointed from each participating area municipality.

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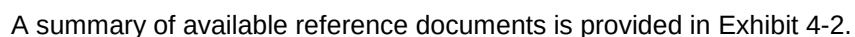


Exhibit 4-2: Municipal Trail & Cycling Resources

MUNICIPALITY	MASTER PLANS					AREA OR CORRIDOR STUDIES WITH TRAIL COMPONENTS
	TMP	AT	BIKE	PEDESTRIAN	TRAILS	
Aurora					✓	
East Gwillimbury	✓	✓			✓	
Georgina		✓			✓	
King	✓					King City Village Nobleton Village Schomberg Village
Markham	✓		✓		✓	Richmond Hill/ Langstaff Centre Gateway Urban Growth Centre Thornhill Yonge Street
Newmarket						Urban Centres
Richmond Hill	✓	✓			✓	
Vaughan	✓	✓				
Whitchurch-Stouffville						Secondary Plans

For each municipality, relevant documents were reviewed to examine the classes of trails identified and planned for the municipality, and to determine which of the classes are most likely to be suitable for Regional active transportation.

In general, trails that are likely to be Regionally-significant from an active transportation perspective must have the following characteristics:

- Surfaces that support multiple, active modes (asphalt or granular)
- Minimum widths that accommodate many users simultaneously
- Long, continuous, high-priority trails that provide relatively direct links between major Regional Centres

With these characteristics in mind, the following sections summarize the planned trail networks within each municipality.

4.2.1 Aurora

Aurora has an existing Trails Master Plan that was developed in November 2011. The report identifies phasing for trails that ranges from short term to long term:

- Short term – Within 15 years (2011-2026)
- Medium Term – Within 16 to 25 years (2027-2036)
- Long-term – Within 26 to 50+ years (2037-2061+)

The TMP identifies a number of classes of trails, as identified in Exhibit 4-3.

Exhibit 4-3: Trail Hierarchy – Aurora Trails Master Plan

REFERENCE	TRAIL CLASSES
Aurora Trails Master Plan	» Town-Wide Spine Trail (In-Road Right of Way) » Town-Wide Spine Trails (Off-Road) – includes the Nokiidaa Trail » Local Neighbourhood Trails » Special Use Trails – includes the Oak Ridges Moraine Trail

According to the trail design standards provided in the document, **town-wide spine trails** will be built to be accessible whenever feasible, and will be signed to provide information to users with mobility challenges. In addition, the widest target widths are reserved for the spine system. The surface will generally be granular, with consideration given to paving the trails as needed to prevent erosion or to support multiple types of users (i.e. small-wheeled devices such as skateboards). Consequently, the **spine trails are most likely to be appropriate for supporting active transportation**, compared to lower order or sensitive use pathways.

4.2.2 East Gwillimbury

East Gwillimbury has an Active Transportation and Trails Master Plan developed in 2012. The plan identifies the following implementation horizons:

- Phase I – Short-term (0-5 years; 2012-2017)
- Phase II – Medium-term (6-10 years; 2018-2023)
- Phase III – Long-term (11-25+ years; 2024-2038+)

There are a number of types of trail infrastructure identified in the study, as summarized in Exhibit 4-4.

Exhibit 4-4: Trail Hierarchy – East Gwillimbury Active Transportation and Trails Master Plan

REFERENCE	TRAIL CLASSES
East Gwillimbury Active Transportation and Trails Master Plan	» Multi-Use Trail (includes the Nokiidaa Trail) » Multi-Use Trail (along Future Road Link) » Footpath » York Region Forest Trails

The trail links which are most appropriate for use for transportation are the multi-use trails identified in the plan, including the Nokiidaa Trail. According to the design characteristics laid out in the document, multi-use trails are intended to serve a wide variety of users, with a minimum width of 3m. While multi-use trails within the road right-of-way will also serve transportation purposes, they are likely to be funded through the capital road program or other funding mechanisms and therefore do not need to be included in the Regional Trails Strategy.

4.2.3 Georgina

Georgina's Trails and Active Transportation Master Plan was developed in 2014. The phasing in the document is separated into the three horizons:

- Short-term (0-5 years; 2014-2019)
- Medium-term (5-10 years; 2020-2025)
- Long-term (11-20+ years; 2026-2035+)

While there is no trail hierarchy in the plan, multi-use trails and desired connections are identified. The majority of the multi-use trails represent local, rather than Regional

connections. As a result, it is recommended that all the facilities along the Lake to Lake Cycling Route and Walking Trail be included in the Regional Trails Strategy.

4.2.4 King

The Township of King recently completed a Trails Master Plan in August 2015. There are 22 new trail links identified in the Trails Master Plan. Of these, many are intended primarily as pedestrian or equestrian links. However, there are two proposed trails following hydro corridors that could provide excellent cross-municipality recreational and active transportation opportunities in conjunction with the greenbelt route. The two proposed hydro corridor trails are candidates for inclusion in the Regional Trails Strategy. This includes trail links N19, N21, N4, N8, N13, N15, N16, and N17 in the Master Plan.

4.2.5 Markham

Markham has a Pathways and Trail Master Plan prepared in 2009 with four implementation horizons:

- Short-term (0-5 years; 2009-2014)
- Medium-term (5-10 years; 2014-2019)
- Long-term (10-20 years; 2019-2029)
- Ultimate (20-50 years; 2029+)

The various trail classes are identified in Exhibit 4-5.

Exhibit 4-5: Trail Classes – Markham's Pathways & Trail Master Plan

REFERENCE	TRAIL CLASSES
Pathways & Trails Master Plan	» Type I: Primary Multi-use Town Wide Pathway » Type II: Secondary Town-wide Pathway » Type III: Park Pathways » Type IV: Trails

Type I Pathways are most appropriate for inclusion in the Regional Trails Strategy as they are the highest level of off road pathways identified in the plan, serving town-wide linkages. These pathways are designed with a minimum width of 3.0m and an asphalt surface to support use by many types of users. They are also intended to be winter-maintained, and well-lit to support year-round use.

4.2.6 Newmarket

Newmarket does not have any trails or active transportation plans available; however, Official Plan Amendment 11 includes a high level map. Until such documents are prepared, it is recommended that the segments of the Lake to Lake Cycling Route and Walking Trail and the Greenbelt Route through Newmarket be included in the Regional Trails Strategy.

4.2.7 Richmond Hill

Richmond Hill has an existing Trails Master Plan developed in 2004. Limited information regarding planned facility type / trail class or implementation time frame is available. It is also likely that much of the trails network has been completed in the ten years since the plan was developed. As a result, it is recommended that the facilities along the Lake to Lake Cycling Route and Walking Trail be included in the Regional Trails Strategy.

4.2.8 Vaughan

Vaughan's Pedestrian and Bicycle Master Plan was completed in 2007. The study identifies two implementation time frames:

- Short Term (0-10 year, 2006-2016)
- Long Term (10-20 years, 2017-2026)

There are several classes of trails include in the study, as identified in Exhibit 4-6.

Exhibit 4-6: Trail Hierarchy – Vaughan Pedestrian & Bicycle Master Plan

REFERENCE	TRAIL CLASSES
Pedestrian & Bicycle Master Plan Study (2007)	» Community Multi-use Recreational Pathway » Neighbourhood Multi-use Recreational Pathway » Community Multi-use Boulevard Pathway » Footpath / Hiking Trail

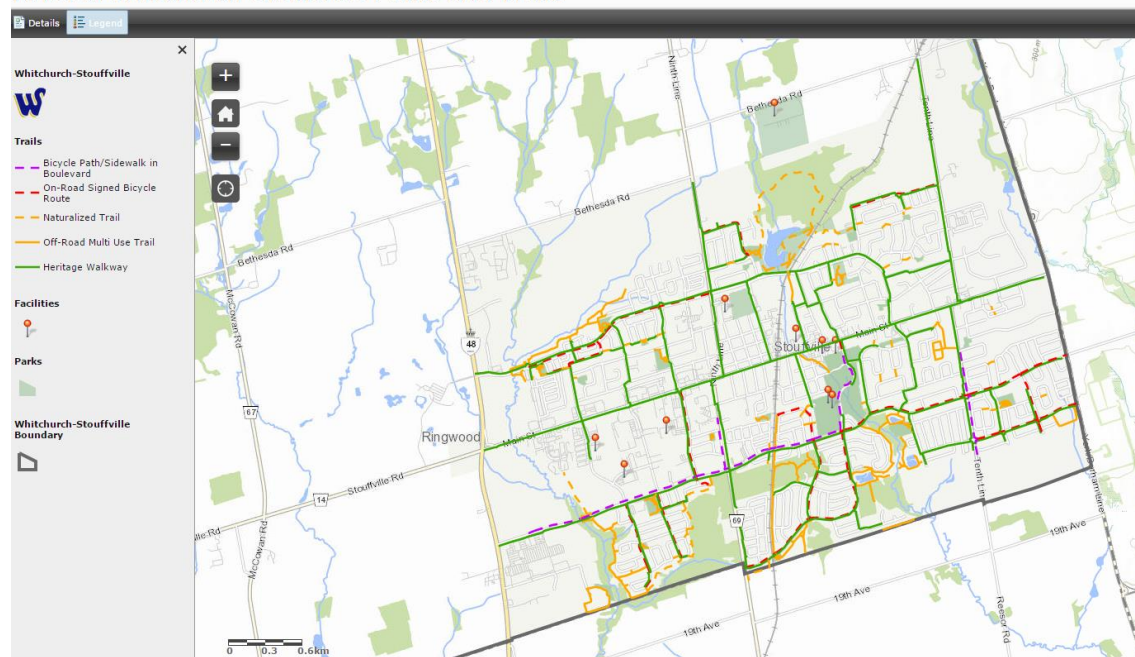
The trail links which are most appropriate for use for transportation are the community multi-use recreational pathways. According to the design characteristics, these trails are intended to serve a wide variety of users, with a minimum width of 3m. Community multi-use boulevard pathways are also likely to form an important core of the active transportation network, however they are likely to be funded through the capital road program or other funding mechanism since they are developed within the road ROW.

4.2.9 Whitchurch-Stouffville

Although Whitchurch-Stouffville does not have an existing trails plan, there is a trail guide provided on their website (see Exhibit 4-7 below). The trail guide includes several classes of trails, including naturalized trails, off-road multi-use trails, and heritage walkways.

Exhibit 4-7: Trail Maps – Whitchurch-Stouffville

Town of Whitchurch-Stouffville Parks and Trails



While the multi-use trails are the most likely to be appropriate from a transportation perspective, the network appears to serve a relatively local neighbourhood context. Therefore, it is recommended that the Greenbelt Route through Whitchurch-Stouffville be included in the Regional Trails Strategy.

4.2.10 Summary of Municipal Trail Review

A summary of the various trail types within each municipality is identified in Exhibit 4-8. The facilities which are most likely to be suitable for travel by active transportation are shown in bold.

Exhibit 4-8: Summary of Trails Planning Documents & Classes

AREA	PLANNING DOCUMENT	TRAIL CLASSES
Aurora	Aurora Trails Master Plan (2011)	» Town-Wide Spine Trail (In-Road Right of Way) » Town-Wide Spine Trails (Off-Road) – includes the Nokiidaa Trail » Local Neighbourhood Trails » Special Use Trails – includes the Oak Ridges Moraine Trail
East Gwillimbury	East Gwillimbury Active Transportation & Trails Master Plan (2012)	» Multi-Use Trail » Multi-Use Trail (along Future Road Link) » Nokiidaa Trail » Footpath » York Region Forest Trails
Georgina	Town of Georgina Trails & Active Transportation Master Plan (2014)	» Multi-use Trails » Desired Connections » Lake to Lake Cycling Route and Walking Trail (part of the Primary System)
King	Township of King Trails Master Plan (2015)	» Hydro corridor trails
Markham	Pathways & Trails Master Plan (2009)	» Type I: Primary Multi-use Town Wide Pathway » Type II: Secondary Town-wide Pathway » Type III: Park Pathways » Type IV: Trails
Newmarket	N/A	N/A
Richmond Hill	Trails Master Plan (2004)	Trails Master Plan does not include any trail classes
Vaughan	Pedestrian & Bicycle Master Plan Study (2007)	» Community Multi-use Recreational Pathway » Neighbourhood Multi-use Recreational Pathway » Community Multi-use Boulevard Pathway » Footpath / Hiking Trail
Whitchurch-Stouffville	N/A	N/A

This table identifies potential regionally significant trails solely from an active transportation perspective i.e. how well the various classes of trails could serve users from the perspective of regional travel. However, the Regional Trails Strategy will consider a more holistic view of trails which considers potential tourism and natural heritage factors. Based on the evaluation presented above (transportation-focused), as well as a need to emphasize regional corridors from other factors including conservation, the following Exhibit 4-9 summarizes a first cut at potential municipal trails to be included in the Regional Trails Strategy.

It is noted that these recommendations are based on an external review of trail planning documents, and that coordination with municipal partners may provide supplementary information and guidance in identifying Regionally-significant trails. As part of the development of the Regional Trails Strategy, all municipalities should be provided with the opportunity to comment on trail priorities. It is recognized that the Regional Trail Strategy would evolve over time as more detailed planning exercises are carried out in the various municipalities.

Exhibit 4-9: Summary of Potentially Regionally Significant Trails in Area Municipalities

LOCAL AREA MUNICIPALITY	REFERENCE	POTENTIAL REGIONALLY-SIGNIFICANT TRAILS
Aurora	Aurora Trails Master Plan (2011)	- All 'Town-Wide Spine Trails (Off-Road)' from the Trails Master Plan - Nokiidaa Trail - Greenbelt Route - Lake to Lake Cycling Route and Walking Trail - Oak Ridges Trail
East Gwillimbury	East Gwillimbury Active Transportation & Trails Master Plan (2012)	- All 'Multi-Use Trails' from the Active Transportation & Trails Master Plan - Nokiidaa Trail - Lake to Lake Cycling Route and Walking Trail - Sutton-Zephyr Rail Trail
Georgina	Town of Georgina Trails & Active Transportation Master Plan (2014)	Lake to Lake Cycling Route and Walking Trail
King	Township of King Trails Master Plan (2015)	- Hydro corridor trails (Links N19, N21, N4, N8, N13, N15, N16, and N17) from the Trails Master Plan - Greenbelt Route - Oak Ridges Trail
Markham	Pathways & Trails Master Plan (2009)	- All 'Type I Primary Multi-Use Town Wide Pathways' from the Pathways & Trails Master Plan - Rouge Valley Trail - Lake to Lake Cycling Route and Walking Trail - Future Rouge National Urban Park trails
Newmarket	OPA 11	- Lake to Lake Cycling Route and Walking Trail - Greenbelt Route - Oak Ridges Trail
Richmond Hill	Trails Master Plan (2004)	- Lake to Lake Cycling Route and Walking Trail - Oak Ridges Corridor Park
Vaughan	Pedestrian & Bicycle Master Plan Study (2007)	- All 'Community Multi-use Recreational Pathways' from the PBMP - Bartley Smith Greenway - William Granger Greenway
Whitchurch-Stouffville	Transportation Master Plan (in progress)	- Greenbelt Route - Oak Ridges Trail

4.3 Other Agencies

It is noted that the information provided in the previous section focuses primarily on York Region's municipal partners. However, there is significant work being conducted by other agencies and partners including Lake Simcoe Region Conservation Authority, Toronto and Region Conservation Authority (TRCA), Parks Canada and the Rouge National Urban Park Initiative, City of Toronto, Greenbelt Route, Oak Ridges Trail Association, etc., which will have important implications for York Region as they develop a Regional Trails Strategy.

Some trails / initiatives of note include:

- TRCA is moving forward with trails in the Nashville Conservation Reserve as part of the larger TRCA Trails Strategy which will connect Kleinberg to Bolton, providing an important connection to the Trans Canada Trail
- The City of Toronto has several high quality trail systems that York Region should consider connections to, including the Humber Trail, Pan Am Path system and the Waterfront Trail
- Connecting to trails in the Rouge Valley lands and the Rouge National Urban Park

As the Region moves ahead with the development and identification of the Regional Trail Strategy, ongoing cooperation with these key stakeholders and organizations will be critical to a developing region-wide network.

4.4 Related Policies, Actions and Big Moves in the TMP

The following policies, actions and big moves in the TMP are related to the development of a Regional trails strategy:

P25	Continue to work with local municipalities, Toronto and Region Conservation Authority, the Lake Simcoe Region Conservation Authority, Parks Canada and other stakeholders to advance the development of a Regional Trails System. Regional trails should be designed and developed to a high standard, consistent across York Region, forming a network of safe and comfortable trails for multiple active transportation users
P34	Designate Regionally-significant cycling routes and require consistent design standards and connectivity between them
A35	Create and chair a Regional Trails Coordinating Committee, with representatives of local municipalities that will designate a network of strategic Regional trails and oversee a program to improve their continuity, design and maintenance
Big Move	Develop a trails strategy to provide a network of greenways
Big Move	Complete Lake to Lake Cycling Route and walking trail and prioritize projects that support connectivity in urban areas

5 Pedestrian and Cycling Policies

A review of the policies in the 2008 Pedestrian and Cycling Master Plan (PCMP) was undertaken to determine modifications or new policies to address the TMP's objectives for walking and cycling.

5.1 Creating Walkable Environments

The ability to walk comfortably to nearby destinations in York Region is fundamentally important to building an interconnected system of mobility. The impact that the planning and design of our communities has on public health has been well publicized. The *Healthy Communities Practice Guide* published by the Canadian Institute of Planners, highlights that walkable neighbourhoods promote physically active and sustainable lifestyles—a stance supported by the *Improving Health by Design in the Greater Toronto and Hamilton Area* report by the GTHA Medical Officers of Health. York Region recognizes that, beyond the public health benefits, improving pedestrian facilities and connectivity improves access to public transit.

5.1.1 Current Conditions and Challenges

The Region's residents face some challenges in navigating their neighbourhoods as pedestrians, including:

- **Incomplete network** – missing sidewalks and trails that present barriers to residents completing trips entirely on foot
- **Incomplete connections to transit** – missing links between the pedestrian network and the transit network that make first and last kilometre trips unattractive to make on foot

Given that sidewalks and multi-use trails are under the jurisdiction of local municipalities, the Region is also constrained in what interventions it can practically make to improve the pedestrian environment.

The 2008 Pedestrian and Cycling Master Plan (PCMP) proposed seven specific actions to improve the pedestrian environment, one of which is complete while the others are in progress.

5.1.2 Related Policies, Actions and Big Moves in the TMP for Creating Walkable Environments

Policies, actions and big moves in the TMP relevant to creating walkable environments are as follows:

- | | |
|-----|---|
| P23 | Continue to participate in the Municipal Liaison Committee with the objectives of sharing information among jurisdictions, enabling integrated active transportation planning and highlighting issues where Regional integration has significant benefits |
| P24 | Collaborate with local municipalities as they develop and implement their own plans to improve active transportation |
| A37 | Develop streetscape design standards for Regional roads to improve the walking environments through features such as benches, trees and lighting |
| A38 | Undertake a sidewalk data collection and mapping exercise |
| A41 | Update the Region's guidelines and standards for the design of pedestrian and cycling facilities, including mid-block crossings, in view of relevant best practices and recent amendments to the Ontario Highway Traffic Act, keeping in mind the objective of consistent application by local municipalities |

- A48 Review the Region's criteria for setting Regional street design speeds and posted speed limits for consistency with the objective of promoting active transportation as an element of livable communities

Big Moves Complete gaps in sidewalks

5.2 Improving Cycling Facilities

Incorporating provisions for cycling into right-of-way designs, improving the comfort and safety of cycling facilities, and establishing connectivity to destinations is critical for enhancing the potential for cycling in York Region.

Providing safe, comfortable, and integrated cycling infrastructure extends the range of destinations and activities that residents can reach without requiring access to motorized transportation. Cycling facilities are therefore complementary to the pedestrian facilities needed to build an inclusive, integrated and sustainable transportation system.

5.2.1 Current Conditions and Challenges

As a result of the structure of York Region, some issues remain that make it challenging to implement appropriate facilities on Regional roads:

- **Weak Integration** – the Region is only responsible for the cycling facilities that are on Regional roads, which allows gaps to emerge between Regional routes and the local networks and off-road trails under local municipal jurisdiction
- **Non-Inclusive** – most Regional roads are high-volume, high-speed corridors that are inherently unattractive to residents considering cycling for short trips. However, there are many destinations located along these roads that residents want to access safely and comfortably.

The 2008 Pedestrian and Cycling Master Plan (PCMP) proposed 10 actions to improve the cycling facilities in the Region, two of which are complete, one has not been started, while the others are in progress. However, some challenges remain that are hindering efficient and effective implementation of the plan. The Strategic Cycling Network addresses the following two challenges:

- The prioritization of various plan elements in the PCMP is unclear, making it challenging to determine how various infrastructure elements should be rolled out to maximize benefits
- Some infrastructure elements do not align with the Region's 10-Year Roads Capital Plan, making them challenging to implement

The third challenge is that the design standards and best practices for comfortable cycling facilities for a wide range of people who bicycle or are interested in cycling has surpassed the guidance offered by the PCMP. The on-going work on the Pedestrian & Cycling Planning & Design Guidelines as a parallel project to the TMP should address this issue.

5.2.2 Related Policies and Actions in the TMP for Improving Cycling Facilities

The following policies from the 2008 PCMP are still relevant to improving cycling facilities:

- P23 Continue to participate in the Municipal Liaison Committee with the objectives of sharing information among jurisdictions, enabling integrated active transportation planning and highlighting issues where Regional integration has significant benefits
- P24 Collaborate with local municipalities as they develop and implement their own plans to improve active transportation

Policies and actions introduced in the TMP relevant to improving cycling facilities are as follows:

- P34 Designate Regionally-significant cycling routes and require consistent design standards and connectivity between them
- Big Move Build comfortable and convenient cycling infrastructure that appeals to a broad range of ages and abilities
- Big Move Work with MTO to make highway interchanges pedestrian and cycle friendly

5.3 Boulevard Jurisdiction

The Boulevard Jurisdiction Strategy and related policies were developed and documented in a separate report.

5.3.1 Policies and Actions in the TMP regarding Boulevard Jurisdiction

The related policies, actions and big moves in the TMP related to boulevard jurisdiction are as follows:

- P26 The Region will assume responsibility for planning, design, construction, operation and ownership of boulevard elements within Regional rights-of-way, including sidewalks, cycling facilities, illumination and streetscape design
- P27 Prepare a strategy to allocate development charges levied for constructing in-boulevard infrastructure along Regional roads to the level of government responsible for the construction
- P28 Collaborate with local municipalities to identify missing links and substandard elements in the sidewalk network along transit routes and within Regional Centres and Corridors and to develop a shared strategy for correcting deficiencies by 2030
- A36 Work with local area municipalities to assume planning, design, construction, maintenance and jurisdictional responsibility for boulevard elements within the Regional rights-of-way, including sidewalks, cycling facilities, illumination and streetscape design
- A39 Continue to work with local area municipalities on design considerations for Regional boulevards
- A47 Establish a Development Charge funded reserve for construction of boulevard elements including sidewalks, cycling facilities, illumination and streetscape design

5.4 Safety of People who Travel by Active Transportation

The perceived level of safety is among the strongest determinants of whether people will choose to complete a trip on foot or by bicycle. In some cases, the car is seen as the safest option, particularly when the trip requires travelling along busy Regional roads. York Region recognizes that providing a safe and comfortable environment for active transportation is important to encouraging more sustainable lifestyles.

5.4.1 Current Conditions and Challenges

Although some of the safety concerns around active transportation in York Region stem from the auto-centric design of the rights-of-way, there are other issues:

- **Complex intersections** - most cyclist and pedestrian related collisions occur at signalized intersections and intersections of Regional roads are among the most difficult to navigate safely. As Regional roads become larger and more complex these intersections become greater hazards to active transportation.

- **Inefficient trail crossings** – pedestrians and cyclists are often forced to make circuitous detours when trails intersect Regional roads due to a lack of mid-block crossings. As a result, Regional roads tend to become barriers to active transportation along the trail system. New opportunities may be available through Ontario Bill 31, Transportation Statute Law Amendment Act (Making Ontario's Roads Safer), 2015, to provide more direct crossings of Regional roads, however 6-lane roads will still require a signalized mid-block crossing or other facility such as a grade separated crossing.
- **Wide, busy roads become barriers** – Regional roads can become barriers to potential cyclists looking for routes across these roadways. As Regional rights-of-way become more complex with the introduction of HOV lanes plus up to four traffic lanes, safe and comfortable crossings are needed.
- **Congestion around schools** - traffic congestion around schools during the morning and afternoon peak periods can create perceived safety risks for youth walking or cycling to school. Many cautious parents choose to drive their children even though many school trips are within walking or cycling distance.

The 2008 PCMP policies describe steps that the Region can take to educate all right-of-way users on safe use of roads, sidewalks, and trails.

5.4.2 Related Policies and Actions in the TMP for Improving AT Safety

Policies introduced in the TMP relevant to improving the safety of walking and cycling are as follows:

- | | |
|-----|--|
| P29 | Promote safe road use through the use of clear, consistent signage and way-finding for drivers, pedestrians and cyclists |
| P30 | Collaborate with local municipalities, schools and school boards to assess schools using York Region's Safety and Traffic Circulation at School Sites Guidelines and help them plan and implement remedial measures at schools where necessary |
| A42 | Establish targets for reducing collisions involving pedestrians and cyclists on Regional roads, conduct an annual review of collisions involving pedestrians and cyclists by location and maintain a multi-year action plan to improve safety at identified hotspots through improved infrastructure design, signs, markings and education |
| A44 | Develop a strategy to provide safe crossing locations on Regional roads wherever they intersect with Regionally-significant trails and to provide way-finding measures that encourage their use |
| A64 | Review the Region's criteria for setting Regional street design speeds and posted speed limits for consistency with the objective of promoting active transportation as an element of livable communities |

5.5 Promoting Walking and Cycling

In addition to providing the infrastructure to enable active transportation, York Region recognizes the need to raise the awareness of the available active transportation options, and to engage residents on how best to use the infrastructure. This includes educating all right-of-way users about safe practices and providing information about the most sustainable travel options for various trips to make use of the infrastructure provided.

5.5.1 Current Conditions and Challenges

Active transportation in York Region is still not viewed as a viable alternative for many residents, even for short trips that could easily be completed by bicycle or on foot. The declining active mode share for school trips is one manifestation of this.

The following summarize some of the barriers to active transportation aside from the built environment:

- **Inadequate Information** – many residents are not aware of the safest routes that their children can take to walk or bike to school so they choose what they see as the most convenient alternative—driving the children to school.
- **Insufficient Training** – despite knowing that active transportation infrastructure is in place, some residents do not feel adequately prepared to bike on public roads. Their safety concerns often override any desire to choose more sustainable modes.
- **Fledgling Walking and Cycling Culture** – often residents, particularly newcomers, will choose the travel mode that they see others using under the notion that this mode is “normal”. When residents do not see many people using active modes for daily trips, they are less likely to choose active modes themselves.

5.5.2 Related Policies and Actions in the TMP for Promoting Walking and Cycling

The TMP includes the following policy supporting the relevant policies in the 2008 PCMP:

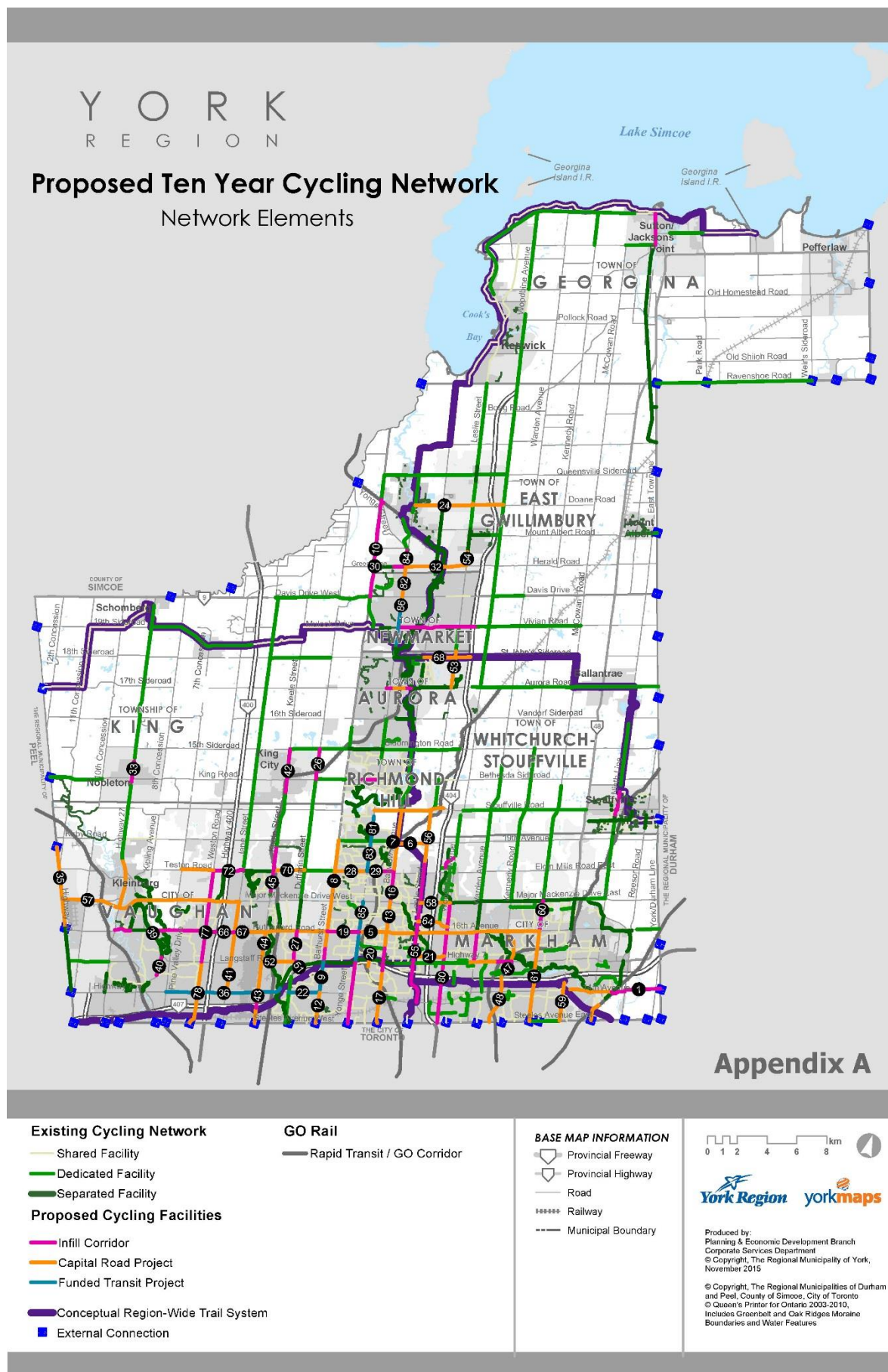
P33	Collaborate with local municipalities, non-governmental organizations and advocacy groups in the promotion of active transportation programs and special events, such as Bike Month and Bike to Work Day
P58	Continue to lead (via York Region Public Health) the York Region Active and Safe Routes to School Committee and to coordinate the efforts of Regional and local municipal transportation departments, school boards, school administrations and school communities to deliver needed resources, services and infrastructure
P59	Continue to support and collaborate with local municipalities to develop and implement municipal school travel planning policies
P60	Advocate for the school travel planning approach and work with all interested publicly funded Elementary schools in York Region to develop school travel plans
P61	Consider opportunities for engaging directly with individuals and families to encourage sustainable travel choices, in order to maximize future uptake of facilities and services for walking, cycling, carpooling and public transit
P63	Support new active transportation infrastructure through marketing, promotion and education of transportation options
A34	Develop an Active Transportation Charter that describes what kinds of active transportation facilities residents can expect (with an emphasis on Regional Centres and Corridors), what criteria will be used to prioritize and schedule their implementation and what standards will guide their construction and maintenance
A43	Collaborate with local municipalities to prepare an Active Transportation Signage and way-finding Strategy for York Region that includes goals, principles, guidelines and an implementation plan

Appendix A – Map & Summary of Strategic Network links

ID	Corridor	Type	Approx. Length (m)
1	14 th Avenue, Donald Cousens Parkway to York-Durham Line	Infill Corridor	3,500
2	14 th Avenue, Hydro Corridor to Donald Cousens Parkway	Capital Road Project	2,900
3	16 th Avenue, Leslie Street to Woodbine Avenue	Capital Road Project	2,100
4	16 th Avenue, Woodbine Avenue to McCowan Road	Capital Road Project	6,300
5	16 th Avenue, Yonge Street to Leslie Street	Capital Road Project	3,900
6	19 th Avenue, Bayview Avenue to Leslie Street	Capital Road Project	2,100
7	19 th Avenue, Jefferson Forest Drive to Bayview Avenue	Capital Road Project	700
8	Bathurst Street, Autumn Hill Boulevard to Gamble Road	Capital Road Project	7,400
9	Bathurst Street, Centre Street to Highway 7	Funded Transit Project	2,100
10	Bathurst Street, Davis Drive to Highway 11	Infill Corridor	5,900
11	Bathurst Street, Highway 7 to Autumn Hill Boulevard	Infill Corridor	900
12	Bathurst Street, Steeles Avenue West to Centre Street	Capital Road Project	2,100
13	Bayview Avenue, Bantry Avenue to Major Mackenzie Drive	Capital Road Project	3,200
14	Bayview Avenue, Elgin Mills Road to Stouffville Road	Capital Road Project	4,300
15	Bayview Avenue, Langstaff Road to Bantry Avenue	Infill Corridor	1,700
16	Bayview Avenue, Major Mackenzie Drive to Elgin Mills Road	Infill Corridor	2,000
17	Bayview Avenue, Steeles Avenue to Langstaff Road	Capital Road Project	3,500
18	Bayview Avenue, Stouffville Road to Old Colony Road	Funded Transit Project	1,100
19	Carrville Road, Bathurst Street to Yonge Street	Infill Corridor	2,200
20	Cedar Avenue to Red Maple Road - Highway 407 Flyover	Capital Road Project	1,900
21	Centaurian Drive to East Pearce Street - Highway 404 Flyover	Capital Road Project	2,200
22	Centre Street, Dufferin Street to Bathurst Street	Funded Transit Project	2,100
23	Dalton Road, Baseline Road to Metro Road	Infill Corridor	2,200
24	Doane Road, Yonge Street to Woodbine Avenue	Capital Road Project	6,100
25	Donald Cousens Parkway, Steeles Avenue to Box Grove Bypass	Capital Road Project	1,300
26	Dufferin Street, King Street to 15 th Sideroad	Infill Corridor	2,100
27	Dufferin Street, Langstaff Road to Rutherford Road	Infill Corridor	2,100
28	Elgin Mills Road, Bathurst Street to Yonge Street	Capital Road Project	2,200
29	Elgin Mills Road, Yonge Street to Bayview Avenue	Infill Corridor	1,900
30	Green Lane, Bathurst Street to Existing Multi-use Path	Infill Corridor	900
31	Green Lane, Existing Multi-use Path to Yonge Street	Infill Corridor	800

ID	Corridor	Type	Approx. Length (m)
32	Green Lane, Yonge Street to Leslie Street	Capital Road Project	400
33	Highway 27 through Nobleton	Infill Corridor	1,400
34	Highway 27, Major Mackenzie Drive to existing paved shoulders	Capital Road Project	3,300
35	Highway 50, Rutherford Road to S of Kirby Road	Capital Road Project	5,600
36	Highway 7, Pine Valley Drive to Centre Street	Funded Transit Project	7,900
37	Highway 7, Rail Corridor to Kennedy Road	Infill Corridor	1,200
38	Highway 7, W of Warden Avenue to Rail Corridor	Capital Road Project	1,900
39	Islington Avenue, Arista Gate to Rutherford Road	Infill Corridor	500
40	Islington Avenue, Willis Road to Langstaff Road	Infill Corridor	1,300
41	Jane Street, Highway 7 to Major Mackenzie Drive	Capital Road Project	6,300
42	Keele Street, existing paved shoulders to Bloomington Road	Infill Corridor	3,000
43	Keele Street, Highway 407 to Highway 7	Infill Corridor	1,100
44	Keele Street, Highway 7 to Rutherford Road	Capital Road Project	4,100
45	Keele Street, North of Major Mackenzie Drive to Peak Point Boulevard	Infill Corridor	3,000
46	Keele Street, Steeles Avenue West to Highway 407	Capital Road Project	1,100
47	Kennedy Road, along Transit Corridor	Funded Transit Project	1,200
48	Kennedy Road, Steeles Avenue to Transit Corridor	Capital Road Project	3,500
49	Kennedy Road, Transit Corridor to 16 th Avenue	Capital Road Project	2,300
50	King Street, Bond Street to Yonge Street	Infill Corridor	1,100
51	Langstaff Road, Dufferin St to Highway 7	Infill Corridor	700
52	Langstaff Road, Keele Street to Dufferin Street	Capital Road Project	2,200
53	Leslie Street Aurora to John Street	Capital Road Project	2,500
54	Leslie Street, Green Lane to Existing Multi-use Path	Capital Road Project	1,000
55	Leslie Street, John Street to North of Elgin Mills Road (Lake to Lake Cycling Route and Walking Trail)	Infill Corridor	9,600
56	Leslie Street, North of Elgin Mills Road to Stouffville Road	Capital Road Project	3,700
57	Major Mackenzie Drive, Highway 50 to Jane Street	Capital Road Project	12,300
58	Major Mackenzie Drive, Leslie St to Woodbine Avenue	Capital Road Project	2,100
59	Markham, Steeles Avenue to Hydro Corridor	Capital Road Project	2,600
60	McCowan Road, 16 th Avenue to Major Mackenzie Drive	Infill Corridor	2,100
61	McCowan Road, Steeles Avenue to 16 th Avenue	Capital Road Project	6,200

ID	Corridor	Type	Approx. Length (m)
62	Mulock Drive /Vivian Road, Yonge Street to East of Highway 404	Infill Corridor	5,300
63	Ninth Line through Stouffville	Infill Corridor	1,700
64	North of 16th Avenue Crossing	Capital Road Project	2,200
65	Rutherford Road, Highway 27 to Existing Multi-use Path	Infill Corridor	1,100
66	Rutherford Road, Islington Avenue to Jane Street	Infill Corridor	5,700
67	Rutherford Road, Jane Street to Bathurst Street	Capital Road Project	6,300
68	John Street Street, Bayview Avenue to Highway 404	Capital Road Project	3,200
69	Stouffville Road, Yonge Street to of Leslie Street	Capital Road Project	4,700
70	Teston Road, Keele Street to Dufferin Street	Capital Road Project	3,200
71	Teston Road, Pine Valley Drive to Weston Road	Capital Road Project	2,200
72	Teston Road, Weston Road to Jane Street	Infill Corridor	2,100
73	Warden Avenue, Highway 7 to 16 th Avenue	Infill Corridor	2,100
74	Wellington Street , Lake to Lake Cycling Route and Walking Trail to East of Aurora GO Station	Infill Corridor	500
75	Wellington Street , Mill Street to Yonge Street	Infill Corridor	400
76	Wellington Street , Yonge Street to of Aurora GO Station	Capital Road Project	800
77	Weston Road, Langstaff Road to Teston Road	Infill Corridor	6,300
78	Weston Road , Steeles Ave to Langstaff Road	Capital Road Project	4,300
79	Woodbine Avenue, Prince of Wales Drive to Victoria Square	Infill Corridor	1,000
80	Woodbine Avenue, Steeles Avenue to Major Mackenzie Drive	Infill Corridor	8,200
81	Yonge Street, 19th Avenue to Stouffville Road	Funded Transit Project	1,700
82	Yonge Street, Davis Drive to Green Lane	Capital Road Project	2,100
83	Yonge Street, Elgin Mills Road to 19 th Avenue	Funded Transit Project	2,100
84	Yonge Street, Green Lane to Highway 11	Infill Corridor	1,100
85	Yonge Street, Highway 7 to Major Mackenzie Drive	Funded Transit Project	4,000
86	Yonge Street, Savage Road to Davis Drive	Funded Transit Project	3,200
87	Yonge Street, Steeles Avenue to Highway 7	Infill Corridor	4,300



Appendix B – Summary of Strategic Network Link Priority Scores

ID	Corridor	Priority Ranking
1	14 th Avenue, Donald Cousens Parkway to York-Durham Line	3
10	Bathurst Street, Davis Drive to Hwy 11	2
11	Bathurst Street, Highway 7 to Autumn Hill Boulevard	3
15	Bayview Avenue, Langstaff Road to Bantry Avenue	1
16	Bayview Avenue, Major Mackenzie Drive to Elgin Mills Road	1
19	Carrville Road, Bathurst Street to Yonge Street	2
23	Dalton Road, Baseline Road to Metro Road	4
26	Dufferin Street, King Street to 15th Sideroad	3
27	Dufferin Street, Langstaff Road to Rutherford Road	1
29	Elgin Mills Road, Yonge Street to Bayview Avenue	1
30	Green Lane, Bathurst Street to Existing Multi-use Path	4
31	Green Lane, Existing Multi-use Path to Yonge Street	3
33	Highway 27 through Nobleton	4
37	Highway 7, Rail Corridor to Kennedy Road	2
39	Islington Avenue, Arista Gate to Rutherford Road	3
40	Islington Avenue, Willis Road to Langstaff Road	4
42	Keele Street, existing paved shoulders to Bloomington Road	3
43	Keele Street, Highway 407 to Highway 7	2
45	Keele Street, North of Major Mackenzie Drive to Peak Point Boulevard	4
50	King Street, Bond Street to Yonge Street	4
51	Langstaff Road, Dufferin St to Highway 7	3
55	Leslie Street, John Street to North of Elgin Mills Road (Lake to Lake Cycling Route and Walking Trail)	1
60	McCowan Road, 16th Avenue to Major Mackenzie Drive	2
62	Mulock Drive /Vivian Road, Yonge Street to East of Highway 404	2
63	Ninth Line through Stouffville	2
65	Rutherford Road, Highway 27 to Existing Multi-use Path	4
66	Rutherford Road, Islington Avenue to Jane Street	1
72	Teston Road, Weston Road to Jane Street	2
73	Warden Avenue, Highway 7 to 16 th Avenue	2
74	Wellington Street , Lake to Lake Cycling Route and Walking Trail to East of Aurora GO Station	3
75	Wellington Street , Mill Street to Yonge Street	3
77	Weston, Langstaff to Teston	1
79	Woodbine Avenue, Prince of Wales Drive to Victoria Square	4
80	Woodbine Avenue, Steeles Avenue to Major Mackenzie Drive	1
84	Yonge Street, Green Lane to Highway 11	3
87	Yonge Street, Highway 7 to Major Mackenzie Drive	1