



Project File: Volume 1 of 2 – Report

# Centennial Neighbourhoods Transportation Management Plan

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## Municipal Class EA



Prepared for City of Hamilton  
by IBI Group

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# 1 Introduction

The purpose of this Centennial Neighbourhoods Transportation Management Plan (TMP) is to develop a comprehensive transportation plan that will:

- a) Follow the Municipal Class Environmental Assessment (EA) process
- b) Support the Centennial Neighbourhoods Secondary Plan study
- c) Identify future transportation needs and address existing transportation issues
- d) Identify and evaluate transportation options and recommend solutions



## 1.1.1 Study Area

The study area for the Centennial Neighbourhoods Transportation Management Plan (CNTMP) is illustrated in **Exhibit 1-1**. To the north, it is bounded by the Queen Elizabeth Way (QEW) and to the south by King Street East. The west boundary is the Red Hill Valley Parkway and the east is Lake Avenue. The study area is larger than the Centennial Neighbourhoods Secondary Plan study area in order to consider the transportation network that serves the area but lies outside the Secondary Plan boundaries.

## 1.1.2 Project Team

The City of Hamilton retained IBI Group to undertake the study. The Project Team members are as follows:

### City of Hamilton

Transportation Management:

- Mohan Philip, Project Manager, Centennial Neighbourhoods Transportation Management Plan
- Bart Brosseau
- Steve Molloy
- Lorissa Skrypniak

Planning & Economic Development:

- Melanie Pham and Kirsten McCauley, Project Managers, Centennial Neighbourhoods Secondary Plan
- Melissa Kiddie
- Christine Newbold
- Catherine Parsons

Traffic Engineering:

- Daryl Bender
- Steve Cooper
- Leanne Cunliffe

Transit Strategy and Infrastructure:

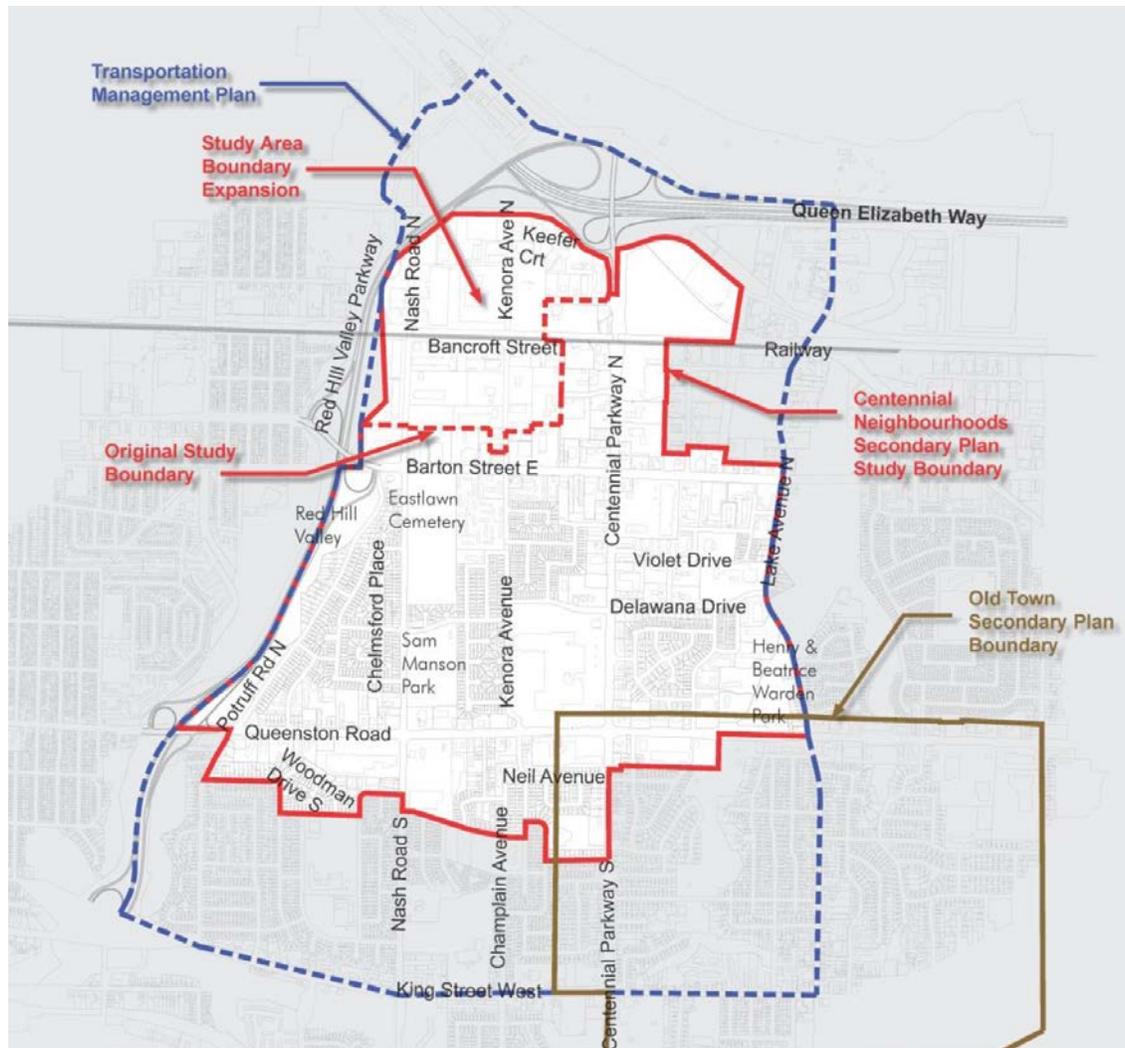
- Danielle Bury
- Andy McLaughlin
- Christie Meleskie

### IBI Group

Brian Hollingworth, Director  
Norma Moores, Project Manager  
Scott Johnston, Traffic Engineer

Public Health Services: Don Curry  
Landscape Architecture Services: Leila Todd

**Exhibit 1-1: Study Area for the Centennial Neighbourhoods Transportation Management Plan and Secondary Plan**



## 1.2 Background

The Centennial Neighbourhoods TMP is in support of the Centennial Neighbourhoods Secondary Plan study. Stakeholder and public meetings were coordinated between the two studies to efficiently reach out for input and feedback as the two studies progressed. The Secondary Plan is described below, along with other transportation-related projects.

### 1.2.1 Centennial Neighbourhoods Secondary Plan (2016)

The Centennial Neighbourhoods Secondary Plan (2016) was initiated as a result of being identified in the City Wide Secondary Plan Review as a priority area for Secondary Plan development. The area is important as it is the main focal point for the east end of the City, and

is one of the City's two major nodes outside of the downtown. It is a terminus point for future higher order transit and a centre for commercial activity.

The Centennial Neighbourhoods Secondary Plan study area consists of lands bounded to the west by the Red Hill Valley Parkway, to the east by Lake Avenue, to the north by the QEW, and to the south by lands just south of Queenston Road, as illustrated on **Exhibit 1-1**. The study area is approximately 325 hectares (803 acres) in size. The boundary of the study area is intended to encompass the Eastgate Sub-Regional Service Node identified in the Urban Hamilton Official Plan, as well as the location of a new planned GO Station on Centennial Parkway North, south of the QEW. It is the only major node in the north-easterly portion of the City, and it is the easterly terminus point for the City's main transportation corridor, the Main-King-Queenston corridor. The area also functions as a gateway area into the City, linked closely with the QEW and the Red Hill Expressway, and has been identified as the location for a new GO Transit bus station. The area provides a central commercial function for the region, and has been identified as a focus area for future intensification opportunities and the development of a mix of uses.

The Centennial Neighbourhoods Secondary Plan will provide a land use plan and policies for the next 25 years to:

- Guide change and redevelopment to achieve the future vision for the neighbourhood
- Promote positive improvements
- Promote change that meets the community's needs

The preparation of a Secondary Plan will help create a more sustainable, complete community by promoting an appropriate mix of uses and densities and improving the design of the neighbourhood.

The Secondary Plan was carried out in the following stages:

1. **Background Review**—provides detailed information used to provide baseline information to inform the development of the Secondary Plan
2. **Information Analysis and Concept Development**—following the review of background information and related studies, and the identification of issues, opportunities and constraints in the area, a vision and guiding principles were developed for the Plan. Various land use options were generated and analysed, and preliminary policies were developed.
3. **Development of Preferred Land Use Concept and Refinement of Policies**—with a preferred land use concept established, policies that reflect the land-use direction were refined.
4. **Approval and Implementation**—the last stage of the process involves finalizing the Secondary Plan policies and land use concept. An amendment to the Urban Hamilton Official Plan will bring the policies and land use concept into effect.

The public and stakeholder meetings for the Centennial Neighbourhoods TMP and the Secondary Plan were held together.

## 1.2.2 Other Related Projects

A number of policies and strategies at the City-wide level will affect the Centennial Neighbourhoods.

### ***City-wide Transportation Master Plan Update***

The City is undertaking a review of the City-wide Transportation Master Plan (TMP) to guide the future of transportation programs and investment to accommodate future growth for 2031 and beyond.

The City-wide Transportation Master Plan vision (draft)<sup>1</sup> is as follows:

- The key objective of the Transportation Master Plan is to provide a comprehensive and attainable transportation blueprint for Hamilton as a whole that balances all modes of transportation to become a healthier city. The success of the plan will be based on specific, measurable, achievable, relevant and programmed results.



The ultimate goals of the TMP are to:

- Reduce dependence on single occupancy vehicles;
- Promote accessibility;
- Improve options for walking, cycling and transit; and,
- Maintain and improve the efficiency of goods movement.

Through the City-wide TMP Update, the City is identifying policy and decision-making process for adopting a Complete Livable Better Streets design approach. Hamilton's version of Complete Streets, the Complete Livable Better Streets approach recognizes that no one-size-fits-all solution is appropriate for street design as different streets can have different priorities. Complete Livable Better Streets recognizes that the primary function of a road may range from goods movement to a local road to a higher order rapid transit corridor; however, within all of these contexts a sensitive approach to balancing the needs of multiple users can be taken. More information on the Complete Livable Better Streets design approach is provided in **Section 5.1.1**.

### ***Cycling Master Plan***

The City of Hamilton's Cycling Master Plan (2009) is intended to guide the development and operation of its cycling infrastructure for the next twenty years. It is primarily focused on developing new on-road facilities, connecting wherever possible to existing or planned off-road facilities, as identified in the Recreational Trails Master Plan. The focus is on commuter, utilitarian, and recreational cycling, recognizing that recreational cycling is often the first step toward commuting or utilitarian use. The cycling network is being updated in-house to identify new opportunities, aligning with the City-wide Transportation Master Plan and the Recreational Trails Master Plan. Existing and planned bikeways are presented in **Section 2.2**.

<sup>1</sup> From Hamilton Transportation Master Plan Review and Update, PIC 4 Information Panels, April 2016.

**Rapid Transit and Light Rail Transit (LRT)**

The City of Hamilton identified a long-term Rapid Transit System. It includes five rapid transit corridors (B, L, A, S, and T lines) as shown in **Exhibit 1-2**. As part of Metrolinx's "Moving Ontario Forward Plan," the Ontario government is investing up to \$1 billion covering 100% of the capital cost of building LRT scheduled for 2019 to 2024. While this report was being prepared, the first phase of the B-line was planned to extend LRT service from McMaster University, through downtown Hamilton, to the Queenston Traffic Circle. Subsequent to the consultation and report for this study, the Environmental Project Report (EPR) for the B-Line LRT was amended to include the segment from the Queenston Traffic Circle to Eastgate Square. The revised LRT project is illustrated in **Exhibit 1-3**.

Numerous reports have been prepared by the City of Hamilton and Metrolinx in support of the LRT. The amendment to the Hamilton Rapid Transit Preliminary Design and Feasibility Study B-line Environmental Project Report was submitted to the Ministry of the Environment and Climate Change on May 29, 2017, with amendments completed on July 10, 2017. A 35-day Minister review period was completed on August 2, 2017. The LRT Office received official correspondence that the Hamilton B-Line LRT project can proceed as amended on July 10, 2017.

**Exhibit 1-2: City of Hamilton Long-term Rapid Transit System**



Exhibit 1-3: Hamilton's LRT Project



### ***Recreational Trails Master Plan***

The Recreational Trails Master Plan (2016) seeks to plan for the development and operation of a trail system within the City of Hamilton that provides for a wide range of recreational opportunities. This systems links to on-road commuter systems and will be fully integrated into a larger regional, provincial, and national network of trails. The City completed a comprehensive review of the Recreational Trails Master Plan document and its proposed trail initiatives for every area of Hamilton. It reviewed missing links in the trail network and updated the trails maps, including those in and around the Centennial Neighborhoods study area. Existing and planned trails are presented in **Sections 2.1 and 2.2**.

### ***Pedestrian Mobility Plan***

The City of Hamilton's Pedestrian Mobility Plan (2012) focuses on rebalancing pedestrian and vehicular mobility on Hamilton's streets by providing for pedestrians needs, while accommodating vehicular traffic within the streetscape. The plan identifies the need to further improve pedestrian safety and the number of walking trips in order to achieve the City-Wide Transportation Master Plan targets. The Pedestrian Mobility Plan embeds within City decision making a process called "Routine Accommodation". Infrastructure development and renewal will address improved pedestrian environments by using appropriate toolbox solutions, together with education, encouragement and enforcement programs. This will be accomplished by focusing decision making through a series of legislative, planning, operational, communications and infrastructure considerations.

### ***TDM for Development***

This guideline was created as a tool for developers and City of Hamilton staff to include Transportation Demand Management (TDM) initiatives into the development approvals process. It contain information about ways to integrate TDM into new development, redevelopment and existing buildings. It also provides a framework for documenting these efforts.

### ***Traffic Signal Operations Study***

A study was completed in 2012 for the approximately 100 signalized intersections in the east end of the lower city from Kenilworth Avenue to Fifty Road. The purpose of the study was to provide improved signal timings that minimize overall road transportation sourced Green House Gas (GHG) emissions and improve road safety through fewer motor vehicle collisions at traffic signals. Recommendations to traffic signal cycle lengths were made. Some longer cycle lengths were implemented and then removed due to complaints from drivers and pedestrians of long delays on the side streets.

### ***Truck Route Master Plan***

The City of Hamilton's Truck Route Master Plan (2014) is intended to recommend a truck route network, and the policies and implementation strategy that will assist the City in managing the truck route network over the next five years. It provides recommendations for future action, policies for truck route signage, and a methodology for dealing with truck route network issues in the future.

## **1.3 Study Process**

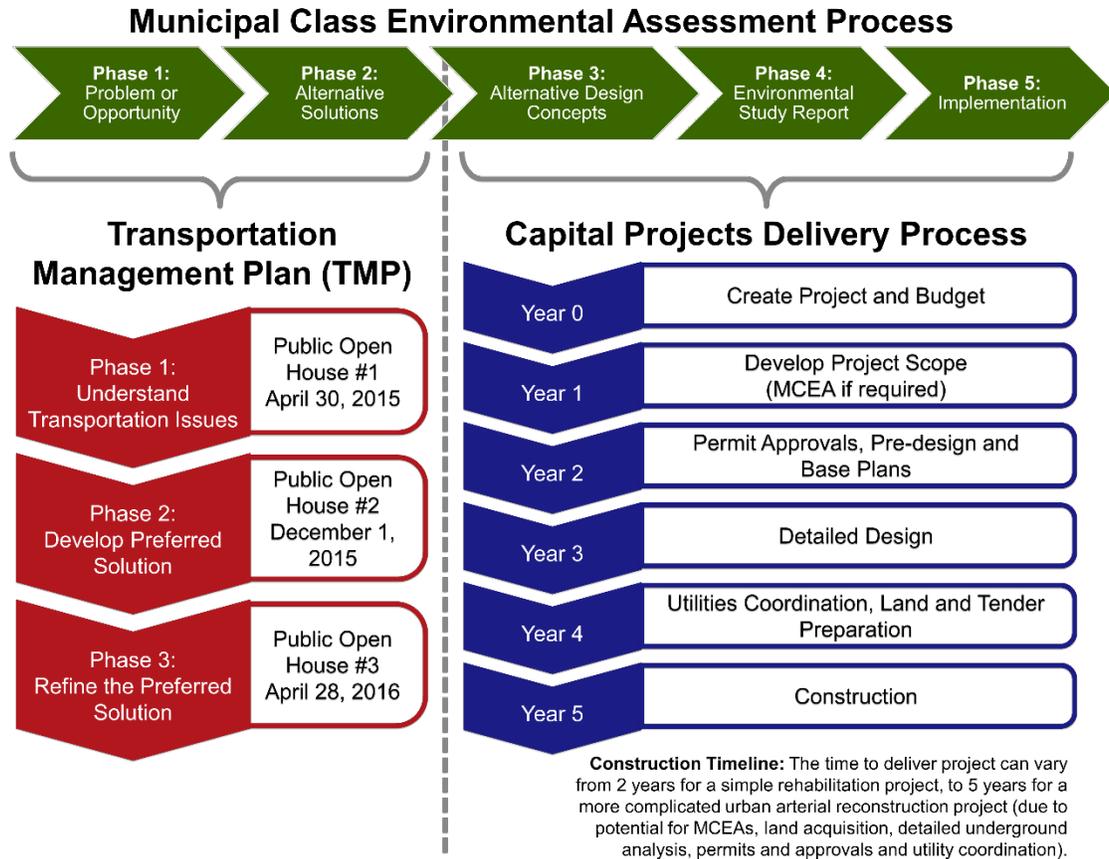
Municipal transportation projects must meet the requirements of the Ontario Environmental Assessment Act. The Municipal Class Environmental Assessment, approved under the EA Act in October 2000, as amended in 2007, and 2011, applies to a group or "class" of municipal projects which occur frequently and have relatively minor and predictable environmental impacts. These projects are approved under the EA Act as long as they are planned, designed and constructed according to the requirements of the Class EA document.

A Master Plan is a long-range plan that examines the whole infrastructure system and recommends a series of projects to be implemented over an extended period of time. Master Plans are not prepared to address site-specific problems such as traffic operations at individual intersections or in specific neighbourhoods. This Class EA will fulfill the requirements of a Master Plan, Approach #2, in the Municipal Class Environmental Assessment planning process. Integrating infrastructure needs with environmental planning principles, a Master Plan follows Phases 1 and 2 of the Class EA process.

Phase 1, "Problem/Opportunity" provides the justification of the need for improvements to the transportation network. Phase 2, "Alternative Solutions", consists of identifying and evaluating alternatives to solve the problems identified in Phase 1. At the end of Phase 2, preferred solutions are combined to form the Master Plan. The Centennial Neighbourhoods TMP study will identify projects that will get carried through Phases 3 to 5. Once a specific transportation project is identified and approved, it will go through a capital project delivery process, subject to an approved budget by Council.

The study process, including the MCEA and Capital Project Delivery Process is illustrated in **Exhibit 1-4**.

**Exhibit 1-4: Municipal Class Environmental Assessment Process, Centennial Neighbourhoods TMP Study Process and the Capital Project Delivery Process**



### 1.3.1 Opportunity Statement

The opportunity statement defines why a municipality is undertaking this study. In simple terms, the opportunity statement is defining, “Why transportation improvements are needed in these neighbourhoods to the year 2031.” The Centennial Neighbourhoods TMP is being undertaken by the City of Hamilton to plan for **improved mobility** to:

- Accommodate transportation needs of future land use
- Take advantage of investment from development opportunities
- Support access to major transportation services such as the QEW, Red Hill Valley Parkway, Hamilton Street Railway (HSR), and the Eastgate Transit Hub, future Rapid Transit, and GO Transit and future Confederation GO Station
- Support alternative transportation choices including walking and cycling
- Create livable neighbourhoods, complete communities and Complete Livable Better Streets



The goals of the improvements are to create safe, efficient, and sustainable transportation that limits impacts to the environment, and supports healthy living.

## 1.4 Transit Project Assessment Process (TPAP)

In June 2008, Ontario's Ministry of the Environment established a streamlined environmental assessment process to expedite the development of transit projects. Rather than requiring a full Environmental Assessment – which can be very time-consuming – the Ministry created the Transit Project Assessment Process (TPAP), enabling assessment of potential environmental impacts to be completed within six months. The TPAP is documented in an Environmental Project Report (EDR)

Integral to the TPAP is detailed public and stakeholder consultation. The TPAP regulation sets out a structured consultation process to both provide information about the proposed transit project and to gather feedback from stakeholders and the public. During the TPAP, information on the advantages and disadvantages of the proposed LRT system, as well as commitments to mitigation and monitoring, will be documented in an Environmental Project Report (EPR) that will be made available for review by the public and the Minister of the Environment.

The amendment to the Hamilton Rapid Transit Preliminary Design and Feasibility Study B-line Environmental Project Report was submitted to the Ministry of the Environment and Climate Change on May 29, 2017, with amendments completed on July 10, 2017. A 35-day Minister review period was completed on August 2, 2017. The LRT Office received official correspondence that the Hamilton B-Line LRT project can proceed as amended on July 10, 2017.

## 2 Existing Conditions

The existing conditions in the Centennial Neighbourhoods study area with respect to the various modes of travel are described below.

### 2.1 Walking

The Centennial Neighbourhoods TMP study area has a number of facilities to accommodate pedestrians. As shown on **Exhibit 2-1**, a number of major destinations are within 1 km walking distance of the residential areas. These include Smart Centres, Dominic Agostino Riverdale Community Centre, Eastgate Square, Red Hill Public Library, and the future GO Transit station. The schools are located within residential neighbourhoods and generally well-served by the sidewalks on local streets surrounding them.



The existing walking conditions and trails are illustrated on **Exhibit 2-1** and consist of the following:

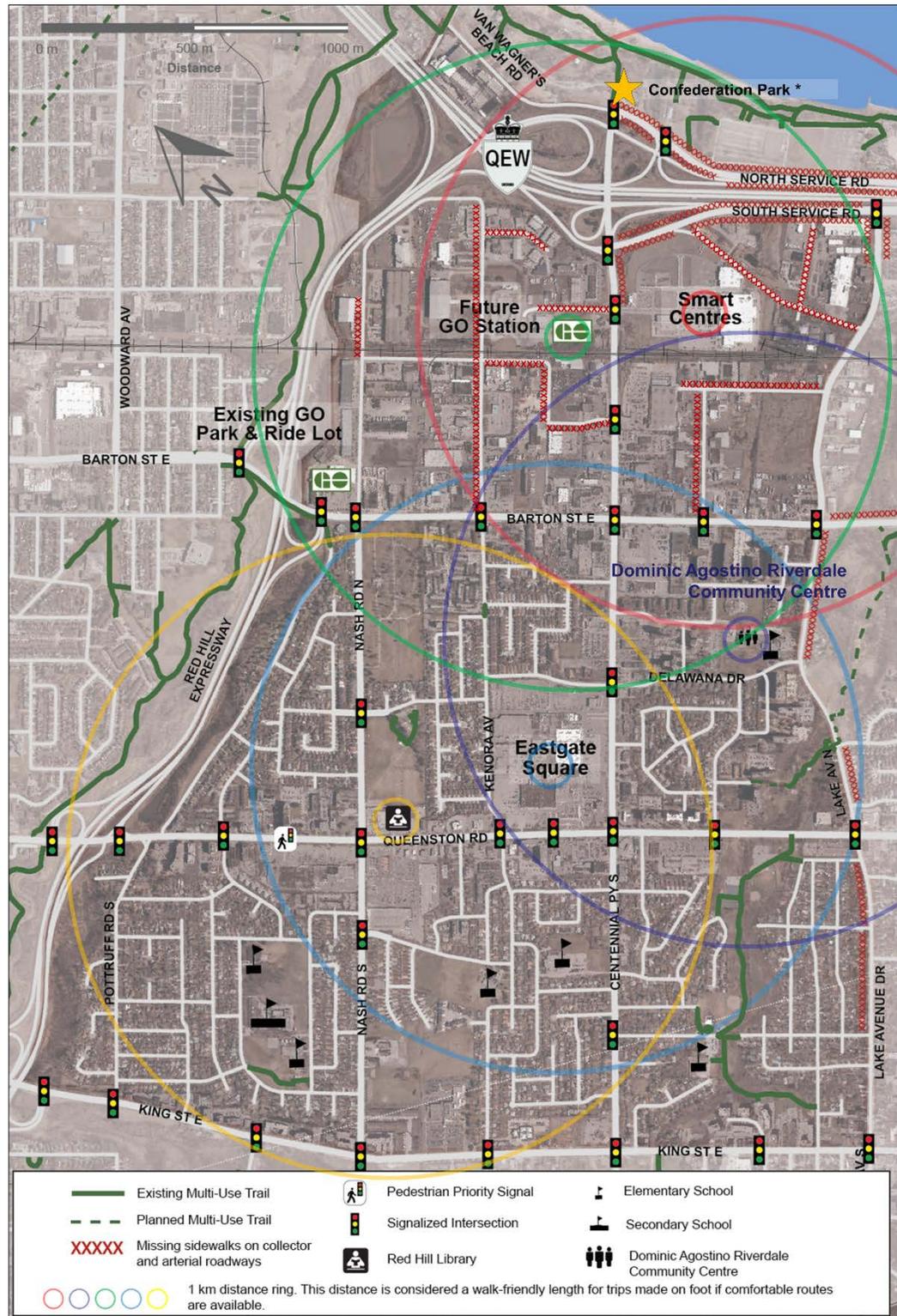
- There are sidewalks on both sides of the streets generally throughout the study area with the following exceptions on arterial and collector roads:
  - Sidewalks are missing on sections of Lake Avenue, east and west sides, between Barton Street East and King Street East, and near the South Service Road
  - A sidewalk is missing on Nash Road on the west side north of Bancroft Street
  - A sidewalk is missing on Kenora Avenue on the west side north of Barton Street East
  - Sidewalks are missing on Centennial Parkway between Goderich Road and the QEW ramp / South Service Road
- Sections of sidewalks are missing on one side of the local streets in employment and commercial areas including Keefer Crescent, Goderich Road, Arrowsmith Road, Covington Street, Cascade Street, Warrington Street, Lanark Street, and a section of Bancroft Street. It is important to provide sidewalk in employment and commercial areas so employees and customers can walk to these destinations and they are better served by transit that requires walking from the bus stop.
- The study area is bisected east-west and north-south by a number of arterial roads that can be difficult to cross when walking. **Exhibit 2-1** illustrates the location of signalized crossings along the arterials. The most widely spaced signals are 700 m on Nash Road. Generally they are spaced about 160 to 500 m, providing connectivity across these busy streets.



- Multi-use recreational trails exist in Henry and Beatrice Warden Park and Green Acres Park. Nearby are the Red Hill Creek Valley recreational trails to the west and the Waterfront Trail to the south. Both of these trails are accessed from the Centennial Neighbourhoods study area only by walking on major arterial roads and through interchanges (Red Hill Valley Parkway and QEW).

Given the well-developed sidewalk network and street crossings and the number of destinations in the neighbourhoods, Centennial Neighbourhoods could support many trips by walking for work, school, shopping, errands and social. However, the pedestrian environment / public realm along the major streets lacks buffers from traffic volumes, speeds and noise; interesting landscaping and urban design; tree and canopy shelter from sun, wind, rain and snow; and rest areas.

Exhibit 2-1: Walking Conditions and Trails



## 2.2 Cycling

Destinations within the Centennial Neighbourhoods TMP study area are all within a distance that is easy to cover by bicycle, i.e. less than 5 km (the study area is 3 km long by 2.6 km wide). It has a few existing facilities to accommodate cyclists, but some facilities are planned for future implementation.

The existing cycling conditions are illustrated on **Exhibit 2-2** and consist of the following:

- Bike lanes exist on King Street East from Barton Street East to Battlefield Drive; shared lane markings (sharrows) were installed after reconstruction of the road from Battlefield Drive to Lake Avenue Drive. Note that the traffic volumes on King Street East (18,000 to 24,000 vehicles per day) exceed the threshold for shared lane use set out in the Ontario Traffic Book 18 Cycling Facilities (4,000 vehicles per day operating at 50 km/h on four lanes), so shared lane markings are considered inadequate for this street.
- Lake Avenue Drive is a designated cycling route with shared lane markings (sharrows) from King Street East to Queenston Road. It is a two-lane road with 40 km/h posted speed and about 6,000 vehicles per day. The daily traffic volumes are a little high for shared use, set out in the Ontario Traffic Book 18 Cycling Facilities (3,000 vehicles per day operating at 40 km/h on two lanes), so shared lane markings are considered inadequate for this street.
- Unsigned cycling routes include King Street East and Queenston Road west of Potruff Road, King Street East east of Battlefield Drive, Lake Avenue north of Queenston Road, Potruff Road, Ede Street / Nugent Drive and Sandlyn Court, Kentley Drive, Delawana Drive, Owen Place, Greenford Drive, and Kenora Avenue Drive south of Delawana Drive. These are shown on the City of Hamilton's Bike Routes, Trails & Parks map as "cautionary unsigned bike route (on streets with low to moderate traffic volumes)". High-volume sections of these unsigned route are also noted on the map, consisting of sections of King Street East, Queenston Road, and Lake Avenue.
- Bike lanes are planned for Nash Road from King Street East to Bancroft Street, and on Barton Street East from Nash Road to Lake Avenue. However, their implementation on Nash Road from King Street East to Barton Street East, and on Barton Street East from Nash Road to Centennial Parkway is not currently planned to proceed due to past lack of community support and impacts on travel lanes.
- The cycling network also includes the multi-use recreational trails that exist in Henry and Beatrice Warden Park and Green Acres Park. Nearby are the Red Hill Creek Valley recreational trails to the west and the Waterfront Trail to the north. Both of these trails are accessed from the Centennial Neighbourhoods study area only by cycling on arterial roads and through interchanges (Red Hill Valley Parkway and QEW), or via Greys Road a kilometre to the east.



SoBi Hamilton operates the Hamilton Bike Share system. They maintain a fleet of 825 bicycles and over 100 hubs available to the public to ride through membership or rental pricing. The service area is currently centred on downtown Hamilton and extends as far east as Ottawa Street; it does not currently serve the Centennial Neighbourhoods study area. The benefits of the bike share system is that it provides a bicycle in good working condition 24 hours a day for a small fee or membership along with secure locking at parking hubs available throughout their service area. Grants allow the program to extend memberships to lower-income people. In May 2016, the following usage was reported (<http://www.cbc.ca/news/canada/hamilton/news/sobi-hamilton-the-city-s-popular-bike-share-turns-1-1.3499753>, accessed August 2016)

- Current active members: 7,678 active users
- Trips per day: between 300 and 750 trips per day
- Trip duration: 17 minutes per trip on average

Given the number of destinations in the neighbourhoods and nearby, Centennial Neighbourhoods could support many trips by cycling for work, school, shopping, errands, social and recreation. However, with the exception of a portion of King Street East, the major streets lack suitable cycling facilities, and the local street network is not very visible as a cycling network connecting to destinations. The multi-use recreational trails along the Red Hill Creek and Lake Ontario Waterfront are important corridors in the City-wide trail network, however, there are no comfortable routes connecting to them from the Centennial Neighbourhoods.

Exhibit 2-2: Existing and Planned Cycling Facilities and Trails



## 2.3 Public Transit

The transit services in the Centennial Neighbourhoods study area are illustrated on **Exhibit 2-4** and described below.

- There are ten local HSR bus routes operating in the study area: Routes 1 King, 2 Barton Street East, 4 Bayfront, 5/52 Delaware, 10 B-Line Express, 11 Parkdale, 44 Rymal, 55 Stoney Creek Central, 56 Centennial, and 58 Stoney Creek Local.
- HSR operates a bus terminal at Eastgate Square. Some, but not all, bus routes in the study area terminate or transfer at this terminal. Bus shelters, benches and bicycle parking racks are provided at the Eastgate Transit Hub.
- Metrolinx is planning on improving and expanding regional transit services to Centennial Neighbourhoods. GO Transit bus service currently stops at a Park & Ride lot at Barton Street East and Nash. This service will be transferred to the new Confederation GO Station being constructed at Goderich Road and Centennial Parkway. Future GO Transit train service will also be provided out of this station.
- The City of Hamilton long-term rapid transit plans include the B-line and S-line that connect into the Centennial Neighbourhoods study area on Queenston Road and Centennial Parkway. These are illustrated on **Exhibit 2-3**. The first phase of the B-line will extend LRT service from McMaster University, through downtown Hamilton, to Eastgate Square and is planned to be constructed from 2019 to 2024. The Transit Project Assessment Process Environmental Project Report (TPAP EPR) has been completed for the B-line LRT to Eastgate Square and an addendum to the Environmental Project Report (EPR) was submitted to the Ministry of Environment and Climate Change on May 29, 2017, with amendments completed on July 10, 2017. The Hamilton Long Term Rapid Transit System initially showed the S-line terminating at Eastgate Square. Prior to this report being finalized, the Hamilton Long Term Rapid Transit System was updated to include the extension of rapid transit to Confederation GO Station, a recommendation of this study.



About 90% of the residential areas in the Centennial Neighbourhoods study area are within 400 m of a local HSR bus route.

Exhibit 2-3: City of Hamilton Long-term Rapid Transit System (B.L.A.S.T.)



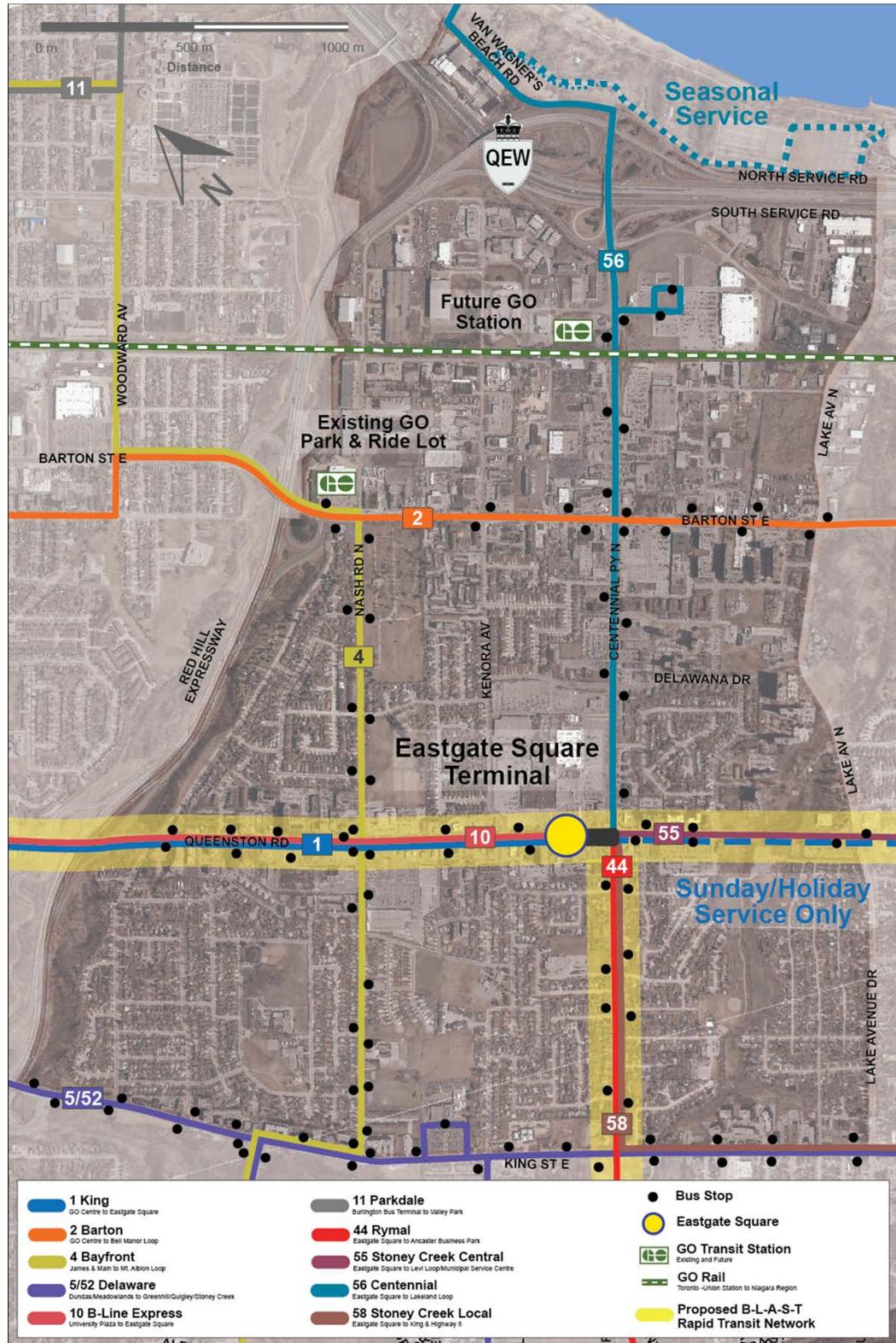
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T

Future Expansion

**Hamilton Long Term Rapid Transit System "B.L.A.S.T." (Conceptual Only)**  



Exhibit 2-4: Existing and Planned Public Transit Services



## 2.4 Roads and Traffic

The road and traffic conditions are illustrated **Exhibit 2-5** and **Exhibit 2-6**. The Centennial Neighbourhoods study area is served by the following major road corridors:

- The QEW Provincial Highway is on the north side of the study area with an interchange at Centennial Parkway. It carries more than 150,000 vehicles per day.
- Red Hill Valley Parkway is on the west side of the study area with interchanges at King Street East, Queenston Road and Barton Street East. It carries more than 50,000 vehicles per day.
- The study area is traversed by one east-west major arterial, Queenston Road; one north-south major arterial, Centennial Parkway; and two east-west minor arterials, King Street East and Barton Street East. The South and North Service Roads are also a minor arterial parallel to the QEW. The major and minor arterials generally carry around 20,000 vehicles per day, although Queenston Road carries about 15,000 vehicles per day east of Centennial Parkway.
- Collector roads in the study area include: Potruff Road from King Street East to Queenston Road, Nash Road from King Street East to Barton Street East, Kenora Avenue / Delawana Drive connecting Centennial Parkway to Lake Avenue, and Lake Avenue / Lake Avenue Drive from King Street East to the South Service Road. The collector roads carry a range of traffic from around 3,000 to 12,000 vehicles per day.



This immediate access with four interchanges from the neighbourhoods to the QEW and Red Hill Valley Parkway freeway provides exceptional mobility to the regional and provincial highway systems. However, it also increases the car and truck volumes in the study area as motorists drive through it to access the regional and provincial road networks.

The following roads were recently reconstructed:

- Centennial Parkway from the Goderich Road to Barton Street East (railway grade separation, 2016), and Barton Street East to King Street East (2014)
- Barton Street East from Nash Road to Centennial Parkway (2014)
- Nash Road from Barton Street East to Queenston Road (2012)
- King Street East from Nash Road to Centennial Parkway (2010) and from Centennial Parkway to Lake Avenue Drive (2016)

Exhibit 2-5: Road Network

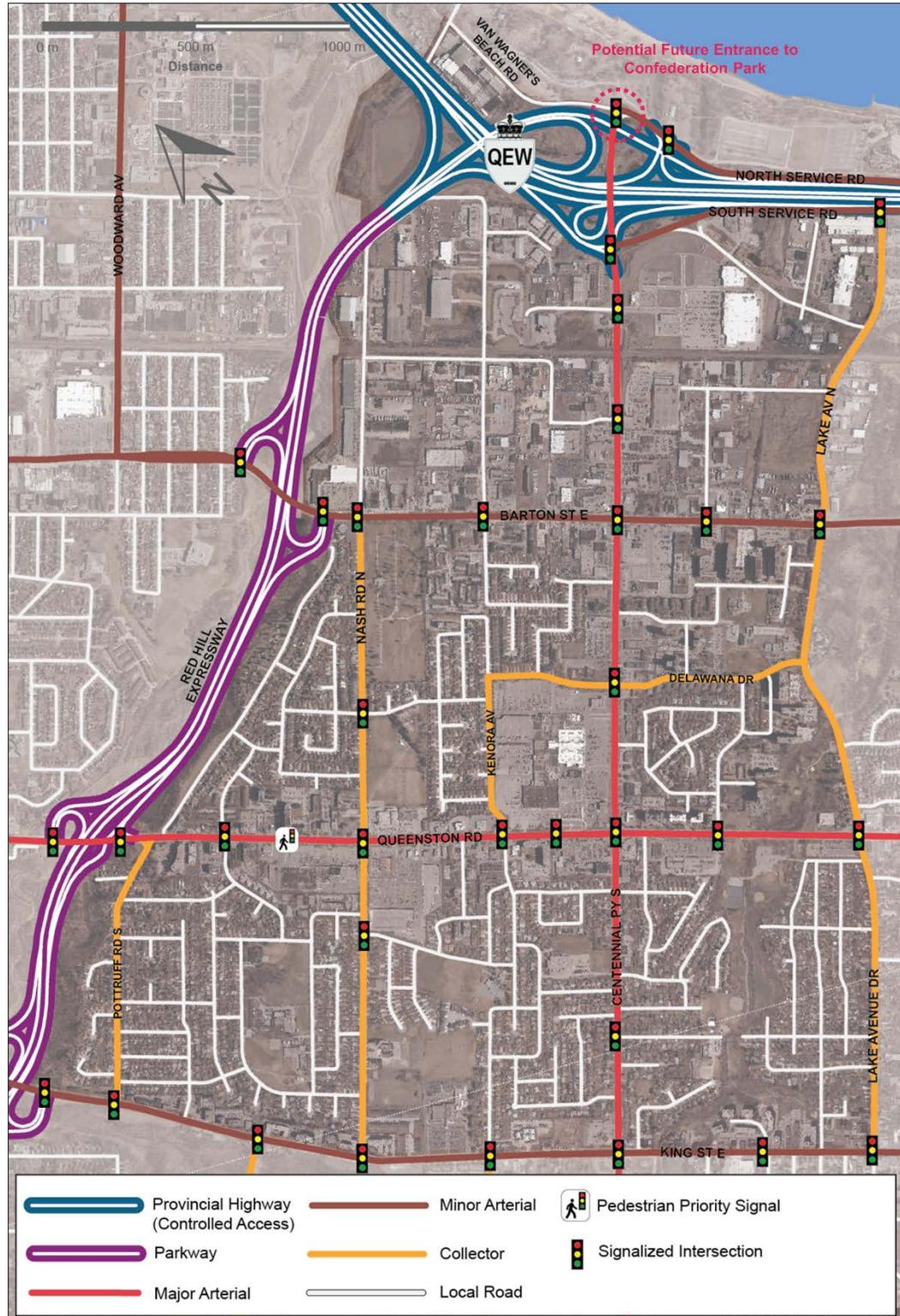


Exhibit 2-6: Existing 24-hour Traffic Volumes



Traffic counts conducted between 2009 and 2014

## 2.5 Goods Movement

There are a number of full-time, designated truck routes in the study area, as illustrated on **Exhibit 2-7** (from City of Hamilton's Highways Designated for Use by Heavy Trucks map, 2014). These include:

- Local streets that service the employment and industrial uses on Nash Road and Kenora Avenue north of Barton Street East, Bancroft Street and Arrowsmith Street, Warrington Street, Lanark Street, Covington Street and Cascade Street. These streets may carry a couple of hundred trucks a day.
- Barton Street East carries around 500 trucks a day and over 700 a day at the Red Hill Valley Parkway interchange
- Queenston Road carries around 250 to 450 trucks a day
- King Street East west of Centennial Parkway carries less than 200 trucks a day
- Lake Avenue north of Barton Street East carries almost 400 trucks a day
- Centennial Parkway carries 200 to 500 trucks a day
- Red Hill Valley Parkway (trucks volumes not available)
- QEW and the North and South Service Roads (trucks volumes not available)

Trucks also travel on streets that are not truck routes in order to access local businesses. For example, Nash Road carries around 80 trucks a day, Lake Avenue south of Barton Street East carries 40 trucks a day, and Delawana Drive carries 20 trucks a day.





## 3 Consultation

The stakeholder and public consultation for the Centennial Neighbourhoods TMP and Secondary Plan consisted of the following meetings and communications:

- Technical Advisory Committee (TAC)—three meetings involving representatives from various City of Hamilton departments: Planning & Economic Development, Public Health, Public Works, and Transit. A list of participants in the TAC meetings is provided in Appendix A.
- Focus Group—three meetings involving representatives from the community: residents, business owners, developers and Ward Councillors
- Public Open Houses—three open houses with displays, presentation and workshop activities
- Project web site—[www.hamilton.ca/CentennialINTMP](http://www.hamilton.ca/CentennialINTMP)



In addition to the above-noted scheduled events, which were advertised on the City's social media, twitter, project website, and in newspapers. City Staff also conducted two pop-up events. The first event was held during the summer of 2015 on August 5th at Sam Manson Park with a focus on the Centennial Neighbourhoods Secondary Plan study. The second event was held on April 29th, 2016 at Eastgate Square and included information on both studies. People also had the opportunity to fill out a comment form on the City's project website.

A summary of the consultation during each phase of the study is provided below. More detailed summaries are provided in Appendix B.

### 3.1 Phase 1 Consultation

The objective of Phase 1 of the CNTMP is to identify issues or opportunities related to transportation. This summary provides an overview of stakeholder and public consultation events undertaken to understand existing conditions and issues. The events include:

- Stakeholder focus group (April 8, 2015)—12 people attended from the public
- Public information centre (PIC) (April 30, 2015)—86 people signed the sign-in sheet
- Comments from City of Hamilton staff—Public Works, HSR, Planning & Economic Development, and Public Health
- Public opinion survey posted on the City of Hamilton website—14 people filled it out on-line; two people submitted hard copies
- Direct submissions from the public—11 comment forms, one written submission and 10 emails

#### 3.1.1 Overview of Issues

An overview of the issues and opportunities identified through the above consultation is provided below. The issues presented are "as heard". While many are directly related to the scope of the CNTMP, others may be subject to other processes and City Divisions. In particular, many of the transit-related issues are of an operational nature and need to be considered in the context of

HSR's overall transit plans. However, the CNTMP will continue to highlight these issues and articulate broader strategies to address them. The timing of transit improvements also influences the success of TDM programs and other initiatives aimed at increasing transit modal shares.

### **Local Transit Service**

#### *High-level local transit comments:*

- **Connectivity to major destinations** within and outside of the community was an issue for many individuals. Within the area, a number of major destinations lacked direct connections to one another, such as the GO Park n' Ride, St. Joseph's UCC, Walmart Plaza, Eastgate Square, and the Riverdale Community Centre. Of particular concern was the lack of a direct connection between Eastgate Square and the current GO Transit Park n' Ride. Similarly, a connection to the future GO Station from the neighbourhoods was a longer-term concern.
- **Supporting expansion of rapid transit** (both LRT and BRT were suggested) along the B-Line corridor received mixed reviews. Some considered it a top priority while others were opposed to it. Some implied that it would be a good way to solve congestion in the area while others said taking lanes away would increase traffic.
- A resident indicated that **connecting existing routes with Eastgate Square**, specifically Route 4 Bayfront, and the Route 5 Delaware branches that operate south of King, would make it easier to connect to other routes by transit and to get to the mall.
- **Riverdale Community Centre needs direct transit service** for the youth, women, and recent immigrants who access its services

#### *Issues to be addressed outside the CNTMP:*

- **Doubling the size of the Eastgate Square terminal** is part of the HSR's long-term plans for the area and they encourage the study to identify where this could take place. Along the same lines, many residents indicated that an indoor waiting area at Eastgate Square, with washrooms and real-time departure information, would improve the experience and make long-transfers between vehicles more comfortable.
- **Low-frequency, community bus routes** that enter local neighbourhoods were suggested for areas with lower densities.
- **Frequency of routes** needing improvement was the transit issue identified by most people. The Queenston Road Corridor (from Downtown to Eastgate Square) and Barton Street East (from Downtown to Bell Manor Loop) were seen as being well served. However, other routes were viewed as needing to operate more frequently to improve their usefulness, particularly for seniors, children/youth, women, new immigrants, and low income residents. The HSR did indicate that improvements would be coming to the Route 56 Centennial route within the next three years as part of their 10-year strategy.
- **Daily operating hours** were viewed as needing improvement by many people. Comments identified that service started too late in the morning and ended too early. Some routes were cited as not operating for the full service span of the destinations they serve, particularly the Route 56 Centennial bus that started operating later and ending earlier than the hours of the Walmart it primarily serves.

- Many comments were received that **Route 56 Centennial does not operate frequently or long enough**. Its hours should align with the Walmart Plaza to provide safe access for workers.
- Many indicated that **one bus should operate the full length of Centennial Parkway**. Currently, Route 56 Centennial operates on the section north of Eastgate Square, while Route 44 Rymal, operates on the section south of Eastgate Square and continues to Upper Centennial Parkway for mountain access.
- **Providing more transit stop amenities** like shelters, benches and waste containers was cited as an opportunity for improvement.
- **Garbage bins are not being emptied** at some bus stops, primarily along Queenston Road and Barton Street East.

### ***Regional Transit***

- The existing **GO Transit Park n Ride/carpool lot** is well liked.
- There is an opportunity to **increase non-auto access to the new GO bus station** by improving the cycling and pedestrian infrastructure in the vicinity and providing more frequent and direct HSR service to it.
- Concerns were raised with **how the new GO Train station will be accessed**. Individuals supported options such as transit, pedestrian, cycling and driving in order to provide multi-modal access for residents.
- **GO buses connecting to Burlington GO should still operate after the new GO Train Station** opens. The train will take too long to get to Burlington as it has to go through Downtown Hamilton.
- Concerns were raised that the new GO Train station will make the community a suburb of Toronto.

### ***Pedestrians***

#### *High-level pedestrian comments:*

- While many of the destinations in the area are a “walkable” distance, most considered it **unsafe and/or uncomfortable to walk** due to an unattractive pedestrian realm, lack of infrastructure and very short crossing times at major intersections. This was cited most frequently for any trip that required crossing an arterial road like Centennial Parkway, Barton Street East or Queenston Road.
- Encouraging and facilitating **walking is important to encourage healthy active living** in the area. Residents should be able to access major destinations in the community by foot to incorporate healthy living by design into their everyday lives.
- **Streetscaping improvements**, such as benches and trees, were requested to be added to improve the area. Generally, Queenston Road was viewed as “attractive” because of the sidewalk setback from the road and trees along the boulevard, while Centennial Parkway, King Street East and Barton Street East were not attractive due to the sidewalk adjacent to the roadway and a lack of amenities and trees along it.
- Mixed comments were received about installing new sidewalks along low-volume residential roads that were built without them.

#### *Location-specific pedestrian comments:*

- **Pedestrian access to Eastgate Square** received mixed reviews:
  - Individuals west of Centennial Parkway North between Barton Street East and Queenston Road generally said access by foot was easy, though speeding traffic was a concern.
  - Individuals east of Centennial Parkway North cited the need for a pedestrian crossing on the eastern side of the mall in the vicinity of Vineyard Road. This was of particular concern for people from the Riverdale area who walk to the mall and transit terminal.
- **Narrow sidewalks on Nash Road** make it uncomfortable to walk along.
- **Missing sidewalks along portions of Lake Avenue and Centennial Parkway** make it difficult for individuals to travel by foot. Access to the Walmart Plaza and Confederation Park was cited as being difficult because of this.

*Issues to be addressed outside the CNTMP:*

- Current **crossing times were considered inadequate** across major roads, even for abled-bodied people. Intersections that received a large volume of comments about this were Centennial Parkway at Queenston Road, Centennial Parkway North at Delawana Drive, and Centennial Parkway North at Barton Street East.
- **New ladder-style pedestrian crossings** were recommended for Kenora Avenue at Kentley Drive, Kentley Drive at Oakland Drive, and Kentley Drive at Nash Road.

### **Cycling**

*High-level cycling comments:*

- Many individuals stated they **do not feel comfortable cycling** in most parts of the community due to the **lack of safe facilities, fast traffic and the large volumes of trucks**. While many of the destinations in the area are a “bikeable” distance, it is not safe and/or comfortable to bike.
- **Expanding Hamilton Bike Share to the area** was cited multiple times as an opportunity.
- **Encouraging cycling is important for healthy active living** in the area. Accessing major destinations in the community by bike should be encouraged to incorporate healthy living by design into residents’ everyday lives.

*Location-specific cycling comments:*

- Many cited the need for a **safe active transportation connection on Centennial Parkway in order to reach Confederation Park**. The City and MTO are currently working on a multi-use path connection on the Centennial Parkway structure over the QEW that will accomplish this, however the timing is currently unknown.
- **New bikeways** were suggested for Nash Road, Delawana Drive, Owen Place, Kenora Avenue and Kentley Drive, as was continuing the lanes on King Street East. As well, adding new facilities to reach the new GO Station and Queenston Library were suggested.

### **Roadways**

*High-level roadway comments:*

- **Speeding is perceived as happening on many residential streets.** Some mention the need for better enforcement or a 40 km/hr blanket speed limit in the area.
- **The Red Hill Valley Parkway congestion causes traffic to seek alternate routes** in study area arterial roads, especially on Centennial Parkway up to the mountain.
- Heavy truck traffic uses Centennial Parkway and Barton Street East and is often noisy, especially at night. Individuals indicated that the large volume poses a perceived safety risk.

*Specific level roadways comments:*

- The left-turn only movement onto **Kenora Avenue** and **right-turn only movement onto Delawana Drive from Eastgate Square** were viewed as an inconvenience by some residents. Many indicated they drive around the mall in order to get home from shopping. These traffic movement restrictions are from an OMB ruling issued September 22, 2000.

*Issues to be addressed outside the CNTMP:*

- There were concerns that the **traffic signals along arterial routes have too short of a green phase.** This needs to be extended in order to allow cars and goods movement vehicles to travel efficiently.
- The **split-phase traffic signal at Nash Road North and Kentley Drive is well liked.** Suggestions were given to improve the signage to help people understand it better.
- Many comments requested an **advanced left turn signal at Centennial Parkway North and Delawana Drive** for traffic turning onto Delawana Drive (both directions).
- Concerns were raised about the **queue that forms to make a left-turn into St. Joseph's UCC on King Street East.**
- Concerns were raised about **construction-related cut-through traffic from recent / on-going projects on Barton Street East and Centennial Parkway.** Roads that were mentioned include Irene Avenue and Kenora Avenue.

### 3.1.2 Evaluation Criteria

As part of the focus group and PIC, individuals were asked to select the five most important factors to them from a list of criterion for evaluating transportation options. The results are shown in **Exhibit 3-1**. Pedestrians and transit were select as important by the most people (17). Urban Design was the most important factor for stakeholders attending the focus group meeting; drivers was the most important to members of the public who participated in this activity at the PIC.

**Exhibit 3-1: Evaluation Criteria Rating**

CRITERIA	NO. OF PEOPLE WHO SELECTED THE CRITERIA AS ONE OF THEIR TOP FIVE		
	PIC	FOCUS GROUP	TOTAL
Transit	13	4	17
Pedestrians	11	6	17
Drivers	14	2	16
Connectivity of the transportation network	9	5	14
Urban Design	8	6	14
Accessibility	10	3	13
Cost	10	2	12
Safety for all users	7	5	12
Natural Environment	11	1	12
Cyclist	9	1	10
Public Health	8	1	9
Built Heritage	2	0	2
Archaeology	2	0	2
Emergency Vehicles Access	2	0	2

### 3.2 Phase 2 Consultation

The objective of Phase 2 of the CNTMP is to develop alternative solutions to the identified transportation issues and opportunities. This summary provides an overview of stakeholder and public consultation events undertaken to understand people’s opinions about the alternatives. The events include:

- Technical Advisory Committee consisting of City of Hamilton staff (October 29, 2015)—Public Works, Transit, HSR, Planning & Economic Development, and Public Health
- Stakeholder focus group (November 10, 2015)—7 people attended from the public
- Public information centre (December 1, 2015)—24 people signed the sign-in sheet
- Direct submissions from the public—7 submissions provide comments related to the Transportation Management Plan



#### 3.2.1 Discussion of Alternative Transportation Solutions

The transportation solutions were categorized by the main issue or opportunity they address:

Capacity      Safety      Urban Design      Mobility Choices

At the Focus Group and PIC, attendees working in groups were asked to consider and identify the alternatives as follows:

- **Advantages** – what makes sense
- **Best ideas** – what will work best for you and your neighbourhood
- **Concerns** – what might not work
- **What Else** – add your ideas

The results are shown in **Exhibit 3-2**, i.e. the number of groups that sorted each alternative according to the above categories.

Based on ideas raised by the groups and comments submitted by individuals, the following modifications to the alternatives are recommended:

- Modify “protect right-of-way on Barton Street East from Red Hill Valley Parkway to Centennial for additional traffic lanes (beyond year 2041)” to include considering HOV / transit-only lanes
- Include reviewing pedestrian walk times as part of “improve traffic signal timing”
- Add the multi-use recreational trails from the **Recreational Trails Master Plan**:
  - Project 5-4 in Bow Valley Open Space and Lawrence Avenue Park just west of Lake Avenue
  - Project 5-9 connecting Pottruff Road near Eugene Street across the Red Hill Valley Parkway to the Red Hill Valley Recreational Trail
- Add a new alternative to improve the safety and comfort of pedestrian and cycling connections through the interchanges at the Red Hill Valley Parkway

Participants at the Focus Group and PIC were asked to select what they thought were their priorities by placing four plastic coins in jars marked Capacity, Safety, Urban Design and Mobility Choices. The results of this prioritization are shown in **Exhibit 3-3**.

Exhibit 3-2: Summary of Working Groups Evaluation of Alternatives

No. of groups that commented on each alterantive		Advantages – what makes sense	Best ideas – what will work best for you and your neighbourhood	Concerns – what might not work
Capacity	Extend the B-line Rapid Transit from Queenston Circle to Eastgate Square (within 15 years west of Centennial & beyond 25 years east of Centennial)	2	3	
	Improve traffic signal timings	4	1	
	Implement S-line Rapid Transit on Centennial and extend to GO Station (beyond 25 years)	3	2	1
	Adopt transit priority measures at signalized intersections	1		
	Protect right-of-way on Barton from Red Hill Valley Parkway to Centennial for additional traffic lanes (beyond 25 years)	1		2
	Add turn lanes or roundabouts at "hot spot" intersections	2		3
Safety	Provide multi-use trail access to Confederation Park	2	2	
	Create neighbourhood greenways to calm traffic, and improve walking and cycling connections		3	
	Implement traffic calming to reduce speeds to 40 km/h or less on local streets where speeding is an issue	2	2	1
	Construct missing pieces of sidewalk along Lake, Centennial and local streets that serve commercial and employment areas	2	1	
	Manage access to new, larger developments to reduce driveways for improved safety	3		1
	Ensure improvements to streets reflect desirable speeds	1		1
Urban Design	Manage parking for new developments to reduce surface lots	1	1	
	Improve quality and location of bus stops, targeting providing shelters at 30% to 50%		2	1
	Implement cycle tracks on Centennial, and Queenston east of Centennial as per Secondary Plan streetscape options	1	1	1
	Improve streetscape and gateways as per the Secondary Plan concepts		1	
	Improve pedestrian connections through new developments		1	1
	Protect rights-of-way on all arterials for implementing Complete / Livable / Better		1	1
Mobility Choices	Create non-auto (walking and cycling) access to GO Station and right-sized Park N'	1	2	1
	Bring in SoBi bike share to serve these neighbourhoods	2		
	Support live / work / play development so people do not have to travel long distances		1	
	Add local HSR circulator route	1		
	Facilitate car sharing		1	1
	Provide bikeways on Nash, Lake, Warrington and South Service Road		1	1
	Extend and modify HSR routes	1		1
Promote travel options to employers, new immigrants and schools			1	

Exhibit 3-3: Results of Prioritization of Groups of Transportation Solutions (PIC and Focus Group)



### 3.3 Consultation on the TMP Recommendations

This summary provides an overview of stakeholder and public consultation events undertaken to understand people's opinions about the recommended transportation solutions. The events include:

- Technical Advisory Committee consisting of City of Hamilton staff (February 23, 2016)—Public Works, Transit, HSR, Planning & Economic Development, and Public Health
- Stakeholder focus group (April 7, 2016)—7 people attended from the public
- Public information centre (April 28, 2016)—43 people signed the sign-in sheet
- Drop-in location with displays at Eastgate Square (April 29, 2016)—about 62 people discussed the studies with City staff
- Direct submissions from the public—21 written submissions were received (comment form, email or web site form)



#### 3.3.1 Comments on the Recommended Transportation Solutions

The recommended transportation solutions were presented through a series of maps:

- Recommended solutions for **streets** including City-wide policies, City-wide activities and programs, and Centennial Neighbourhoods specific initiatives
- Recommended solutions for **transit** including City-wide policies, City-wide activities and programs, and City-wide projects
- Recommended solutions for **active transportation** including City-wide projects and Centennial Neighbourhoods specific initiatives
- Recommended solutions for **Secondary Plan Policies**
- Recommended solutions for **other proponents** including SoBi Hamilton, Ministry of Transportation, Ontario and Metrolinx

Members of the focus group expressed concerns regarding the CNTMP around cycling, walking, and the QEW interchanges. They would like to promote green space along the frontage of buildings on Centennial and Queenston similar to the green space that is present along some properties today, instead of having building fronts adjacent a hardscaped pedestrian area. There was concern regarding who rides bicycles in the area, since there are a large number of senior residents. They also wanted to know if there was a new interchange planned for the QEW at Grays Road, which is under the jurisdiction of the Ministry of Transportation, Ontario.

Transportation recommendations received from the public by way of a comment form or email that members of the public liked are summarized below. Some people generally support improved transportation, while others remarked generally that not enough is being done:

- The CNTMP “does not address an increase in traffic to an area that already has traffic issues”
- “There needs to be a careful and considerate review of the traffic issues in all of Stoney Creek, and real and doable options made available to ratepayers to consider. I support cleaner and leaner transportation, as long as there are no

negative impacts on existing residential home owners, businesses, and this community.”

- “This is a great plan. It should help reduce car dependency, increase active lifestyles, and result in greater economic opportunities for the neighbourhood.”
- “The traffic is TERRIBLE in this area. I believe the issue is due to poor planning, by allowing the Walmart development to proceed before having a proper transportation infrastructure plan designed, approved, and put in place... This seems to be an ongoing issue in our City, and one that can be easily corrected by putting the interests of the ratepayers and people that reside and work in the community first.”

Specific comments and suggestions are divided into three categories, and summarized in **Exhibit 3-4:**

- Support for recommended transportation solutions
- Suggested changes regarding the recommendations or new ideas to consider
- Comments that are outside the scope of the CNTMP and should be referred to other City departments or agencies

**Exhibit 3-4: Summary of Comments Received on the Recommended Transportation Solutions**

SUPPORT FOR RECOMMENDED TRANSPORTATION SOLUTIONS	
<p>Recommended solutions for <b>streets:</b></p> <ul style="list-style-type: none"> <li>▶ Support better traffic flow and signal timing (2 people)</li> <li>▶ Support traffic calming (2 people). Specific streets mentioned are Cromwell Crescent, Owen Place, Kentley Drive, and streets used to access Eastgate Mall from Nash Road</li> </ul>	<p>Recommended solutions for <b>transit:</b></p> <ul style="list-style-type: none"> <li>▶ Support connections to transit hubs, more bus routes, stops and shelters, and feeder bus routes to the Queenston LRT station (6 people)</li> <li>▶ Support connections to public transit</li> <li>▶ Support LRT to Eastgate Square (not BRT) (5 people), including extending the first phase to Eastgate Transit Hub from Queenston Circle</li> </ul>
<p>Recommended solutions for <b>active transportation:</b></p> <ul style="list-style-type: none"> <li>▶ Support active transportation with new and enhanced infrastructure</li> <li>▶ Support increase in walkability</li> <li>▶ Support more bike lanes (2 people), specifically on Lake Avenue connecting Confederation Park entrance (2 people)</li> <li>▶ Support improving east-west active transportation connections in the study area</li> <li>▶ Support improving the safety and comfort of pedestrian and cycling connections through the interchanges at the Red Hill Valley Parkway and make it a top priority</li> </ul>	<p>Recommended solutions for <b>other proponents:</b></p> <ul style="list-style-type: none"> <li>▶ Support the GO train station at Centennial Parkway North (4 people)</li> <li>▶ Support for multi-use trail link over the QEW as part of the MTO bridge rehabilitation</li> </ul>
SUGGESTIONS FOR THE RECOMMENDED TRANSPORTATION SOLUTIONS	
<p>Recommended solutions for <b>streets:</b></p> <ul style="list-style-type: none"> <li>▶ For <b>Complete Livable Better Streets</b>, wider sidewalks (2 people). Specific streets mentioned are Nash Road, Queenston Road, Centennial Parkway, and Barton Street East</li> <li>▶ Open Kenora Avenue from Barton Street East to Queenston Road to ease congestion along Nash and Centennial once the Confederation GO Station is in full use</li> </ul>	<p>Recommended solutions for <b>transit:</b></p> <ul style="list-style-type: none"> <li>▶ Locate the LRT on Barton Street East closer to the Confederation GO Station</li> <li>▶ With the bus service review, consider extending bus service to Confederation Park, and looping Routes 4 and 44 around St. Joseph’s Hospital and Eastgate Transit Hub</li> </ul>

Recommended solutions for <b>active transportation</b> :	
<ul style="list-style-type: none"> <li>▶ Project 5-9 connecting Pottruff Road near Eugene Street across the Red Hill Valley Parkway to the Red Hill Valley Trails requires more study regarding costs. It may be for effective to invest in pedestrian and cyclists improvements on Queenston Road and Barton Street East.</li> <li>▶ For the neighbourhood greenways, include bike lanes on Delawana Drive, Kenora Avenue, and Kentley Drive along with 40 km/h posted speed limit.</li> <li>▶ Provide high visibility crosswalks ('ladder' markings) throughout the neighbourhoods</li> <li>▶ Connect Battlefield Park to Confederation Park for tourists</li> <li>▶ Provide protected bike lanes or cycle tracks (4 people). Specific streets mentioned are Nash Road, Queenston Road, and Centennial Parkway.</li> </ul>	
COMMENTS OUTSIDE THE CNTMP SCOPE	REFERRAL
▶ Need a direct, faster bus route to Mohawk College on Barton Street East; stopover / transfer at Bell Manor Loop is too long	HSR, City of Hamilton
<ul style="list-style-type: none"> <li>▶ Cars making U-turns from Vineyard Road to Centennial Parkway south are very dangerous for pedestrians</li> <li>▶ Reduce speed limit on Queenston Road - 60 km/hr is too fast</li> <li>▶ There is too much truck traffic on Centennial Parkway; it should be using the Red Hill Valley Parkway</li> </ul>	Traffic, City of Hamilton
▶ Provide more lighting, trees and pathways for people with strollers or wheelchairs to enjoy in Sam Manson Park	Parks & Recreation, City of Hamilton
▶ Red Hill Library should have direct connection / access to Sam Manson Park (3 people)	Hamilton Public Library and Parks & Recreation, City of Hamilton
<ul style="list-style-type: none"> <li>▶ Better traffic markings for QEW</li> <li>▶ Extend the HOV lanes on the QEW through Hamilton / Stoney Creek</li> </ul>	Ministry of Transportation, Ontario
<ul style="list-style-type: none"> <li>▶ Provide more train services throughout the GTA and Niagara region interconnected along the lakeshore/ QEW and with more bus stops</li> <li>▶ Need more parking space and parking garage and bike cage at Confederation GO Station</li> </ul>	Metrolinx

### 3.3.2 Modifications to the Recommended Transportation Solutions

Based on the public consultation on the recommended transportation solutions, the following modifications were made:

- Support for cycle tracks on Centennial and Queenston and other arterials in the study area will be noted in the Centennial Neighbourhoods TMP. However, they are not included in the City of Hamilton's Cycling Master Plan. As previously noted, opportunities to implement cycle tracks are very long term, beyond the horizon year of the Secondary Plan. Centennial Parkway was recently reconstructed. Options to incorporate cycle tracks into Queenston Road corridor east of Centennial Parkway can be explored as part of the B-line LRT extension; west of Centennial Parkway the approved LRT EA study did not include them. In the meantime, other cycling facilities recommended in the Centennial Neighbourhoods TMP can be pursued. Right-of-way widths are being protected in the Urban Official Plan to create **Complete Livable Better Streets** in the longer term that may incorporate cycle tracks.
- Providing a linkage between Battlefield Park and Confederation Park will be noted as a concept to pursue in future Recreational Trails Master Plans.

## 3.4 Others Consulted

As part of the Municipal Class EA, government ministries, agencies and First Nations and Aboriginal Peoples are contacted to determine their interest and obtain input on the study. Correspondence is summarized below.

### 3.4.1 Ministry of Transportation, Ontario

The Ministry of Transportation, Ontario (MTO) were notified by the City of Hamilton of the public meetings. They requested to be notified of the projects as the study area includes the QEW, the Ministry's right-of-way, and any potential impact on the highway network is of importance to them.

The City of Hamilton has met with the MTO regarding the QEW/Centennial Parkway Structure Rehabilitation project and continues to correspond with them regarding incorporating a multi-use trail on the structure. The MTO is planning on rehabilitating the bridge in 2017.

### 3.4.2 The Mississaugas of the New Credit First Nation (MNCFN)

The Mississaugas of the New Credit First Nation (MNCFN) were notified by the City of Hamilton of the public meetings. Their letter dated June 17, 2016, noted that they have various treaty rights across its traditional territory, including the Centennial Neighbourhoods study area. The MNCFN exercises treaty rights that include, but are not limited to, rights to harvest, fish, trap and gather species of plants, animals and insects for any purpose including food, social, ceremonial, trade and exchange purposes. The MNCFN also has the right to use the water and resources from the rivers, creeks and lands across the MNCFN traditional territory. They indicated that they do not have a high level of concern regarding the proposed project at this time. They requested to be notified regarding the following:

- The status of the project
- If there are any changes to the project that may impact MNCFN's interests
- Provide an electronic copy of all associated environmental and archaeology reports

### 3.4.3 Metrolinx

Metrolinx is an agency of the Government of Ontario that champions, develops and implements an integrated transportation system in the Greater Toronto and Hamilton Area. Metrolinx provided the following information on regional transportation in the Centennial Neighbourhoods study area:

- **Rapid Transit**—planning is underway for the approved B Line from McMaster University to Eastgate Square and the A Line along James Street North. A rapid connection from Eastgate Mall to Ancaster is currently identified as a 25-year rapid transit corridor in the current Regional Transportation Plan.
- **Confederation GO Station**—this future station is located at Goderich Road and Centennial Parkway. Phase 1 is an interim GO Transit park-and-ride lot on the north side of the railway. Phase 2 consists of the station building, tunnels, platforms and additional parking south of the railway. Timelines for these phases were not provided by Metrolinx. Metrolinx confirmed that they are comfortable with the preferred transportation solutions for station access by rapid transit and walking and cycling to the south; it is consistent with the anticipated volume and expected transit user market at the station.

## 4 Transportation Issues

### 4.1 Road Network and Capacity Analysis

A traffic analysis was undertaken to determine the effect of traffic generated by future developments proposed in the Secondary Plan on the adjacent street network to determine any operation deficiencies. Two approaches were used:

- Capacity analysis with defined "screenlines" to determine the overall traffic operations based on the ratio of volume of traffic to capacity of lanes across each screenline. The analysis was completed on four major screenlines: south of the QEW, east of Lake Avenue, east of the Red Hill Valley Expressway, and north of King Street East.
- An intersection analysis focused on nine major intersections, analyzing the overall intersection operations and individual movement performance.



Traffic forecasts were developed for the years 2021 and 2031 with the additional of traffic expected to be generated by the land use options proposed in the Secondary Plan study.

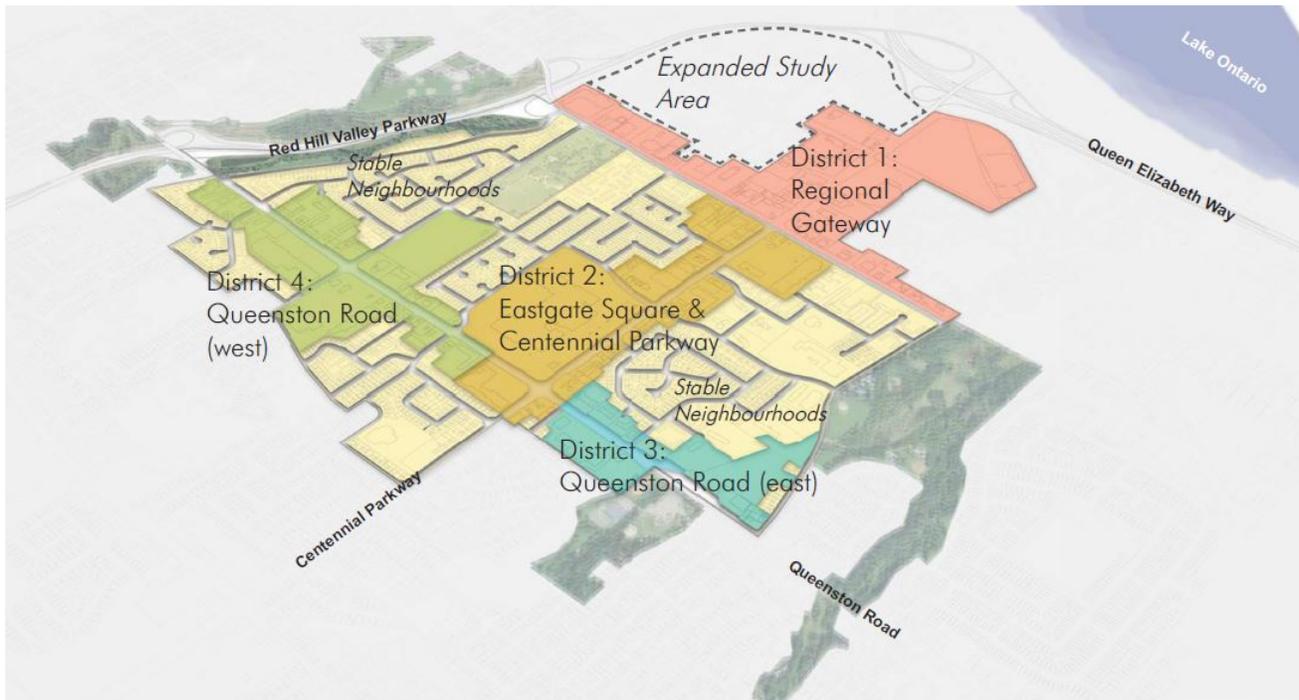
The full Road Network and Capacity Analysis report is provided in Appendix C.

#### 4.1.1 Secondary Plan Traffic Forecasts

The Centennial Neighbourhoods Secondary Plan divided the study area into four districts: Regional Gateway, Eastgate Square and Centennial Parkway, Queenston Road (east), and Queenston Road (west). **Exhibit 4-1** shows the boundaries of the four districts. Each district has three land use options, consisting of:

- Land Use Option 1 – Current Official Plan: 1,750 new residents, 177,000 ft<sup>2</sup> Gross Floor Area (GFA) general office and 118,000 ft<sup>2</sup> GFA shopping centre
- Land Use Option 2 – Medium Density Mixed Use Development: 3,950 new residents, 177,000 ft<sup>2</sup> Gross Floor Area (GFA) general office and 118,000 ft<sup>2</sup> GFA shopping centre
- Land Use Option 3 – Medium and High Density Mixed Use Development: 5,200 new residents, 228,000 ft<sup>2</sup> Gross Floor Area (GFA) general office and 152,000 ft<sup>2</sup> GFA shopping centre

The Secondary Plan land-use options will add 900 to 1,400 peak hour trips will be added to / from the study area – equivalent to two additional travel lanes on arterials to serve the area.

**Exhibit 4-1: Locations of Districts of Secondary Plan**

Source: Dillion Consulting, Centennial Neighbourhoods Secondary Plan Study Draft Secondary Plan Options

#### 4.1.2 Future Traffic Operations

In 2031, it is estimated that:

- The road network will operate reasonably well with a few “hot spot” intersections. Traffic at these intersections will experience long delays of more than 55 seconds per vehicle and queues waiting at the signals up to 180 meters in length during the PM peak hour. These intersections include Barton Street East and Lake Avenue (northbound left-turn), Queenston Road and Nash Road (northbound left turn and southbound through / right turn), and King Street East and Centennial Parkway (eastbound left turn, eastbound through / right turn, westbound left turn, northbound left turn, and southbound through).
- Barton Street East and Queenston Road west of Centennial Parkway will experience higher levels of congestion during peak periods due to the increase in traffic accessing the Red Hill Valley Parkway
- Other roads approach but do not exceed their capacity to move traffic

With the recent reconstruction of Barton Street East, Centennial Parkway and King Street East, and the planned LRT on Queenston Road, future travel demand cannot be accommodated by adding lanes to the existing roads. A few intersections, as noted above, will operate with long delays and queues if the roads are not widened. A wider range of mode choices is required to address travel demand.

#### 4.2 Issues Identified Through Consultation

An overview of the issues and opportunities identified through the consultation is provided in **Exhibit 4-2**. They represent the comments from 12 members of the Focus Group, 86 people who attended the first Public Open House, and 12 written submission.

**Exhibit 4-2: Issues Identified in Phase 1 Consultation**

**Roadways:**

- Speeding on residential streets
- Congestion on Red Hill Valley Parkway causes traffic to seek alternate routes in neighbourhoods
- Heavy, noisy truck traffic on Centennial and Barton is unsafe

**Regional Transit:**

- GO Transit Park n Ride well liked
- How will people access the new GO Station
- Increase non-auto access to new GO Station

**Local Transit:**

- Mixed opinions on potential for rapid transit expansion
- Lack of service between major destinations within the neighbourhoods
- Connect existing routes to Eastgate Square (Route 4 & 5)
- Lack of transit service to Riverdale Community Centre

**Walking:**

- Important for healthy active living
- Unsafe and/or uncomfortable to walk
- Streetscaping improvements needed
- Major streets crossing times inadequate
- Existing sidewalks adjacent to traffic on Nash
- Missing sidewalks along portions of Lake, Centennial and Warrington
- Pedestrian access to Eastgate Square / Transit Terminal: easy from west; need better connections east to Riverdale

**Bicycling:**

- Important for healthy active living
- Uncomfortable due to lack of safe facilities, fast traffic and large trucks
- Expand Hamilton Bike Share (SoBi) to the area
- Need safe connection on Centennial Parkway to Confederation Park
- New bikeways suggested for Nash, Delawana, Owen Place, Kenora, Kentley; to new GO Station and Red Hill Library; and extend King Street bike lanes

## 5 Alternative Transportation Solutions

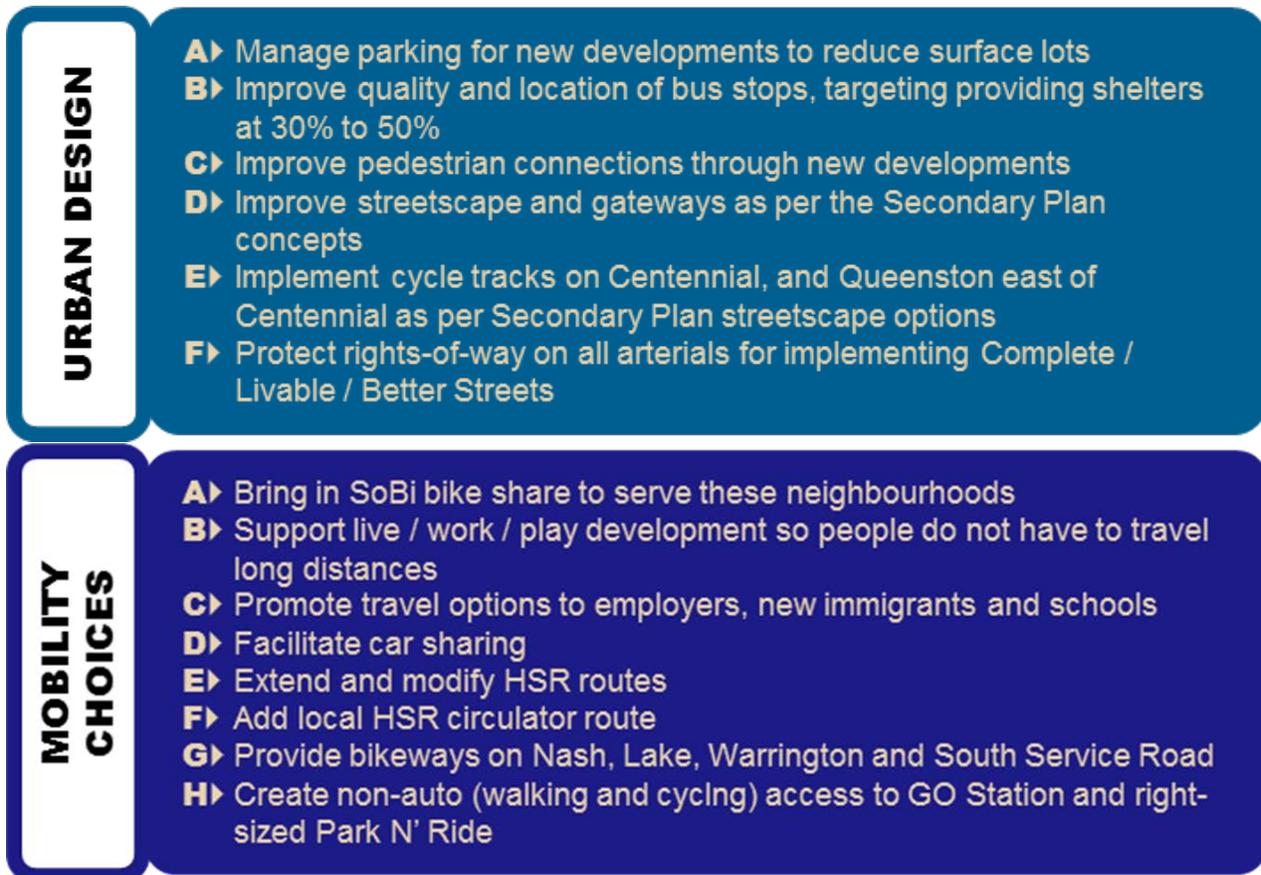
The transportation solutions were categorized by the main issue or opportunity they address:

[Capacity](#)      [Safety](#)      [Urban Design](#)      [Mobility Choices](#)

The transportation solutions are listed in **Exhibit 5-1**. Additional information on Complete Livable Better Streets and neighbourhood greenways, two new approaches to street design in Hamilton, are provide in the subsequent sections.

**Exhibit 5-1: Alternative Transportation Solutions**

<b>CAPACITY</b>	<ul style="list-style-type: none"><li><b>A▶</b> Extend the B-line Rapid Transit from Queenston Circle to Eastgate Square (within 15 years west of Centennial &amp; beyond 25 years east of Centennial)</li><li><b>B▶</b> Implement S-line Rapid Transit on Centennial and extend to GO Station (beyond 25 years)</li><li><b>C▶</b> Protect right-of-way on Barton from Red Hill Valley Parkway to Centennial for additional traffic lanes (beyond 25 years)</li><li><b>D▶</b> Improve traffic signal timings</li><li><b>E▶</b> Add turn lanes or roundabouts at “hot spot” intersections</li><li><b>F▶</b> Adopt transit priority measures at signalized intersections</li></ul>
<b>SAFETY</b>	<ul style="list-style-type: none"><li><b>A▶</b> Ensure improvements to streets reflect desirable speeds</li><li><b>B▶</b> Implement traffic calming to reduce speeds to 40 km/h or less on local streets where speeding is an issue</li><li><b>C▶</b> Construct missing pieces of sidewalk along Lake, Centennial and local streets that serve commercial and employment areas</li><li><b>D▶</b> Create neighbourhood greenways to calm traffic, and improve walking and cycling connections</li><li><b>E▶</b> Manage access to new, larger developments to reduce driveways for improved safety</li><li><b>F▶</b> Provide multi-use trail access to Confederation Park</li></ul>



### 5.1.1 Complete Livable Better Streets<sup>2</sup>

The City of Hamilton's approach to street design has been evolving to better recognize the needs of all users. The City's Official Plan and supporting policy documents call for streets that are more supportive of walking, cycling and transit. The City-wide TMP considers planned land uses and built form intensities to ensure that the transportation network supports and facilitates the City's vision for growth.

Streets in Hamilton today are identified by their transportation function as arterial, collector and local roads. Streets will continue to be identified via this classification, however, as part of the City-wide TMP Update the City is identifying policy and a decision making process for adopting a Complete Livable Better Streets design approach.

Complete Livable Better Streets is an approach to street design that balances the needs of all users. While design does not always provide equal accommodation, it is a context sensitive approach that considers both the transportation and place-making function of the road. A Complete Livable Better Streets approach to design will include place-making and land-use sensitive roadway typologies, and a standards toolkit that will help rationalize and guide road and streetscape decisions. The proposed Complete Livable Better Streets typologies include Main Streets, Urban Avenues, Transitioning Avenues, Connectors, Neighbourhood Streets, Rural Roads, and Rural Villages.

<sup>2</sup> From Hamilton Transportation Master Plan Review and Update, PIC 3 Information Panels, December 2015, and PIC 4 Information Panels, April 2016.

The proposed Complete Livable Better Streets policy shown below; the associated decision-making process is illustrated in **Exhibit 5-2**.

Promote a network of Complete Livable Better Streets that recognizes both the transportation and place-making function of the road. These streets are context sensitive, balance the needs of all users and are efficient, accessible, safe and sustainable. This network will be achieved through:

- ▶ Applying the City-wide TMP policies to the design, planning, maintenance and operations of all street projects
- ▶ Designing streets with consideration for the context of surrounding land uses
- ▶ Balancing user needs based on the vision and differing purposes of each streets
- ▶ Incorporating green infrastructure
- ▶ Improving the public realm to encourage interaction between all of its users
- ▶ Considering economic well-being

The Complete Livable Better Streets policy will be implemented as follows:

- ▶ Implement the Complete Livable Better Streets decision-making process (see
- ▶ Develop design guidelines
- ▶ Develop a program to monitor the implementation and success of Complete Livable Better Streets
- ▶ Review current design standards to ensure reflection of Complete Livable

Exhibit 5-2: Complete Livable Better Streets Decision-making Process



### 5.1.2 Neighbourhood Greenways

Neighbourhood greenways are local residential streets where pedestrians, cyclists, and neighbours are given priority, linking them to parks, schools, natural areas, amenities, and commercial streets. The elements that make up a neighbourhood greenway help slow traffic, discourage through traffic, and make the street safer and more comfortable for residents. A network of neighbourhood greenways can promote access by active transportation to areas that were seen only accessible by busy arterial roads or by car. The network provides opportunities for physical activity, and strengthens the sense of community. In the latest Hamilton Transportation Master Plan draft report this term is renamed Bicycle Boulevard.

These local, traffic calmed streets have been implemented for example in Vancouver, British Columbia, and Portland, Oregon, and are very popular.

Neighbourhood greenways are created by planning routes on quiet streets and adding traffic calming, public amenities, and signs and pavement markings to create an inviting street for walking, cycling and interaction among neighbours. The design of each street requires residents to help identify what needs to be improved. Design treatments are typically a mix of the following:

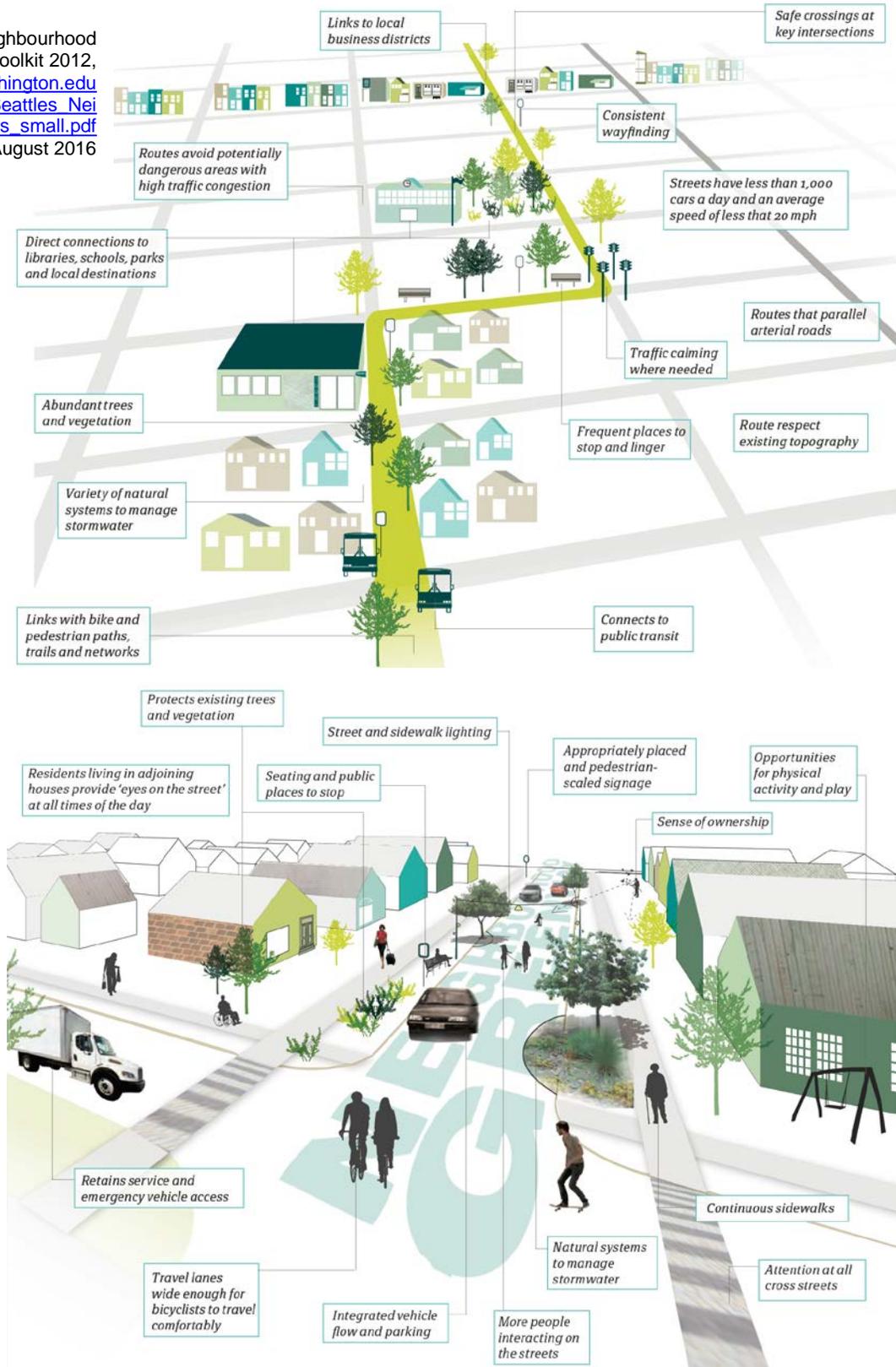
- Route Planning: Direct access to destinations such as schools, parks, community centres, and nearby shops
- Signs and Pavement Markings: Easy to find and to follow
- Speed Management: Slow motor vehicle speeds

- Volume Management: Low or reduced motor vehicle volumes
- Minor Street Crossings: Minimal bicyclist delay
- Major Street Crossings: Safe and convenient crossings
- Offset Crossings: Clear and safe navigation
- Green Infrastructure: Enhancing environments

The route planning and design treatments of neighbourhood greenways are illustrated in **Exhibit 5-3**. See also Glossary, page 65.

Exhibit 5-3: Neighbourhood Greenways: Route Planning and Design Elements

From Seattle's Neighbourhood Greenways: Seattle Toolkit 2012, [http://greenfutures.washington.edu/images/publications/Seattles\\_Neighborhood\\_Greeways\\_small.pdf](http://greenfutures.washington.edu/images/publications/Seattles_Neighborhood_Greeways_small.pdf) accessed August 2016



## 5.2 Modifications to the Alternatives

The following modifications to the alternatives were introduced following Phase 2 consultation, based on suggestions from stakeholders and members of the public:

- Modify “protect right-of-way on Barton Street East for additional traffic lanes” to include HOV / transit-only lanes
- Include reviewing pedestrian walk times in “improve traffic signal timing”
- Add from **Recreational Trails Master Plan**:
  - Project 5-4: Bow Valley Open Space and Lawrence Avenue Park just west of Lake Avenue
  - Project 5-9: Pottruff Road near Eugene Street across the Red Hill Valley Parkway to the Red Hill Valley Recreational Trail
- Add improve safety and comfort of pedestrian and cycling connections through Red Hill Valley Parkway interchanges

## 5.3 Evaluation

The alternative transportation solutions were evaluated based on their impact on the environment described in terms of transportation, public health, physical environment and cost. The initial evaluation criteria were presented to the public for review and then additional criteria were added as described in **Exhibit 5-4**.

### Exhibit 5-4: Evaluation Criteria

**TRANSPORTATION:** network, access, comfort and delay:

- ▶ Pedestrians
- ▶ Cyclists
- ▶ Transit passengers
- ▶ Drivers
- ▶ Emergency services
- ▶ Goods movement

Initial evaluation criteria presented to stakeholders / public:

- Transit
- Pedestrians
- Cyclists
- Drivers
- Connectivity
- Accessibility

Additional evaluation criteria added following consultation:

- Comfort
- Delay
- Emergency Services
- Goods Movement

**PUBLIC HEALTH:**

- ▶ Social interaction
- ▶ Transportation equity and access
- ▶ Active transportation
- ▶ Collision reduction
- ▶ Air quality

Initial evaluation criteria presented to stakeholders / public:

- Safety
- Public health

Additional evaluation criteria added following consultation:

- Transportation equity and access (includes physical activity)
- Social interaction
- Air quality

**PHYSICAL ENVIRONMENT:**

- ▶ Natural environment (landscape, parks, open space, watercourses, and shorelines)
- ▶ Public realm (streetscape and public spaces)
- ▶ Cultural, heritage, and archaeological resources

Initial evaluation criteria presented to stakeholders / public:

- Urban design
- Natural environment
- Built heritage
- Archaeology

**COST:**

- ▶ Implementation
- ▶ Operation and maintain
- ▶ Economic benefits

Initial evaluation criteria presented to stakeholders / public:

- Cost

Additional evaluation criteria added following consultation:

- Economic benefits

A detailed evaluation was undertaken; the results are provided in Appendix D. A summary of the evaluation is provided **Exhibit 5-5**.

**Exhibit 5-5: Summary of Evaluation**

Alternative Solution	Transportation	Public health	Physical Environment	Costs	Recommended Alternative
<b>Issue / Opportunity: Capacity</b>					
A▶ Extend the B-line Rapid Transit from Queenston Circle to Eastgate Square (within 15 years west of Centennial & beyond 25 years east of Centennial)	Excellent	Excellent	Neutral	Excellent	Yes
B▶ Implement S-line Rapid Transit on Centennial and extend to GO Station (beyond 25 years)	Good	Good	To be determined	To be determined	Yes
C▶ Protect right-of-way on Barton from Red Hill Valley Parkway to Centennial for additional traffic, HOV or transit-only lanes (beyond 25 years)	Neutral	Poor	Fair	Fair	Yes
D▶ Improve traffic signal timings including pedestrian walk times	Good	Good	Neutral	Good	Yes
E▶ Add turn lanes or roundabouts at "hot spot" intersections	Neutral	Fair	Fair	Poor	No
F▶ Adopt transit priority measures at signalized intersections	Good	Good	Neutral	Good	Yes

Alternative Solution	Transportation	Public health	Physical Environment	Costs	Recommended Alternative	
<b>Issue / Opportunity: Safety</b>						
A▶	Ensure improvements to streets reflect desirable speeds	Neutral	Excellent	Neutral	Good	See Urban Design Option F
B▶	Implement traffic calming to reduce speeds to 40 km/h or less on local streets where speeding is an issue	Good	Good	Good	Good	Yes
C▶	Construct missing pieces of sidewalk along Lake, Centennial and local streets that serve commercial and employment areas	Excellent	Excellent	Neutral	Fair	Yes
D▶	Create neighbourhood greenways to calm traffic, and improve walking and cycling connections	Good	Excellent	Good	Fair	Yes
E▶	Manage access to new, larger developments to reduce driveways for improved safety	Good	Good	Neutral	Fair	Yes
F▶	Provide multi-use trail access to Confederation Park	Good	Excellent	Neutral	Poor	Yes

Alternative Solution	Transportation	Public health	Physical Environment	Costs	Recommended Alternative	
<b>Issue / Opportunity: Urban Design</b>						
A▶	Manage parking for new developments to reduce surface lots	Good	Excellent	Good	Neutral	Yes
B▶	Improve quality and location of bus stops, targeting providing shelters at 30% to 50%	Good	Excellent	Good	Good	Yes
C▶	Improve pedestrian connections through new developments	Good	Excellent	Good	Good	Yes
D▶	Improve streetscape and gateways as per the Secondary Plan concepts	Good	Excellent	Good	Good	Yes
E▶	Implement cycle tracks on Centennial, and Queenston east of Centennial as per Secondary Plan streetscape options	Good	Excellent	Good	Poor	See Urban Design Option F
F▶	Protect rights-of-way on all arterials for implementing Complete / Livable / Better Streets	Neutral	Excellent	Good	Fair	Yes

Alternative Solution	Transportation	Public health	Physical Environment	Costs	Recommended Alternative	
<b>Issue / Opportunity: Mobility Choices</b>						
A▶	Bring in SoBi bike share to serve these neighbourhoods	Good	Excellent	Good	Good	Yes
B▶	Support live / work / play development so people do not have to travel long distances	Excellent	Excellent	Good	Excellent	Yes
C▶	Promote travel options to employers, new immigrants and schools	Good	Excellent	Good	Excellent	Yes
D▶	Facilitate car sharing	Neutral	Good	Neutral	Good	Yes
E▶	Extend and modify HSR routes	Good	Good	Neutral	Poor	Yes
F▶	Add local HSR circulator route	Good	Good	Neutral	Poor	No
G▶	Provide bikeways on Nash, Lake, Warrington and South Service Road	Good	Good	Neutral	Fair	Yes
H▶	Create non-auto (walking and cycling) access to GO Station and right-sized Park N' Ride	Good	Excellent	Neutral	Good	Yes
I▶	Implement the multi-use recreational trails from the Recreational Master Plan: Project 5-4 in Bow Valley Open Space and Lawrence Avenue Park just west of Lake Avenue; Project 5-9 connecting Pottruff Road near Eugene Street across the RHVP to the Red Hill Valley Recreational Trail	Good	Excellent	Good	Good	Yes
J▶	Improve the safety and comfort of pedestrian and cycling connections through the interchanges at the RHVP	Good	Good	Neutral	Excellent	Yes

Based on the evaluation, the following alternative transportation solutions are **NOT** recommended:

- Add turn lanes or roundabouts at “hot spot” intersections: Based on traffic analysis, additional turn lanes recommended at Barton Street East and Nash, Barton Street East and Lake, Queenston and Nash, and Queenston and Centennial. Significant physical constraints may preclude the ability to widen intersections for additional turn lanes. Centennial Parkway and sections of Barton Street East and King Street East were recently reconstructed so the opportunity would be longer term, maybe beyond the horizon year of the Secondary Plan.
- Add local HSR circulator route: About 90% of the residential areas are within 400 m of a bus routes. A local circulator route would be expensive (both capital and operating costs). It is recommended that effort focus on monitoring and adjusting existing routes instead of adding a new route; HSR reviews bus routes annually.

Constructing cycle tracks on Centennial Parkway, and on Queenston Road east of Centennial Parkway are considered not viable in the short term. Centennial Parkway was recently reconstructed so the cost of constructing cycle tracks would be very high. Cycle tracks on Queenston Road need to be considered as part of the longer-term B-line LRT extension. Therefore, the opportunity to provide cycle tracks is very long term, beyond the horizon year of the Secondary Plan. This alternative transportation solution is captured, however, by the alternatives to protect the rights-of-way of these arterials and support future designs to reflect the Complete Livable Better Streets policy.

## 5.4 Preferences Identified Through Consultation

During the Phase 2 Focus Group and Public Open House, attendees worked in five groups to identify alternatives with advantages that made sense, were the best ideas for them and their neighbourhoods, and those that they had concerns about or might not work. The outcomes are summarized in **Section 3.2**. The top alternatives that were clearly supported included:



- Extend the B-Line Rapid Transit from Queenston Circle to Eastgate Square (within 15 years ) and east of Centennial Parkway (beyond year 2041)
- Improve traffic signal timings
- Implement the S-Line Rapid Transit on Centennial Parkway
- Extend rapid transit along Centennial Parkway to the GO Transit station (beyond year 2041)
- Provide multi-use trail access to Confederation Park
- Implement traffic calming to reduce speeds to 40 km/h or less on local streets where speeding is an issue

The recommended alternative transportation solutions were presented at the third Focus Group meeting and Public Open House. Comments received in support of the recommended alternatives are summarized in **Exhibit 5-6**.

**Exhibit 5-6: Summary of Comments Received Supporting Recommended Transportation Solutions**

RECOMMENDED SOLUTIONS FOR STREETS:	RECOMMENDED SOLUTIONS FOR TRANSIT:
<ul style="list-style-type: none"> <li>▶ Support better traffic flow and signal timing (2 people)</li> <li>▶ Support traffic calming (2 people). Specific streets mentioned are Cromwell Crescent, Owen Place, Kentley Drive, and streets used to access Eastgate Mall from Nash Road</li> </ul>	<ul style="list-style-type: none"> <li>▶ Support connections to transit hubs, more bus routes, stops and shelters, and feeder bus routes to the Queenston LRT station (6 people)</li> <li>▶ Support connections to public transit</li> <li>▶ Support LRT to Eastgate Square (not BRT) (5 people)</li> </ul>
RECOMMENDED SOLUTIONS FOR ACTIVE TRANSPORTATION:	RECOMMENDED SOLUTIONS FOR OTHER PROPONENTS:
<ul style="list-style-type: none"> <li>▶ Support active transportation with new and enhanced infrastructure</li> <li>▶ Support increase in walkability</li> <li>▶ Support more bike lanes (2 people), specifically on Lake Avenue connecting Confederation Park entrance (2 people)</li> <li>▶ Support improving east-west active transportation connections in the study area</li> <li>▶ Support improving the safety and comfort of pedestrian and cycling connections through the interchanges at the Red Hill Valley Parkway and make it a top priority</li> </ul>	<ul style="list-style-type: none"> <li>▶ Support the GO train station at Centennial Parkway (4 people)</li> </ul>

The following suggestions were added to the recommended transportation solutions based on comments received:

- For **Complete Livable Better Streets**, wider sidewalks. Specific streets mentioned are Nash Road, Queenston Road, Centennial Parkway, and Barton Street East
- With the **bus service review**, consider extending bus service to Confederation Park, and looping Routes 4 and 44 around St. Joseph's Hospital and Eastgate Transit Hub
- For the **neighbourhood greenways**, include bike lanes on Delawana Drive, Kenora Avenue, and Kentley Drive along with 40 km/h posted speed limit.
- Provide **high visibility crosswalks** ('ladder' markings) throughout the neighbourhoods
- Connect **Battlefield Park to Confederation Park** for tourists
- Provide **protected bike lanes or cycle tracks** on Queenston Road and Centennial Parkway to support direct access to Battlefield Park, Eastgate Transit Hub, Confederation GO Station, and the many commercial and employment establishments on these corridors.

In addition, the Secondary Plan area was extended to include the industrial / employment area north of Barton Street East and west of the future Confederation GO Station. Land use in the area may change to be supportive of the transit hub. Considering direct access to the area and the GO station and to provide improved road, pedestrian and cycling network connectivity – the study recommends extending Goderich Road to Kenora Avenue. It would require relocating the City of Hamilton's Transfer Station.

## 6 Preferred Transportation Solutions

The preferred transportation solutions are those that:

- Meet the goals of the opportunity statement
- Result in net benefits with respect to the evaluation of their transportation, public health, physical environment and cost impacts
- Generally have the support of the stakeholders and members of the public who participated in the consultation



They are described in **Sections 6.2 to 6.6** in terms of City-wide policies, City-wide activities and programs, City-wide projects, Centennial Neighbourhoods specific initiatives, Secondary Plan policies, and preferred solutions by other proponents.

### 6.1 Municipal Class EA Schedules

Some of the preferred transportation solutions will require additional study and consultation under the Municipal Class Environmental Assessment Process (MCEA). The specific requirements of the MCEA for a particular project depend on the type of project, its complexity and the significance of environmental impacts. According to the project classifications included in the Class EA document, the projects included in this Master Plan are a combination of the following schedules:



- Schedule "A" projects are limited in scale and have minimal adverse environmental impacts. These projects are considered pre-approved under the Class EA and may proceed directly to construction without following the Class EA process. An example of a Schedule "A" project is normal or emergency operations and maintenance of a roadway. Consultation for these projects has been completed through the CNTMP. These may proceed to implementation.
- Schedule "A+" projects are similar to Schedule "A" projects and are considered preapproved under the Class EA, however public notification is required prior to construction. An example of such a project includes the construction of localized operational improvements, such as a turning lane at an intersection, where the construction cost is less than \$2.3 M. Consultation for these projects has been completed through the CNTMP. These may proceed to implementation.
- Schedule "B" projects have the potential for some adverse impacts and are approved under the EA Act provided they follow Phases 1 and 2 of the Class EA process and are "screened". An example of a Schedule "B" project is the widening of a roadway, where the construction cost is less than \$2.3 M. Consultation for these projects has been completed through the CNTMP. The proponent (City of Hamilton) must issue a Notice of Completion to review agencies and public. The Project File (this document) is made available for review. If no Part II Order

requests are received within 30 days of the Notice of Completion, projects may proceed to implementation.

- Schedule "C" projects have the potential for significant adverse environmental impacts and must follow all five phases of the Class EA process. An example of a Schedule "C" project includes the construction of a new road, where the construction value is greater than \$2.3 M. Phases 1 and 2 of the planning and design process are completed through the CNTMP. Phases 3 and 4 of the Class EA must be completed prior to construction of any Schedule "C" projects. Additional study and mandatory consultation required for these projects.

Since a Master Plan covers Phases 1 and 2 of the Class EA process, projects that must follow all five phases of the process, such as widening an existing road where the construction value is greater than \$2.3 M, can proceed directly to Phases 3 and 4 of the Class EA process. Phase 3 includes the identification, evaluation and selection of the preferred design and Phase 4 consists of the documentation of Phases 1, 2 (including any required updates to this Master Plan) and 3 in an Environmental Study Report.

## 6.2 Preferred Solutions for Streets

Preferred transportation solutions that affect streets in the Centennial Neighbourhoods TMP study area are listed in **Exhibit 6-1**. The referenced excerpt from the *Urban Official Plan* indicating the right-of-way to be protected along the arterials is provided in **Exhibit 6-2**. The preferred solutions for streets are also illustrated on a map in **Exhibit 6-3**.

**Exhibit 6-1: Preferred Solutions for Streets including Approximate Cost, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION		APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
City-wide Policies	1. Support future designs of streets to reflect desirable operating speeds through the City-wide Transportation Master Plan (2016) <b>Complete Livable Better Streets</b> policy (See Section 5.1.1 for a description of Complete Livable Better Streets)	NA	NA	As streets in the study area are reconstructed.
	2. Protect right-of-way (no cost) as per <i>Urban Official Plan, Schedule C-2 – Future Road Widening (October 2015)</i> – see <b>Exhibit 6-2</b> – for <b>Complete Livable Better Streets</b> on Barton Street East from Red Hill Valley Parkway to Centennial Parkway for increased capacity, on Centennial Parkway and Queenston Road for future LRT, and on <u>all</u> arterials for HOV, transit-only lanes, cycle tracks or bike lanes, wider pedestrian sidewalks and amenities, and / or enhanced streetscaping.	NA	NA	As streets in the study area are reconstructed.

PREFERRED TRANSPORTATION SOLUTION		APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
City-wide Activities & Programs	3. Improve traffic signal co-ordination and timings, including pedestrian walk times. Review the implementation of recommendations from the Traffic Signal Operations Study (2012) and determine if additional adjustments are required.	Existing activities / programs	Schedule A	On-going
	4. Implement traffic calming on local streets where speeding, cut-through traffic volumes, collisions and safety concerns are ascertained; future studies are required. Implement with community and Councillor's support.	Costs vary from about \$2 K to \$10 K per traffic calming device	Schedule A	On-going Speed studies on Owen Place have identified speeding as an issue; Owen Place has been recommended to be included in the City of Hamilton's traffic calming program.
	5. Continue to promote travel options to employers and schools through the Smart Commute program and Active and Sustainable School Transportation (ASST) initiatives (Transportation Demand Management).	Existing City activities / programs	NA	On-going
Centennial Neighbourhoods Specific Program	6. Co-ordinate communication of travel options available for new residents in various languages aligned with settlement activities (Transportation Demand Management).	To be determined	NA	Years 2017 to 2022
<p>Notes:</p> <p>1. <b>Schedule A and A+ Projects:</b> Consultation for these projects has been completed through the CNTMP. These may proceed to implementation.  <b>Schedule B Projects:</b> Issue Notice of Completion to review agencies and public. The Project File (this document) is made available for review. If no Part II Order requests are received within 30 days of the Notice of Completion, projects may proceed to implementation.  <b>Schedule C Projects:</b> Additional study and mandatory consultation required for these projects.</p>				

Exhibit 6-2: Excerpt from Urban Official Plan Schedule C-2 – Future Road Widening (October 2015)

<b>Urban Official Plan Schedule C-2 – Future Road Widening (October 2015)</b>			
<b>Road</b>	<b>From</b>	<b>To</b>	<b>Future Right-of-way Width</b>
Barton Street	Woodward Avenue	Nash Road	42.672 m
	Nash Road	Fifty Road	36.576 m
Centennial Parkway	King Street	North Service Road	36.576 m
King Street East	Redhill Creek	Battlefield Drive	36.576 m
	Battlefield Drive	Queenston Road	26.213 m
Lake Avenue N	North City Limit	Queenston Road	26.213 m
Lake Avenue Drive	Queenston Road	King Street	20.117 m
Nash Road	End	Barton Street	26.213 m
Queenston Road	Redhill Valley Parkway	Donn Avenue	36.576 m

Exhibit 6-3: Map of Preferred Solutions for Streets

No. 2 Protect right-of-way (no cost) as per Urban Official Plan for Complete Livable Better Streets  
 No. 3 Improve traffic signal co-ordination and timings

Through the TMP Update, the City is identifying policy and a decision-making process for adopting a **Complete Livable Better Streets** design approach. It balances the needs of all users yet is sensitive to local context that considers both the transportation and place-making function of the street.



	Future Road Widening for Complete Livable Better Streets		Pedestrian Signal		Elementary School
	Potential Goderich Road Extension		Red Hill Library		Secondary School
					Dominic Agostino Riverdale Community Centre

### 6.3 Preferred Solutions for Transit

Preferred transportation solutions that affect transit in the Centennial Neighbourhoods TMP study area are listed in **Exhibit 6-4**. The preferred solutions for transit are also illustrated on a map in **Exhibit 6-5**.

**Exhibit 6-4: Preferred Solutions for Transit including Approximate Cost, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION		APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
City-wide Policy	7. Determine appropriate transit priority measures and funding. A transit priority study is recommended for Centennial Neighbourhoods following adoption of a potential new transit priority policy under the City-wide Transportation Master Plan.	To be determined	Schedules A+ or B, (depending on potential for environmental effects)	Years 2017 to 2027
City-wide Activities & Programs	8. New guidelines are being developed for bus stop placement and design, including installing passenger amenity features. More transit shelters throughout the HSR bus route system is a key element for improving the customer experience, helping to grow transit ridership. Apply these guidelines to the study area routes.	To be determined	Schedule A+	Years 2017 to 2027
	9. Through the City-wide Annual Transit Service Plans, consider extending or modifying HSR bus routes in the study area. Review the potential for improving connections between the LRT terminus and the new Confederation GO Station until rapid transit is extended to this destination.	Modification or extension of local bus routes generally require purchase of additional buses and increases in operating budget  Cost of rapid transit extensions have not been determined.	Schedule A+	On-going
City-wide Projects	10. Extend the B-line LRT from Queenston Traffic Circle to Eastgate Transit Hub. Subsequent to the consultation and preparation of this report, the LRT extension from the Queenston Traffic Circle to Eastgate was included in the Environmental Project Report addendum, and endorsed by council.	To be determined	Transit Project Assessment Process	As per City's B line implementation plans
	11. Extend rapid transit from the Eastgate Transit Hub to the Confederation GO Station.	To be determined	Transit Project Assessment Process	As per City's Rapid Transit expansion Plans

PREFERRED TRANSPORTATION SOLUTION	APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENT ATION (if known)
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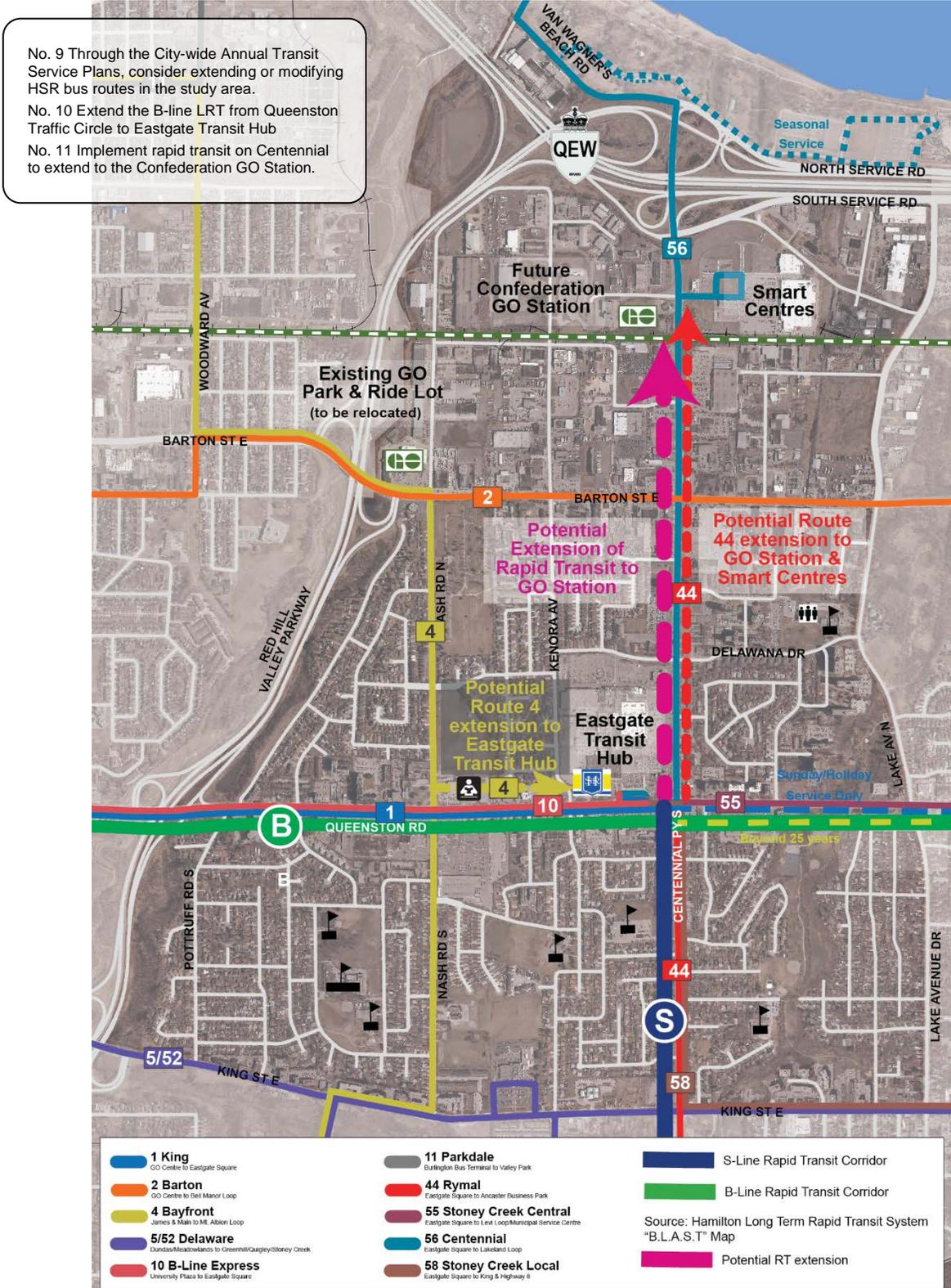
Notes:

- Schedule A and A+ Projects:** Consultation for these projects has been completed through the CNTMP. These may proceed to implementation.

**Schedule B Projects:** Issue Notice of Completion to review agencies and public. The Project File (this document) is made available for review. If no Part II Order requests are received within 30 days of the Notice of Completion, projects may proceed to implementation.

**Schedule C Projects:** Additional study and mandatory consultation required for these projects.

Exhibit 6-5: Map of Preferred Solutions for Transit



## 6.4 Preferred Solutions for Active Transportation

Preferred transportation solutions that affect active transportation (walking and cycling) in the Centennial Neighbourhoods TMP study area are listed in **Exhibit 6-6**. The preferred solutions for active transportation are also illustrated on a map in **Exhibit 6-7**.

These recommendations will be guided by the City of Hamilton's' Pedestrian Mobility Plan (2012) and Cycling Master Plan (2009), and associated updates to these plans.

Also see Preferred Solutions for Streets No. 2 to protect rights-of-way as per Urban Official Plan for **Complete Livable Better Streets**. This includes allowing for the provision of cycle tracks, pedestrian facilities and amenities on arterial roads such as Barton Street East, Centennial Parkway and Queenston Road at such time that these roads are reconstructed.

**Exhibit 6-6: Preferred Solutions for Active Transportation including Approximate Cost, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION	APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
<p style="text-align: center;">City-wide Projects</p> <p>12. Implement Projects in the City of Hamilton's Recreational Trails Master Plan (2016):</p> <ul style="list-style-type: none"> <li>• Project 5-4: multi-use trail in Bow Valley Open Space and Lawrence Avenue Park just west of Lake Avenue</li> <li>• Project 5-9: multi-use trail and bridge connecting Pottruff Road near Eugene Street across the Red Hill Valley Parkway to the Red Hill Valley Trails</li> <li>• Project 5-10: multi-use trail access to Confederation Park along Centennial Parkway and across the QEW to Goderich Road (see Recommended Solutions by Other Proponents).</li> </ul>	<p>Recreational Trails Master Plan does not include any estimated construction costs (to be determined)</p> <p>Project 5-10 approx. value \$2 M</p>	<p>Trail projects under \$3.5 M are exempt from the MCEA</p> <p>Those that cost between \$3.5 M and 9.5 M are Schedule B</p> <p>Those over \$9.5 M are Schedule C</p>	<p>The Recreational Trails Master Plan is intended for phased implementation of trail initiatives.</p> <p>Implementation timeframes for Projects 5-4 and 5-9 not identified.</p> <p>Project 5-10: see Recommended Solutions by Other Proponents No. 29 – implement as part of QEW / Centennial Parkway bridge rehabilitation scheduled by MTO anticipated for 2017</p>
<p style="text-align: center;">Centennial Neighbourhoods Specific Projects</p> <p>13. Create neighbourhood greenways to calm traffic and improve walking and cycling connections to create Complete Livable Better Streets. Improvements may consist of street furniture and amenities (e.g. seating, planters or gardens, public art, bicycle racks, pedestrian-scale lighting, water fountains, tree or shade canopies), way-finding signage and pavement markings, traffic speed and volume management (e.g. traffic calming, signs and pavement markings), bike lanes to narrow road width, and green stormwater infrastructure. A description of neighbourhood greenways is provided in Section 5.1.2 and the Glossary.</p>	<p>There are about 7 km of greenways recommended at a cost of about \$75 K per kilometre to implement.</p>	<p>Schedule A</p>	<p>Co-ordinate with traffic calming initiatives (see Preferred Solutions for Streets No. 4 and Preferred Transportation Solutions to include in the Secondary Plan No. 24)</p>

PREFERRED TRANSPORTATION SOLUTION	APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
<p>14. Construct missing sections of sidewalk along Lake Avenue, Centennial Parkway and local streets that serve commercial and employment areas and schools.</p>	<p>There are about a total of 6 km of new sidewalks required at a cost of about \$300 K per kilometre to construct</p>	<p>Schedule A</p>	<p>Phase in with road resurfacing / reconstruction projects or through development applications (see Secondary Plan Policies No. 26)</p>
<p>15. Provide cycling facilities on Nash Road, Lake Avenue, Warrington Street and a section of the South Service Road in the future. Options to consider for cycling facilities are as follows:</p> <ul style="list-style-type: none"> <li>• Nash Road—Re-stripe with bike lanes north of Barton Street East in conjunction with permanent on-street parking along the west curb as well as auxiliary left-turn lanes at Kentley Drive to eliminate the 3-phase traffic signal design. Re-stripe with bike lanes south of Barton Street East in conjunction with a centre two-way left-turn lane.</li> <li>• Lake Avenue— Re-stripe with bike lanes in conjunction with a centre two-way left-turn lane.</li> <li>• Warrington Street and a section of the South Service Road—Construct a multi-use trail on the south side from Lake Avenue to Centennial Parkway.</li> </ul>	<p>Nash Road: Approximately \$80 K</p> <p>Lake Avenue: Approximately \$90 K</p> <p>Warrington Street: Approximately \$600 K</p>	<p>Schedule A+</p>	<p>Consider implementing with future development to provide cycling infrastructure in response to growth in travel. Although wider rights-of-way for the arterial streets will be protected for potential cycle tracks in the long term (see Preferred Solutions for Streets No. 2), retrofitting these bikeways are an opportunity to develop a viable cycling network in the shorter term.</p>
<p>16. Improve the safety and comfort of pedestrian and cycling connections through the interchanges at the Red Hill Valley Parkway. A design study is recommended to determine issues and appropriate treatments.</p>	<p>The cost to improve signage, pavement markings and ramp crossings is estimated to be about \$100 K per interchange</p>	<p>Schedule A</p>	<p>Year 2017 to 2022</p>

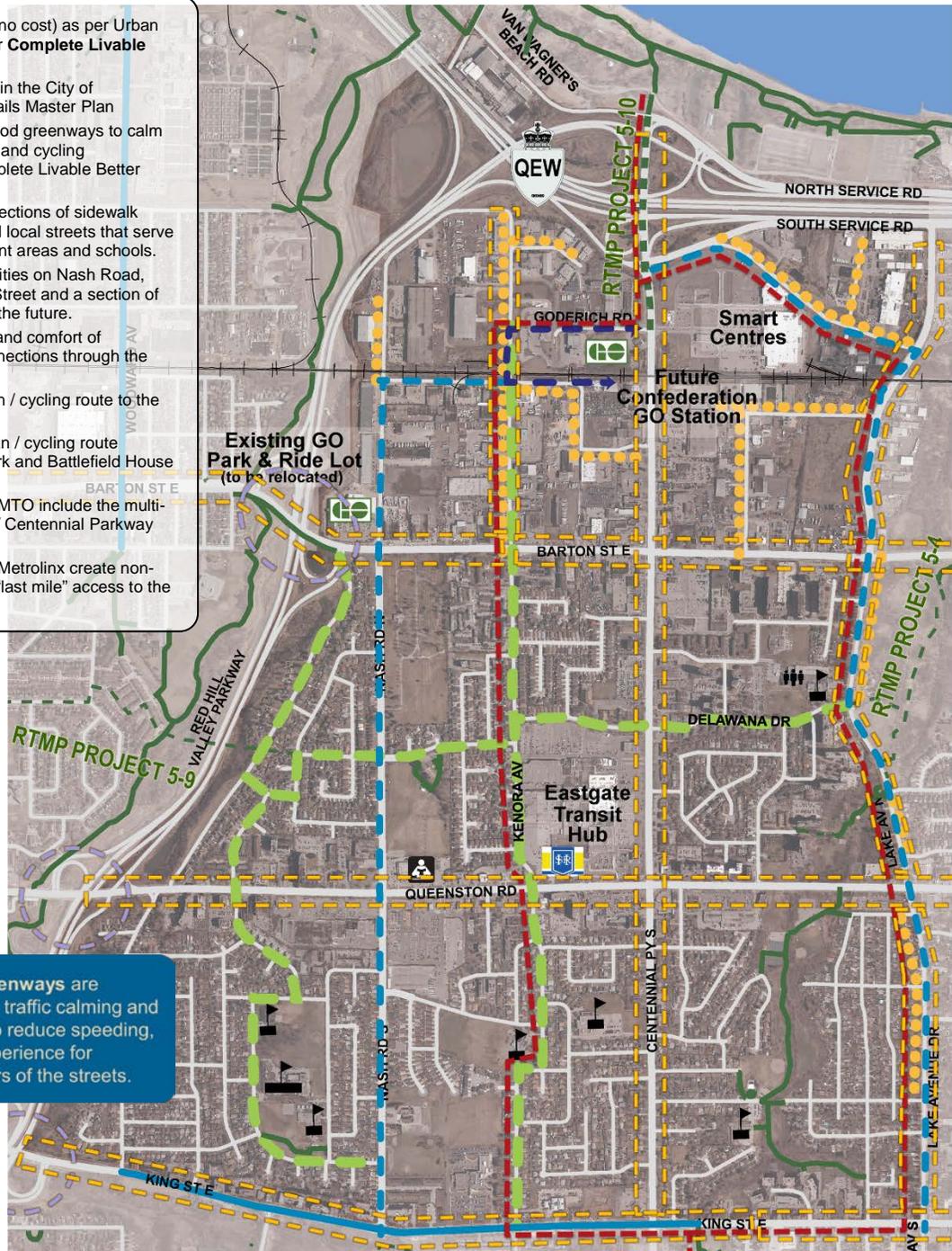
Centennial Neighbourhoods Specific Projects

PREFERRED TRANSPORTATION SOLUTION	APPROX. COST (if known)	MCEA SCHEDULE (see Note 1)	TIMEFRAME FOR IMPLEMENTATION (if known)
<p>17. Provide a pedestrian / cycling route to the Confederation GO Station (see Preferred Transportation Solutions by Other Proponents No. 30). Potential non-auto routing to be investigated includes:</p> <ul style="list-style-type: none"> <li>• A connection south of the railway along Bancroft Street to the Confederation GO Station, with access across the railway to the north side</li> <li>• Incorporating active transportation facilities on the potential extension of Goderich Road through the City's Transfer Station lands to Kenora Avenue (see Preferred Transportation Solutions to include in the Secondary Plan No. 27)</li> </ul>	<p>The cost of a pedestrian / cycling route along Bancroft Street is approximately \$300 K</p> <p>Cost of extending Goderich Road to be determined</p>	<p>Pedestrian / cycling route along Bancroft Street</p> <p>Schedule A+</p> <p>Further studies needed to identify class of EA for Goderich Road extension</p>	<p>Implement with Phase 2 development of the Confederation GO Station by Metrolinx (see Preferred Solutions by Other Proponents No. 30)</p> <p>Timeframe to implement Goderich Road extension depends on further studies</p>
<p>18. Develop a pedestrian / cycling route between Confederation Park and Battlefield House Museum and Park. Signage should be consistent with the City of Hamilton's City-wide Wayfinding project including pedestrian and cyclist oriented signage. There are two routes that can be explored:</p> <ul style="list-style-type: none"> <li>• Centennial Parkway multi-use trail over the QEW, future Goderich Road connection to Kenora Avenue (sidewalks and future bike lanes), Kenora Avenue / Greenfield Drive / Owen Place (future neighbourhood greenways), and King Street East (sidewalks and bike lanes)</li> <li>• Centennial Parkway multi-use trail over the QEW, South Service Road (future multi-use trail), Warrington Street (future multi-use trail), Lake Avenue (sidewalks and future bike lanes), and King Street East (sidewalks)</li> </ul>	<p>Approximate cost for signage of existing and future routes is \$10 K</p>	<p>Exempt</p>	<p>Implement following implementation of Preferred Transportation Solution for Active Transportation No. 12 (Recreational Trails Master Plan Project 5-10), No. 13 and No. 15.</p>
<p>Notes:</p> <p>1. <b>Schedule A and A+ Projects:</b> Consultation for these projects has been completed through the CNTMP. These may proceed to implementation.</p> <p><b>Schedule B Projects:</b> Issue Notice of Completion to review agencies and public. The Project File (this document) is made available for review. If no Part II Order requests are received within 30 days of the Notice of Completion, projects may proceed to implementation.</p> <p><b>Schedule C Projects:</b> Additional study and mandatory consultation required for these projects.</p>			

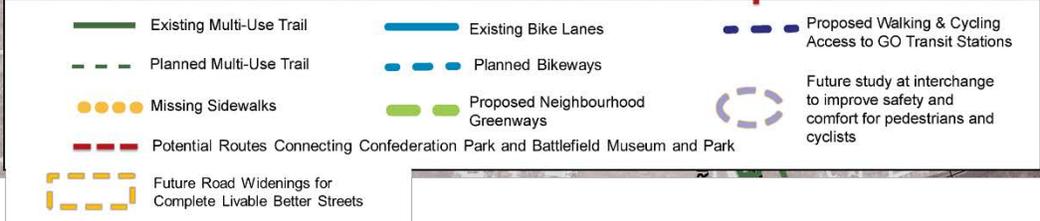
Centennial Neighbourhoods Specific Projects

Exhibit 6-7: Map of Preferred Solutions for Active Transportation

- No. 2 Protect right-of-way (no cost) as per Urban Official Plan (see below) for **Complete Livable Better Streets**
- No. 12 Implement Projects in the City of Hamilton's Recreational Trails Master Plan
- No. 13 Create neighbourhood greenways to calm traffic and improve walking and cycling connections to create Complete Livable Better Streets.
- No. 14 Construct missing sections of sidewalk along Lake, Centennial and local streets that serve commercial and employment areas and schools.
- No. 15 Provide cycling facilities on Nash Road, Lake Avenue, Warrington Street and a section of the South Service Road in the future.
- No. 16 Improve the safety and comfort of pedestrian and cycling connections through the interchanges at the RHVP.
- No. 17 Provide a pedestrian / cycling route to the Confederation GO Station
- No. 18 Develop a pedestrian / cycling route between Confederation Park and Battlefield House Museum and Park.
- No. 29 City to request that MTO include the multi-use trail through the QEW / Centennial Parkway interchange
- No. 30 City to request that Metrolinx create non-auto (walking and cycling) "last mile" access to the Confederation GO Station



**Neighbourhood greenways** are streets designed with traffic calming and landscape features to reduce speeding, create a pleasant experience for residents and all users of the streets.



## 6.5 Preferred Transportation Solutions to include in the Secondary Plan

Preferred transportation solutions to be included in the Centennial Neighbourhoods Secondary Plan are listed in **Exhibit 6-8** and illustrated on a map in **Exhibit 6-9**.

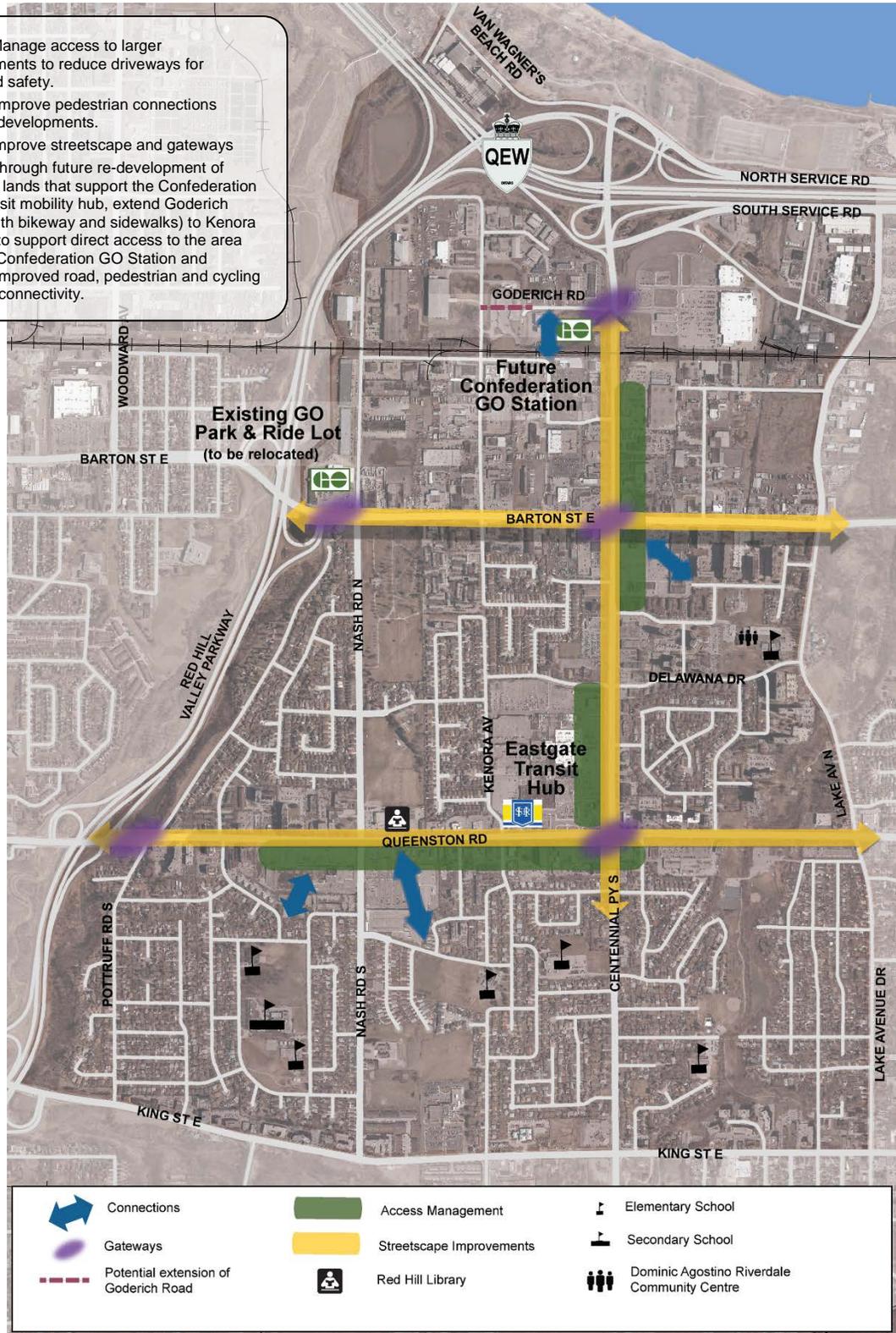
These recommendations will be guided by the City of Hamilton's Transportation Demand Management (TDM) Guide for Development (2015). They will be implemented through the Planning Act and development approval processes (the Municipal Class Environmental Assessment process is not applicable). The timeframe for implementation will be addressed in the Secondary Plan and as development proceeds over the next 20 years. These transportation solutions will generally be funded by the developer.

**Exhibit 6-8: Preferred Solutions to be included in the Centennial Neighbourhoods Secondary Plan including Approximate Cost, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION	
Secondary Plan Policy	19. Manage access to larger developments to reduce driveways for improved safety. Identify and implement access management as part of development applications for deeper properties.
	20. Manage parking for developments to reduce surface lots. Identify parking requirements including "end-of-trip" cycling facilities such as bike parking, lockers, change rooms and showers for developments in the Secondary Plan.
	21. Improve pedestrian connections through developments. Identify and implement pedestrian connections as part of development applications.
	22. Improve streetscape and gateways as per the Secondary Plan concepts. Gateways may include one or a combination of public art, way-finding signage, landscaping or streetscape / built form around the entryways to strengthen a sense of place. Signage should be consistent with the City of Hamilton's City-wide Wayfinding project including pedestrian and cyclist oriented signage.
	23. Support live / work / play development to encourage trips by active transportation and transit through the Secondary Plan land-use recommendations.
	24. Facilitate car sharing through a City-wide initiative to consider policies required to support car-sharing and then apply to Centennial Neighbourhoods area. Identify opportunities for car-sharing when applying the Transportation Demand Management (TDM) Land Use Guidelines to development applications.
	25. Identify traffic calming measures to reduce cut-through traffic, speeding, collisions or safety concerns as part of development applications. Implement with community and Councillor support.
	26. Require missing sidewalks adjacent to new developments to be constructed as part of the development.
27. Through future re-development of adjacent lands that support the Confederation GO Transit mobility hub, extend Goderich Road (with bikeway and sidewalks) to Kenora Avenue to support direct access to the area and Confederation GO Station and to provide improved road, pedestrian and cycling network connectivity. This solution would require relocating the City of Hamilton's Transfer Station.	

**Exhibit 6-9: Map of Preferred Transportation Solutions to include in the Secondary Plan**

- No. 19 Manage access to larger developments to reduce driveways for improved safety.
- No. 21 Improve pedestrian connections through developments.
- No. 22 Improve streetscape and gateways
- No. 27 Through future re-development of adjacent lands that support the Confederation GO Transit mobility hub, extend Goderich Road (with bikeway and sidewalks) to Kenora Avenue to support direct access to the area and the Confederation GO Station and provide improved road, pedestrian and cycling network connectivity.



## 6.6 Preferred Transportation Solutions by Other Proponents

Preferred transportation solutions to be implemented by other proponents are listed in **Exhibit 6-10**. The costs to implement these solutions will be determined by the proponents. Any additional studies required as noted in **Exhibit 6-10** will be the responsibility of the proponent. The timeframe for implementation is provided by the proponents.

**Exhibit 6-10: Preferred Solutions to be implemented by Other Proponents including Approximate Cost, MCEA Schedule and Implementation Timeframe**

PREFERRED TRANSPORTATION SOLUTION		ADDITIONAL STUDIES REQUIRED	TIMEFRAME FOR IMPLEMENTATION (if known)
SoBi Hamilton	28. City to approach SoBi Hamilton bike share to undertake a study to determine the feasibility of serving the Centennial Neighbourhoods study area.	To be determined	Year 2017 to 2022
Ministry of Transportation, Ontario	29. City to request that MTO include the multi-use trail (Project 5-10 of the Recreational Trails Master Plan) through the QEW / Centennial Parkway interchange as part of MTO's initiative for improvements to the interchange and rehabilitation of the bridge. The multi-use trail is recommended to be a minimum of 3.0 m wide plus appropriate offsets to railings and hazards.	MTO is proponent (Class Environmental Assessment for Provincial Transportation Facilities)	QEW / Centennial Parkway bridge rehabilitation scheduled by MTO anticipated for 2017.
Metrolinx	30. City to request that Metrolinx create non-auto (walking and cycling) "last mile" access to the Confederation GO Station, and provide bicycle parking and right-sized Park N' Ride at the Confederation GO Station (see Preferred Solutions for Active Transportation No. 17).	Metrolinx is proponent (GO Transit Class Environmental Assessment)	To be determined by Metrolinx

## Glossary

<b>Active and Sustainable School Transportation (ASST) initiatives</b>	ASST emphasizes the importance of walking, cycling, and public transit for transportation to schools. Smart Commute Hamilton, City of Hamilton, and local organizations work with school boards and schools to promote active and sustainable school transportation in elementary and secondary schools. The City of Hamilton, the Hamilton-Wentworth District School Board (HWDSB) and the Hamilton-Wentworth Catholic District School Board (HWCDSB) endorsed the Active & Sustainable School Transportation Charter. The goal of is to facilitate a measurable shift in travel behaviour towards active and sustainable transportation through policy change, infrastructure improvements, capacity building, and education and awareness.
<b>Cordon Count</b>	A count of vehicles and people across a designated screenline line to determine the total flow (people and vehicles by mode and time period) into and out of the study area and the accumulation (people and vehicles) within the cordon area by time of day. A series of successive counting stations are grouped to form a "screenline". A "cordon" refers to a geographic area enclosed by a set of screenlines.
<b>Complete Livable Better Streets</b>	Hamilton's version of Complete Streets, the Complete Livable Better Streets approach recognizes that no-one size fits all solution is appropriate for street design as different streets can have different priorities. Complete Livable Better Streets recognizes that the primary function of a road may range from Goods Movement to a local road to a higher order rapid transit corridor; however, within all of these contexts a sensitive approach to balancing the needs of multiple users can be taken.
<b>GO Transit</b>	A division of Metrolinx, GO Transit is the regional public transit service for the Greater Toronto and Hamilton Area, with routes extending to communities across the Greater Golden Horseshoe. Service includes both train and bus lines.
<b>Hamilton Street Railway or HSR</b>	City of Hamilton public transit system including bus, accessible transit and future rapid transit services,
<b>Light Rail Transit or LRT</b>	A transportation system based on electrically powered light rail vehicles (LRV) that operated on a track in a segregated, right of way. Multiple LRVs, or cars, can be coupled together to form a train. They are designed to deliver rapid, reliable and safe transportation services. With higher capacity than other transit systems, LRT will carry passengers in reserved transit lanes separated from regular traffic. Vehicles will be low floor with multiple entrances that are accessible to customers with all levels of mobility.

**Level of Service (LOS)** A set of characteristics that indicate the quality and quantity of transportation service provided, including characteristics that are quantifiable and those that are more difficult to quantify. Signalized intersection LOS is defined in terms of the average total vehicle delay of all traffic movements (through, left and right turns in all directions) through an intersection. Vehicle delay is a method of quantifying several intangible factors, including driver discomfort, frustration, and lost travel time. Specifically, LOS criteria are stated in terms of average delay per vehicle during a specified time period (for example, the PM peak hour). Vehicle delay is a complex measure based on many variables, including signal phasing (i.e., progression of movements through the intersection), signal cycle length, and traffic volumes with respect to intersection capacity. Level of Service Criteria for Signalized Intersections is as follows:

LOS A	≤10 sec/veh of average delay	Free flow
LOS B	>10 – 20 sec/veh of average delay	Stable flow (slight delays)
LOS C	>20 – 35 sec/veh of average delay	Stable flow (acceptable delays)
LOS D	>35 – 55 sec/veh of average delay	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
LOS E	>55 – 80 sec/veh of average delay	Unstable flow (intolerable delay)
LOS F	>80 sec/veh of average delay	Forced flow (jammed)

**Metrolinx** Metrolinx is an agency of the Government of Ontario that champions, develops and implements an integrated transportation system in the Greater Toronto and Hamilton Area.

**Municipal Class Environmental Assessment (MCEA)** A planning process that applies to municipal infrastructure projects including roads, water, and wastewater projects. The process is an approved procedure designed to protect the environment and enables the requirements of Ontario's Environmental Assessment Act to be met in an effective manner.

**MCEA Schedule** Projects undertaken by municipalities vary in their environmental impact. Projects are classified in the MCEA in terms of schedules. MCEA Schedules A, A+, B, and C have increasing adverse environmental effects from minimal to significant. This the planning process for each schedule increases in complexity and consultative requirements.

**Neighbourhood  
Greenways**

Streets designed with traffic calming and landscape features to reduce speeding, create a pleasant experience for residents and all users of the streets. In the latest Hamilton Transportation Master Plan draft report this term is renamed Bicycle Boulevard.

Design treatments are typically a mix of the following:

- Route Planning: Direct access to destinations such as schools, parks, community centres, and nearby shops
- Signs and Pavement Markings: Easy to find and to follow
- Speed Management: Slow motor vehicle speeds
- Volume Management: Low or reduced motor vehicle volumes
- Minor Street Crossings: Minimal bicyclist delay
- Major Street Crossings: Safe and convenient crossings
- Offset Crossings: Clear and safe navigation
- Green Infrastructure: Enhancing environments

**Transit Project  
Assessment Process**

In June 2008, Ontario's Ministry of the Environment established a streamlined environmental assessment process to expedite the development of transit projects. Rather than requiring a full Environmental Assessment – which can be very time-consuming – the Ministry created the Transit Project Assessment Process (TPAP), enabling assessment of potential environmental impacts to be completed within six months. The TPAP is documented in an Environmental Project Report (EPR)

Integral to the TPAP is detailed public and stakeholder consultation. The TPAP regulation sets out a structured consultation process to both provide information about the proposed transit project and to gather feedback from stakeholders and the public. During the TPAP, information on the advantages and disadvantages of the proposed LRT system, as well as commitments to mitigation and monitoring, will be documented in an Environmental Project Report (EPR) that will be made available for review by the public and the Minister of the Environment.

**Transportation  
Demand Management  
(TDM)**

TDM manages the demands placed on transportation infrastructure. It is the use of policies, programs, infrastructure improvements, and/or services to influence travel behaviour. TDM encourages sustainable travel choices by supporting alternatives options over the convention of frequently driving alone. It encompasses a wide range of strategies including:

- Shifting travel modes (e.g. walking, cycling, taking transit or carpooling instead of driving alone)
- Reducing the number of trips people must make (e.g. destinations and activities such as work and shopping, near each other)
- Travelling more efficiently (e.g. making trips outside of peak hours)

**Transportation  
Tomorrow Survey  
(TTS)**

The Transportation Tomorrow Survey (TTS) is a cooperative effort by local and provincial government agencies to collect information about urban travel in southern Ontario. The survey has been undertaken every five years since 1986. The data collected helps local and regional governments, as well as the province and its agencies make transportation planning and investment decisions.

All TTS are a retrospective survey of travel taken by every member (age 11 or over) of the household during the day previous to the telephone (or web) contact. The TTS data contains detailed demographic on all members of a surveyed household.

The information collected and the method of collection has remained consistent over the six surveys and includes, characteristics of the household, characteristics of each person in the household, and details of the trips taken by each member of the household. Trip information includes details of any trips taken by transit. Information includes trip purpose, mode of transportation (driver, passenger, local or regional transit, walking, cycling and other), trip origin, destination and length.