An aerial photograph of the Peterborough Lock and a road. The lock is on the left, with a road curving to the right. The background shows a golf course and trees.

  
peterborough

Eastside  
Transportation Study

Executive Summary – March 2022

# Executive Summary

## Introduction

### Context

The lack of transportation infrastructure to serve growth on the east side of the Otonabee River has posed challenges for the City of Peterborough for decades. The absence of sufficient continuous, reliable connections across the river and the Trent-Severn Waterway for all travel modes poses challenges in serving existing and future transportation needs between East City and points west, including downtown.

Over the years, the City has investigated different transportation network changes to address these challenges. With recent development pressures, the City wishes to reassess the transportation infrastructure needs and priorities for the east part of Peterborough.

### Purpose

The **Eastside Transportation Study (ESTS)** includes a review of growth forecasts and development plans in the area, infrastructure improvements completed by the City since the previous studies, and policy direction for future build out of the entire Liftlock Secondary Plan area. The resulting Transportation Study provides recommendations for both future road and active transportation (walking and cycling) networks within this area, with the findings of the study being incorporated into the concurrent update of the City-wide Transportation Master Plan.

### Municipal Class Environmental Assessment

The ESTS is being undertaken in accordance with Approach #1 of the Master Planning Process, as outlined in Appendix 4 of the Municipal Class Environmental Assessment (MCEA) document (October 2000, as amended in 2015). This approach enables municipal infrastructure to be planned as part of an overall system, rather than as individual projects.

Once approved by the municipality, the ESTS will provide the context for the implementation of specific minor (Schedule B) and major (Schedule C) transportation infrastructure projects identified in the plan. More detailed investigations and public consultation will be required prior to implementing the specific Schedule B and C projects recommended in the ESTS.



## Consultation

### Program Overview

All interested parties were offered early and ongoing opportunities to review study information and provide input to the decision-making process. A variety of communication strategies were used to engage the public, agencies, interest groups and First Nations throughout the study. Consultation activities carried out as part of the ESTS included:

- Study notifications (Notice of Study Commencement and Public Comment Invited, Notice of Online Public Information Centre 1 and Notice of Online Public Information Centre 2). All notifications were published in two issues of the Peterborough this Week newspaper.
- Study contact list
- Dedicated study webpage on the City's engagement website
- Dedicated study email account (EastsideTS@peterborough.ca)
- Web-based mapping and survey applications at study commencement. The mapping and survey solicited public feedback regarding specific items of interest or concern regarding travel within and surrounding the study area.
- Two Online Public Information Centres (PICs). Material for each session was posted on the City's engagement website.
- One Virtual PIC (two sessions) as part of Online PIC #2, in combination with the City-wide Transportation Master Plan update.
- Online surveys/comment forms provided as part of each Online PIC
- Three meetings with a Technical Working Group comprising staff from the City, Parks Canada, adjacent municipalities (i.e., Peterborough County, Township of Douro-Dummer, Township of Otonabee-South Monaghan), and the Ministry of Transportation (MTO)
- Two meetings with representatives of Trent University
- One meeting with representatives from Parks Canada
- Three combined meetings with representatives of Peterborough County and MTO
- Three meetings with City staff representing various departments
- One meeting with representatives of Curve Lake First Nation

Following Council approval, a Notice of Study Completion will be issued to notify the public and interested parties that the ESTS Transportation Master Plan Report has been completed and is available for review and comment for a 30-day review period.



## First Nations

The study area is situated within the treaty and traditional territory of the Mississauga Anishnaabeg. As such, the seven member communities of the Williams Treaties First Nations have been circulated on all study notifications. In addition, a meeting with Curve Lake First Nation was held on December 15, 2021 to provide an overview of the study process, work plan and schedule, alternative transportation solutions, and potential solutions. Given the preliminary nature of the ESTS, meeting participants expressed an interest in continuing to be notified of study updates and being further engaged in the subsequent planning stages of the projects being recommended by the ESTS.

## Online PIC 2 Survey

The following themes emerged from the online survey conducted during the second PIC:

- Need for a new connection north of the Hunter Street East bridge, that provides an alternate route for traffic over the Otonabee River that does not lead downtown.
- Concern that a new Sherbrooke Street/Maria Street connection will increase vehicular traffic in the area, impede existing pedestrian/cyclist friendly space, require property acquisition, and reduce parkland.
- Concern for pedestrian safety due to high-speed traffic at Maria Street/Mark Street, east/west on Parkhill Road East and McFarlane Street and where the Rotary Greenway Trail meets Hunter Street East, and associated suggestions for new traffic calming measures and signalized pedestrian crossings.
- Suggestion that a new McFarlane Street crossing of the Trent Canal use the McFarlane Street right-of-way north of the existing structure to provide a realigned roadway. This will also allow the existing bridge to remain in service until the new crossing is constructed.
- Support for not extending Ashburnham Drive northerly to Parkhill Road East to preserve existing wetlands and wildlife in the area.

## Emailed Comments

The following themes emerged from comments emailed to the Study Team:

- Pedestrians and Cyclists
  - Concern for the safety of pedestrians and cyclists due to increasing vehicular traffic.
  - Need for increased connectivity and widened sidewalks for pedestrians and separated bike lanes for cyclists.
  - Concern for apparent lack of incorporation of cycling facilities proposed in the City's Cycling Master Plan.



- Waterway Crossings
  - Need for reconstructing Parkhill Road East to a four-lane arterial road, including wider bridges over the Trent Canal and Otonabee River.
  - Suggestion to implement a new crossing of the Otonabee River north of Parkhill Road East and south of Nassau Mills Road.
  - Concern that a new Maria Street/Sherbrooke Street connection would adversely impact private property and parkland, as well as increase vehicular traffic, noise, and air quality impacts within the surrounding residential neighbourhood.
- Roadways
  - Need for the prioritization of the Television Road bridge replacement due to the high volume of traffic, including emergency vehicles and large trucks.
  - Need for the Maria Street extension easterly to Television Road to help alleviate traffic on Maniece Avenue.
  - Concern that extending Maria Street east would result in impacts to private property and the trail.
  - Suggestion for a new high-capacity collector road within the Ashborough Village development to provide an east/west connection to Ashburnham Drive and Television Road.
- Wildlife/Wildlife Habitat, Parks and Greenspace
  - Concern for impacts to wildlife/wildlife habitat, particularly the wetland habitat within the Trent Wildlife Sanctuary.
  - Concern for potential impacts to parks and green space.
- Reduction of Single-Vehicle Use
  - Concern that increased parking near downtown will encourage more vehicle travel versus active transportation or use of public transportation.
- Funding and Policies
  - Suggestion for new policies that curb impacts to climate change due to large delivery trucks within the downtown core (i.e., electric cargo-trikes).
  - Concern about the source of funding for implementation of the recommended solutions.



## Combined Virtual PIC Participation and Key Comment Themes

The following themes emerged from participants of the virtual PIC:

- Questions regarding the next steps in the process, potential funding, and the timing for completion of the recommended projects.
- Need for additional traffic calming measures in some residential areas, particularly in East City.
- Support for new waterway crossings to relieve congestion on existing bridges.
- Need for increased streetscaping along roadways to enhance public realm.
- Need to consider schools in route planning for vehicles and public transportation during peak hours.
- Concern for accessibility considerations in planning.
- Concern regarding impacts to wildlife/wildlife habitat and the need for additional wildlife crossings.
- Concern regarding the ability of the future transportation network to support an increased volume of vehicular traffic from new subdivision developments.
- Concern for pedestrian and cyclist safety, specifically on waterway crossings and at the Armour Road/Maria Street intersection.

## Comment Summary

**Table ES.1** summarizes the public comments by theme and the Study Team responses to the questions and concerns noted. The feedback received helped inform the assessments and recommendations prepared for the ESTS, as captured, and further explained in the subsequent sections of the report.



**TABLE ES.1: SUMMARY OF PUBLIC COMMENTS AND RESPONSES**

Public Comment/Theme	Study Team Response
Suggestion for a new crossing north of Parkhill Road East	<p>In response to comments heard during and after the PIC, the possibility of a new bridge crossing the river north of Parkhill Road East and south of Nassau Mills Road was tested in the City’s transportation model. Shifting the new crossing to a point north of Parkhill Road East does not significantly relieve traffic volumes on either Lansdowne Street East or Hunter Street East and adds additional traffic on Armour Road. The need for a new crossing in the East City area would remain.</p>
Concerns about the proposed Sherbrooke Street/Maria Street crossing	<p>Peterborough is expected to grow considerably over the next 30 years. There are a limited number of crossings of the Otonabee River, and forecasts of future travel demand developed through the City-wide Transportation Master Plan, and confirmed through the ESTS, indicate that even with the actions proposed in the Transportation Master Plan and in the Cycling Master Plan, all river crossings on City roads will exceed available capacity by 2051. The proposed widening of Nassau Mills Road bridge being considered as part of the North End and Trent University Class Environmental Assessment will address one of the deficient river crossings in the north end of the City but offers little benefit to the road network in the south part of the study area.</p> <p>The ESTS assessed various options to add road network capacity, including widening the Parkhill Road East bridge, widening the Hunter Street East bridge, widening the Lansdowne Street East bridge, and/or adding a new bridge crossing of the Otonabee River. A combination of projects, including widening the Parkhill Road East bridge across the Otonabee River to four lanes and adding a new crossing connecting Sherbrooke Street to Maria Street, combined with an extension of Maria Street east to Television Road, offered the best long-term network performance and flexibility. These projects address future east-west capacity needs crossing the Otonabee River and create a new continuous arterial road connection across the City, which offers benefits in terms of emergency access and supports enhanced transit service, improved truck access into the downtown, and continued growth of new development in the southern portion of the downtown area.</p>



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Public Comment/Theme	Study Team Response
<p>Impacts associated with many of the proposed roadway modification projects</p>	<p>The ESTS is being undertaken in accordance with Master Planning Approach #1 of the MCEA process, as stated above. As such, this study generally addresses Phases 1 and 2 of the MCEA process and will form the basis for any recommended Schedule B and C transportation solutions identified through the study. More detailed investigations and public consultation will be required subsequently for the recommended projects.</p> <p>As part of these future EA studies, further technical and environmental investigations would be required to identify potential impacts to the natural, socio-economic and cultural environments, and recommend mitigation measures. Additional consultation activities would also be undertaken to allow for community and stakeholder input to the planning and design process.</p>
<p>The need for the Ashburnham Drive realignment</p> <p>The City should partner with Parks Canada to plan/design multi-modal trails and sidewalks, road crossings and parking that facilitates safe and connected movement between destinations within area bordered by Beavermede Park, Parkhill Road, Armour Road, and Ashburnham Drive</p>	<p>Near the Peterborough Lift Lock, Ashburnham Drive does not offer sidewalks or dedicated cycling infrastructure, and parking is currently limited to a gravel shoulder. North of the Lift Lock, Ashburnham Drive is located on a berm that forms the east bank of the Trent Canal and the geometry of the roadway in this area results in poor sightlines. These characteristics present a significant challenge to making physical improvements to the existing roadway, including the provision of cycling infrastructure and sidewalks.</p> <p>A shift in alignment for this section of Ashburnham Drive will provide an opportunity to:</p> <ul style="list-style-type: none"> <li>• Offer a safer and more comfortable experience for active transportation users and visitors to the recreational areas adjacent to the Trent Canal;</li> <li>• Address existing technical constraints associated with the current alignment;</li> <li>• Improve existing sightlines for all users; and</li> <li>• Allow for suitable transit stops and access for pedestrians.</li> </ul> <p>Following Council approval of the ESTS, the City intends to proceed with the planning and preliminary design for the proposed</p>



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Public Comment/Theme	Study Team Response
	<p>realignment of Ashburnham Drive, between approximately Maniece Avenue and the McFarlane Street bridge, following Phases 3 and 4 of the MCEA process. This investigation will include:</p> <ul style="list-style-type: none"> <li>• The identification of alternative alignments and design concepts for the realigned roadway and associated active transportation improvements;</li> <li>• An evaluation of the alternative designs, in consideration of potential technical and environmental effects; and</li> <li>• Selection of a recommended design.</li> </ul> <p>The study process will be documented within an Environmental Study Report, which will become available for public review and comment for a minimum of 30 calendar days following the study.</p> <p>Consultation activities will continue throughout the remaining phases of the Ashburnham Drive MCEA to allow for community and stakeholder input into the planning and design process. A key stakeholder, Parks Canada will be explicitly invited to participate in the study.</p>
<p>Concerned with plans to improve University Road through the Trent Wildlife Sanctuary</p>	<p>The City is addressing future needs for University Road through the North End and Trent University Area MCEA, which is identifying infrastructure requirements to accommodate planned growth in the City’s north end. While still in progress, the study is proposing the following University Road improvements:</p> <ul style="list-style-type: none"> <li>• Paved shoulders to better accommodate cyclists and pedestrians including those crossing the road between footpaths. (Paved shoulders also eliminate gravel shoulders that are attractive to nesting turtles)</li> <li>• Dry culverts and fencing to reduce crossings of the road by turtles and other small wildlife</li> <li>• Turtle habitat improvements such as nesting areas and sunning areas</li> </ul>



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Public Comment/Theme	Study Team Response
	The City anticipates completing the study later in 2022.
<p>Address and show specifically how the following are incorporated into the Eastside transportation network:</p> <ul style="list-style-type: none"> <li>• How the network and elements within it contribute to the four Council priorities and the 35 percent non-auto modal share;</li> <li>• Where transit and active transportation improvements overlap, and how they will be integrated with, individual road improvements. For example, cycling facility types recommended in the Cycling Master Plan, as well as future multi-use trails, should be identified (and what trails should receive winter maintenance); and</li> <li>• Areas of conflict and safety issues and how they should be addressed (e.g., Complete Streets treatment, traffic</li> </ul>	<p>Transportation Master Plans are long-range plans that guide transportation planning and infrastructure needs to accommodate growth and development within a broad area. The master planning process identifies short- and longer-term transportation infrastructure needs and deficiencies and the transportation network improvements needed to address existing and future travel demands.</p> <p>The City-wide Transportation Master Plan recommends road network improvements and transit priority measures, along with a series of key policy initiatives, including updating the City’s design standards to incorporate Complete Streets, goods movement, safety, parking, and emerging transportation technology. The ESTS adopts and builds on this foundation, identifying the specific infrastructure and other transportation system improvements needed to support the Transportation Master Plan policy objectives and accommodate growth within the study area.</p> <p>The transportation modelling completed as part of the ESTS incorporated the modal share targets set forth by the City-wide Transportation Master Plan, and assessed the infrastructure needs and deficiencies within and beyond East City based on the growth and development forecast up to 2051.</p> <p>The recommended solutions identified through the ESTS include and complement the recommendations set forth by the Cycling Master Plan and City-wide Transportation Master Plan. Like the ESTS, these master planning studies are being completed at a broad level of assessment, and do not provide design and implementation details for specific projects. However, as part of the Complete Streets policy direction set out in the Transportation Master Plan (and adopted for the ESTS), new streets in the City are to be designed to include sidewalks on both sides of the roadway, cycling facilities on collector and arterial roads, transit amenities (where needed), and context sensitive design considerations. The City will seek opportunities to incorporate these features for all road improvement and/or rehabilitation projects to help to address gaps in the existing multi-</p>



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Public Comment/Theme	Study Team Response
calming, and other safety measures).	modal transportation network. As such, active transportation will be addressed through separate, more detailed studies.
<p>“minimize property requirements” is not a social criterion but an economic criterion in terms of financial outlay by the City. The real criterion is the measure of “community impact” by which any proposal must be assessed – safety for vulnerable populations such as children and seniors, creation of barriers to access (e.g., parks, schools), loss of housing/private amenity, etc.</p> <p>Add “equity and inclusion” to the list of social criteria</p> <p>Noise and air pollution, which are currently listed under environmental factors, should also be listed as primarily a community impact</p>	<p>The ESTS is being undertaken in accordance with Master Planning Approach #1 of the MCEA process, as stated above. Per Section B.1 (Key Considerations) of the MCEA document, “<i>the social environment includes existing communities, residential areas and recreational areas</i>”. This includes community impacts to residential property and access, community facilities, recreational facilities, pedestrians, cyclists, noise, and air quality. On this basis, the noise and air pollution criterion has been included in the Social criteria group, so as to better align with the MCEA.</p> <p>The ability of individuals to walk, cycle, and/or use transit easily and safely, as well as support equal access for all to travel to/from various destination, was considered as part of both the Transportation and Social criteria groups.</p> <p>“Promote Equity and Inclusion” has been added to the list of Social criteria and assessed as part of the evaluation. Inclusion of this criterion did not change the outcome of the evaluation and/or the recommendations of the ESTS.</p>
Mention rebuilding Parkhill Road East both east and west of Trent Canal crossing, and increasing capacity on Parkhill Road East at the Otonabee River crossing to four lanes, but no mention of a necessary	<p>The traffic modelling only identified the need for additional roadway capacity over the Otonabee River. As such, no widening of the bridge crossing the Trent Canal or new high-level structure is proposed.</p> <p>The ESTS has identified the need to reconstruct Parkhill Road East between Water Street and Television Road but only the section west</p>



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Public Comment/Theme	Study Team Response
high level four lane crossing over the canal	of Leahy's Lane (which is west of the Trent Canal) would be widened beyond the current two-lane cross-section.
Why turn Maria Street from a collector into an arterial road, through a residential area, through greenspace, building new river crossings to connect to another two-lane street downtown (Sherbrooke Street). Fully utilize the existing corridor on Parkhill Road East.	<p>The need for a new crossing connecting Sherbrooke Street to Maria Street may arise towards the end of the 2051 planning horizon. Although the traffic modelling has indicated that a two-lane crossing will be required by this time, protection for four lanes is being recommended to ensure that the land required to accommodate a wider structure is available should the need arise in the future. The need for the Sherbrooke Street/Maria Street connection already assumes a widening of Parkhill Road to four lanes across the Otonabee River, maximizing the potential of this existing crossing.</p> <p>The opportunities and additional benefits presented by the Sherbrooke Street/Maria Street connection are noted above.</p> <p>Providing the connection would cause no new capacity deficiencies on Sherbrooke Street in the future based on the work completed to date.</p>
Future of routing traffic through the Lift Lock relative to the integrity of the structure and possible increasing safety risks	Through this study, the City has been consulting with Parks Canada on potential transportation solutions in the vicinity of the Trent-Severn Waterway including the Peterborough Lift Lock and other water crossings within the ESTS study area owned/managed by Parks Canada. While Parks Canada has not informed of any impending changes to use of the Lift Lock for vehicle traffic, the ESTS has explored other potential options for crossing the Trent Canal in this area given the age and cultural heritage significance of the structure. These considerations factored in the recommendation for a potential future Sherbrooke Street/ Maria Street connection, in part because the new link would provide an opportunity to reduce traffic demands through the existing Lift Lock tunnel and along Hunter Street East within East City, and its potential to benefit active transportation users.
Maniece urbanization will impact residents/properties	The urbanization of Maniece Avenue (along with Old Norwood Road and MacFarlane Street) is consistent with the City-wide Transportation Master Plan policy initiative to update the City's



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Public Comment/Theme	Study Team Response
	<p>design standards to incorporate Complete Streets principles. With a greater focus on place-making and promoting more sustainable modes of travel, new streets within the City are to be designed to include sidewalks on both sides of roadways, cycling facilities on collector or arterial roads, transit amenities (where needed), and context sensitive design considerations. The City will seek opportunities to incorporate these features on all road improvement and/or rehabilitation projects, particularly in areas expected to experience development/redevelopment.</p>
<p>The Maria Street extension go forward as a recommendation rather than be dismissed. The road allowance exists, it does not impact residential properties, there is potentially enough space for a Complete Street design and will provide a direct route from Television Road to the downtown if the proposed new bridge at the end of Maria Street ever proceeds.</p>	<p>The traffic modelling indicated that the extension of Maria Street to Television Road would be most beneficial with implementation of the potential future Sherbrooke Street/Maria Street connection.</p>
<p>The City should work with the Ashborough Village developer to finalize a subdivision design that ensures a high-capacity collector is built within the subdivision as an east west road connecting Television Road and Ashburnham Drive, including complete</p>	<p>City of Peterborough Council approved Phase 1 of the Ashborough Village development in 2018, with the main east-west roadway designated as a Low Capacity Collector Road. Phase 2 of the development application process has been on hold pending confirmation of the configuration for the realigned Ashburnham Drive. As part of the <i>Planning Act</i> application process, the City will continue to work with the developer to ensure that all roadway infrastructure included within the site plan area is planned and designed in accordance with the City’s standards and policies. The recommended reconstruction of Old Norwood Road and McFarlane Street, combined with a new two- lane McFarlane Street, will provide</p>



**TABLE ES.1: SUMMARY OF PUBLIC COMMENTS AND RESPONSES**

Public Comment/Theme	Study Team Response
street design and public transit	a High Capacity Collector that connects Armour Road, Ashburnham Drive and Television Road.

## Planning Context

The ESTS is based on the land use and transportation planning policy context defined by the Province of Ontario, City of Peterborough, and other public agencies.

New policies, studies, and planned transportation infrastructure projects have emerged since the City’s 2012 Comprehensive Transportation Plan was completed. These initiatives have a direct effect on the performance of the City’s transportation network and influence future transportation needs within the east side of Peterborough.

### Provincial Context

The Growth Plan for the Greater Golden Horseshoe establishes the Provincial vision for managing population and employment growth within the Greater Golden Horseshoe area to the year 2051. Both the City of Peterborough and Peterborough County fall in this area. The Growth Plan was most recently updated in 2020.

There is a protected corridor for a Provincial Highway from the intersection of Television Road and Highway 7-115 north to Burnham Line and Douro 9<sup>th</sup> Line, lying primarily within Peterborough County. This corridor was established in the 1970s to link Provincial Highways around the east side of Peterborough. The north end of the corridor no longer connects to a Provincial Highway, and the current corridor designation limits development opportunities, most notably in the vicinity of Trent University.

### City Context

The City of Peterborough and Peterborough County both have Official Plans that govern how land is used. These guiding documents set the vision and direction for growth and development. In November 2021, City Council adopted a new Official Plan for the City and is currently awaiting Provincial approval. In January 2022, Peterborough County released its draft new Official Plan for comment. Both Official Plans are intended to conform to the most recent Growth Plan.

The City is currently undertaking an update to its City-wide Transportation Master Plan. The strategy, which updates the 2012 Comprehensive Transportation Plan, will set a long-term



vision for multi-modal transportation in Peterborough. It will identify a series of actions, policies, and programs to help the City prepare for anticipated growth. The plan will also address multi-modal transportation needs across the City.

The City's Cycling Master Plan is also currently being developed. The plan will identify ways for the City to support cycling as part of the broader multi-modal transportation network. It will recommend cycling and trail infrastructure projects and provide an action-oriented implementation plan. The plan will also recommend policies and strategies that will encourage more people to choose cycling for travel in Peterborough.

As well, the City is undertaking a Transit Study to help shape the City's existing and future transit service. The study includes a review of the transit route network, a vision for the future of Peterborough Transit, and a Downtown Transit Hub plan.

### Eastside Study Area Context

Although no previous transportation assessment has encompassed the same geographic scope as the ESTS, past city-wide studies have made specific recommendations for the study area, as follows:

- 2002 Comprehensive Transportation Plan
  - Extend Ashburnham Drive from McFarlane Street/Old Norwood Road to Parkhill Road East
  - Reconstruct and widen Ashburnham Drive between Lansdowne Street East and Maria Street
  - Extend Maria Street from Walker Avenue to Television Road
- 2004 Liftlock Functional Planning Study
  - Realign Ashburnham Drive north of the Peterborough Lift Lock
  - Upgrade Maniece Avenue and Old Norwood Road
  - Extend Ashburnham Drive from McFarlane Street/Old Norwood Road to Parkhill Road East
- 2012 Comprehensive Transportation Plan – Road Network:
  - Long-term widening of Television Road
  - Realign Television Road
  - Upgrade University Road
  - Widen Nassau Mills Road



- 2012 Comprehensive Transportation Plan – Cycling Facilities:
  - Create off-road facility in Beavermead Park
  - Add on-road facilities on McFarlane Street, Ashburnham Drive, Maria Street, and Television Road

## Existing Environmental Conditions

### Natural Environment

A natural heritage screening was completed as part of this study to review the potential presence of Species at Risk or habitat and other potential natural environment constraints in the study area that should be considered as part of the identification or evaluation of possible transportation solutions.

Several natural heritage features and areas of potential constraint were identified within the study area based on the findings of the screening assessment. These include Natural Areas and Corridors, Natural Heritage System, the South Drumlin Nature Area, and the Canal and Wildlife Sanctuary Nature Areas. The Natural Areas and Corridors generally surround the watercourses and wetlands in the study area, including the Trent Canal, Otonabee River and Golf Course Creek.

There is also the potential for 36 Species at Risk to be present in the study area, including endangered bat species and Butternut Trees. No aquatic Species at Risk were recorded.

Provincially Significant Wetlands are identified by the province as being the most valuable wetlands. Both Downers Corners and the Nassau Wetland Complex are Provincially Significant Wetlands located within the study area.

### Cultural Environment

A Cultural Heritage Review of the study area was undertaken to identify known and potential cultural heritage sites that will need to be considered as part of the evaluation of transportation solutions. The review found:

- Approximately 20 properties designated under Part IV of the *Ontario Heritage Act*;
- Two National Historic Sites (Trent-Severn Waterway and Peterborough Lift Lock);
- Numerous properties represented by municipal, provincial, or federal plaques and other properties containing structures over 40 years of age were identified;
- Historic transportation corridors, including rail lines and trails; and
- Sites of Indigenous cultural significance.



## Existing Transportation System Conditions

The transportation system serves lands that reflect a mix of developed areas (such as between the Otonabee River and the Trent Canal) and undeveloped greenfield areas (such as around Television Road). Most of the study area is undeveloped.

### Transit Services

Peterborough Transit fixed-route transit routes cover most of the most of the City's existing urban area, with outlying areas served by its demand-responsive Trans-Cab service. The study area is only partially served by fixed routes and Trans-Cab service. Some portions have no transit service. The study area includes lands outside the City boundaries, and hence beyond its responsibility to provide transit.

Some east-west road connections are not usable by typical transit vehicles because of weight restrictions or because the connections are intermittent (such as a swing bridge). Further, the limited sidewalk network inhibits potential riders from walking to/from bus stops.

Frequency and service span limit potential ridership. Weekday buses typically run every 30 or 60 minutes from 6am to midnight with reduced frequencies on weekends and shorter service spans on Sundays and holidays. More frequent bus service would be a proven way to attract more riders, while longer service hours would make transit an option for more trips.

### Cycling/Multi-Use Trail Facilities

Cycling and multi-use trails play a key role in encouraging cycling for leisure and travel purposes. Multi-use trails also provide pedestrian access through greenspace.

The cycling facilities and trails in the study area are not connected into a wider network. High quality trails exist beside the waterways and in other locations, but facilities are not well linked. This inhibits cycling use for journeys outside these individual segments, particularly for longer trips.

More east-west routes are needed, especially across the Trent Canal. The study area is expected to generate significant travel to/from the rest of Peterborough's urban area, creating a need for east-west cycling routes. Many existing road connections across the waterways lack suitable cycling facilities.

The City's recent Cycling Master Plan provides detailed recommendations for cycling improvements in the study area. The relevant Council-endorsed recommendations have been incorporated into this ESTS transportation strategy.



## Pedestrian Network

Sidewalks are vital to encouraging individuals to walk to nearby destinations (including transit stops). Much of the developed area of the City has a relatively dense street network, providing plenty of crossing points.

Sidewalk provision in study area is limited, even in developed portions. The City has a prioritized plan to resolve missing sidewalk links in existing urban areas.

## Road Network

The study area road network is used for travel by auto, transit, cycling, and walking. As a result, its long-term configuration will affect how people can and will travel within the east part of the City. The existing road network reflects the current mix of developed and undeveloped land within the study area.

Congestion issues are likely to affect various intersections in the short-term. Based on traffic modelling, operational concerns are expected at:

- Parkhill Road East and Armour Road
- Parkhill Road East and Television Road
- Old Norwood Road and Television Road
- Paul Rexe Boulevard and Television Road
- Maria Street and Armour Road
- Lansdowne Street East and Ashburnham Drive
- Lansdowne Street East/Highway 7-115 and Television Road

The McFarlane Street and Hunter Street East (at the Peterborough Lift Lock) crossings of the Trent Canal only accommodate one lane of traffic and lack active transportation facilities. These structures pose limitations on traffic capacity and potential safety concerns.

The study area has limited east-west connections over the Trent Canal and Otonabee River to the rest of City and its amenities. Improved connectivity is needed for all modes of travel. Additional lanes crossing the Otonabee River are also expected to be required by 2051 based on traffic modelling.

Additional north-south capacity may be needed to access Highway 7-115 and amenities to south. Growth in the study area is likely to increase traffic volumes beyond the limits of the existing north-south roads.



## Ashburnham Drive

Ashburnham Drive runs along the east side of the Trent Canal, an area rich in heritage and offering myriad leisure and tourist activities. South of Maria Street, Ashburnham Drive was recently improved to add turning lanes, traffic signals, on-road cycling lanes, and a multi-use trail.

Ashburnham Drive serves a dual purpose, both moving traffic and providing access to leisure activities. From a traffic perspective, the road provides an important north-south arterial connection that serves all modes of travel. For leisure purposes, it serves the Peterborough Lift Lock and Trent-Severn Waterway, which are both National Historic Sites, and surrounding parkland, open space, and trails.

The area around the Peterborough Lift Lock lacks suitable transportation infrastructure. There are no sidewalks or cycling infrastructure, and parking is currently limited to a gravel shoulder.

The current alignment of Ashburnham Drive north of the Peterborough Lift Lock is not desirable from an engineering perspective and limits opportunities for sustainable transportation infrastructure. The roadway is located on a berm that forms the east bank of the Trent Canal. This poses issues for stormwater management/drainage and road safety (as the geometry of the roadway results in poor sightlines). Its location also presents a significant challenge to implementing improvements to the existing rural roadway, as there is limited physical space available for the provision of bikeways, sidewalks, and other such treatments.

Realigning Ashburnham Drive north of the Peterborough Lift Lock would help address these concerns. Realignment of the road to the east would also support development planning in the study area as the current alignment and restricted sightlines would not facilitate a connection to the proposed Norman Maker Avenue.

## Future Conditions

### Growth and Development

A significant portion of Peterborough's future growth is projected to take place within the study area, generally in the parts that are currently undeveloped.

The City's Official Plan designations in the study area allow new development. This includes a mix of residential and commercial. Some parts of the study area are designated greenspace or protected natural area.

There is development demand within the existing urban area in the study area. The City has received applications for various high density residential developments in the Hunter Street



corridor, a new public school was recently constructed on Hunter Street East at Armour Road, and the construction of a new Canadian Canoe Museum at Johnson Park, just north of Beavermead Park is underway.

City Council approved Phase 1 of the Ashborough Village development in 2018. This planned development comprises up to 700 new low-medium density housing units plus some commercial uses.

Growth forecasts project 7,500 more people and 2,000 additional jobs in the study area by 2051. This growth is in addition to existing population and amenities.

### Problem and Opportunity Statement

The following Problems and Opportunity Statement was presented at the first PIC and to stakeholders:

The Eastside area is expected to **grow significantly** by 2051, adding 7,500 people and 2,000 jobs to the existing population and amenities. The additional residents and jobs will **create travel demand** within the study area, and to/from the rest of Peterborough and the wider region. This extra travel demand will **require an enhanced transportation** system to provide sufficient capacity and connectivity across all modes of travel. This includes upgrading existing infrastructure built for rural or historic needs that is unsuitable for future urban requirements.

The City's existing policies aim to **reduce single-occupant vehicle** use, as well as **reduce greenhouse emissions** caused by transportation. The planned transportation system needs to reflect that. This Study will **identify the changes** needed to the transportation system and related policies needed to accommodate the change in travel demand that **advance the City's strategic aims**.

This statement was used as the overarching framework to guide the development and evaluation of potential changes to the transportation network in and around the study area.

## Assessment of Transportation Network Alternatives

### Other Planned and Programmed Network Improvements

The ESTS study area includes other planned and programmed network improvements by the City and Parks Canada.

In 2017, the City initiated the North End and Trent University Area Class Environmental Assessment to study infrastructure improvements required in the City's north end to



accommodate planned growth. The MCEA has identified the following preliminary preferred transportation concepts within the study area:

- Armour Road realignment north of Cunningham Boulevard
- University Road upgrade to improve its profile and add paved shoulders for pedestrians and cyclists
- Pioneer Road upgrade
- Nassau Mills Road widening and bridge replacements over the Otonabee River and Trent Severn Waterway

The City is also undertaking a MCEA for replacement of the Television Road bridge over South Meade Creek. Further, Parks Canada is considering replacement of the Maria Street bridge over the Trent Canal in the coming years, pending funding approval.

The ESTS assumed all these projects would form part of the various alternatives described below.

### Network Alternatives

Options were grouped into four alternatives for assessment. Each alternative builds on the actions of the previous option (e.g., Alternative 3 encompasses all actions proposed for Alternative 2 plus the additional initiatives specific to Alternative 3). This approach to alternative generation was used due to the considerable number of potential combinations of actions possible. The four alternatives were as follows:

#### Alternative 1: Do Nothing

- Maintain existing transportation network and service levels.

#### Alternative 2: Implement Existing Plans

- Implement City-wide Transportation Master Plan update, Cycling Master Plan, and Transit Study recommendations, excluding new or widened roads within the study area.
- Improve the following intersections:
  - Parkhill Road East and Armour Road
  - Parkhill Road East and Television Road
  - Old Norwood Road and Television Road
  - Paul Rexe Boulevard and Television Road
  - Maria Street and Armour Road



- Lansdowne Street East and Ashburnham Drive

Future operational deficiencies were also noted at the Lansdowne Street East/Highway 7-115 and Television Road intersection, which is under MTO jurisdiction.

### **Alternative 3: Modernize Infrastructure**

This option includes Alternative 2 plus the upgrade or replacement of aging and/or deficient roads and bridges that do not meet present-day needs and/or design criteria. Projects include:

- Realign Ashburnham Drive from Maniece Avenue to Old Norwood Road/McFarlane Street
- Urbanize Maniece Avenue, Old Norwood Road, and McFarlane Street
- Construct new (replacement) McFarlane Street bridge over the Trent Canal
- Realign Hunter Street East and create new two-lane crossing of the Trent Canal (without widening the existing crossing)
- Reconstruct Parkhill Road East from Leahy's Lane to Television Road

This alternative also included the following projects from other initiatives noted above:

- Replacement of Maria Street bridge over the Trent Canal
- Replacement of Television Road bridge over South Meade Creek
- Armour Road realignment north of Cunningham Boulevard
- University Road upgrade
- Pioneer Road upgrade

### **Alternative 4: Expand Road Network**

Traffic modelling for the City-wide Transportation Master Plan update identified north-south and east-west at the Otonabee River capacity deficiencies within the study area. The deficiencies were addressed independently given the very different approaches and limitations to resolving north-south and east-west Otonabee River crossing capacity requirements in this vicinity. Alternatives 4a (North-South Roads) and 4b (East-West Roads/Otonabee River Crossing) also include the actions from Alternatives 2 and 3.

Projects to address the north-south capacity deficiency ([Alternative 4a](#)) include:

- Extend Ashburnham Drive from McFarlane Street/Old Norwood Road to Parkhill Road East



- Widen Ashburnham Drive between Lansdowne Street East and Maria Street
- Widen Television Road between Lansdowne Street East/Highway 7-115 and Parkhill Road East
- Widen and realign County Road 4 (Warsaw Road) from Television Road to County Road 41 (University Road) (subject to Peterborough County)

The connection of Armour Road to Ashburnham Drive was considered by not deemed feasible because of the significant property impacts and need to cross over or under the Trent Canal and railway.

Projects to address the east-west Otonabee River crossing capacity deficiency (Alternative 4b) include:

- Widen Parkhill Road East (including river crossing) from west of the Otonabee River to Leahy's Lane
- Extend Maria Street from Walker Avenue to Television Road
- Widen Lansdowne Street East from George Street to Television Road to six or seven lanes
- Connect Sherbrooke Street and Maria Street

This alternative also included the following projects from other initiatives noted above:

- Nassau Mills Road widening and bridge replacements over the Otonabee River and Trent Severn Waterway

### Evaluation of Alternatives

The options were assessed using the evaluation framework shown below. The framework comprises four categories (transportation, environment, social, economic) of various criteria.

Transportation	Environment
<ul style="list-style-type: none"> <li>• Improve connectivity of transportation system for all modes</li> <li>• Offer variety of travel options</li> <li>• Improve traffic operations</li> <li>• Accommodate future travel demands</li> <li>• Shift travel away from auto use</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce greenhouse gas emissions</li> <li>• Avoid significant natural heritage features</li> <li>• Avoid cultural heritage properties, structures, or landscapes</li> <li>• Reduce noise and pollution attributable to transportation</li> </ul>



Social	Economic
<ul style="list-style-type: none"> <li>• Provide safe system for all users</li> <li>• Promote equity and inclusivity</li> <li>• Improve access to National Historic Sites and leisure destinations</li> <li>• Encourage active transportation</li> <li>• Balance allocation of road space between modes</li> <li>• Minimize property requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Support future population and employment growth</li> <li>• Consider approved development lands</li> <li>• Invest responsibly in transportation</li> <li>• Reduce long-term capital maintenance costs</li> </ul>

The evaluation findings provided the basis to identify the option as “preferred” or “not preferred” within each category. The evaluation results indicated:

- Alternative 1 (Do Nothing) does not address the Problems and Opportunities statement.
- Alternative 2 (Implement Existing Plans) partially addresses the Problems and Opportunities statement but is not sufficient as a standalone solution.
- Alternative 3 (Modernize Infrastructure) partially addresses the Problems and Opportunities statement. However, some actions identified for this alternative were not suitable for implementation.
- Alternative 4 (Expand Road Network) was the only option to address the Problems and Opportunities statement. However, some actions identified for this alternative/sub-alternative were not suitable for implementation.

Based on the evaluation, Alternatives 1 and 2 were not carried forward for further consideration.

Each of the projects identified as part of Alternatives 3, 4a and 4b comprised the short list of transportation solutions, which were assessed using a reasoned argument approach. Through this method of evaluation, advantages and disadvantages of each alternative are generally described and measured in terms of how well it responds to selected criteria. At a high level, possible opportunities to incorporate mitigation to offset potential adverse impacts are also considered. This is commonly referred to as a net effects evaluation.

The following sections summarize the evaluation results for these alternatives.



### **Alternative 3: Modernize Infrastructure**

Based on the results of the preliminary evaluation of Alternative 3 options, the following infrastructure upgrades and/or modernization projects are recommended as part of the Preferred Solution:

- Ashburnham Drive realignment north of Maniece Avenue
- Maniece Avenue, Old Norwood Road, and McFarlane Street urbanization
- New (replacement) McFarlane Street bridge
- Parkhill Road East reconstruction east of Leahy's Lane

The Hunter Street Realignment/New Canal Crossing was not recommended to carry forward. While this project could be expected to improve connectivity of the transportation system for all modes, the realignment/crossing has the potential to significantly impact a large area of property, as well as two National Historic Sites, including the Peterborough Lift Lock and surrounding Cultural Heritage Landscape (a Parks Canada Level 1 Cultural Heritage Site).

### **Alternative 4a: Expand Road Network (North-South Roads)**

Based on the results of the preliminary evaluation of Alternative 4a options, the following north-south road expansion projects are recommended as part of the Preferred Solution:

- Ashburnham Drive widening south of Maria Street
- Television Road widening
- County Road 4 (Warsaw Road) widening/realignment (subject to Peterborough County)

The extension of Ashburnham Drive to Parkhill Road East was not recommended to carry forward. While this project could accommodate a variety of travel options, the extension does not offer traffic relief to other congested and parallel roadways. Further, this option is expected to significantly impact private property, natural heritage features, and properties identified as having potential cultural heritage value or interest.

### **Alternative 4b: Expand Road Network (East-West Roads/Otonabee River Crossing)**

Based on the results of the preliminary evaluation of Alternative 4b options, the following East-West Roads/Otonabee River Crossing expansion projects are recommended as part of the Preferred Solution:

- Parkhill Road East widening (including the Otonabee River crossing) west of Leahy's Lane
- Sherbrooke Street/Maria Street connection and extension of Maria Street easterly to Television Road. This project would improve connectivity for all modes by creating a new,



continuous arterial road connection across the City that could reduce travel demands on parallel routes and accommodate all modes of travel, including transit service. While this alternative has the potential to impact natural heritage features, designated Regional Parks, and encroach onto private properties, it will support enhanced transit use and increased ridership and reduce travel demands through the Hunter Street East corridor within East City, thereby benefitting pedestrian safety. The connection should also reduce through traffic on other north-south roads in East City. In addition, opportunities to avoid and/or mitigate impacts were considered and could be explored as part of a separate and focused study.

The Lansdowne Street East widening is not recommended to carry forward. This project would impose significant direct impacts to existing residential land uses and business operations situated along the west side of the existing roadway. In addition, this option is not expected to improve connectivity of the transportation system and/or encourage a shift in travel to non-auto modes.

Similarly, the extension of Maria Street to Television Road is not recommended to carry forward as a standalone solution. This project provides limited improvement to connectivity and is not expected to encourage a shift in travel away from auto use. The traffic modelling indicated that the extension of Maria Street to Television Road would be most beneficial with implementation of the potential future Sherbrooke Street/Maria Street connection.

Full evaluation results were provided to the public at the second PIC and are included in the main report.

The ESTS forms the basis for future investigations for the specific Schedule B and C projects identified within the plan. Where applicable, each of the recommended solutions would be subjected to a more detailed investigation at the project-specific level as part of a future MCEA study.

## Recommendations

Based on the evaluation, it is recommended that the City:

- **Implement existing plans** from the City-wide Transportation Master Plan update, Cycling Master Plan, and Transit Study recommendations per **Alternative 2**;
- **Modernize select infrastructure**, in line with the evaluation results for **Alternative 3**; and
- **Expand road network**, in line with the evaluation results for **Alternative 4**.

The recommended solution will help address identified transportation issues while balancing costs and potential negative effects. The following sections summarize the details of the multi-modal transportation strategies.



## Road Network Strategy

The proposed changes to the road network will support all modes not just auto travel. Walking and cycling facilities will be added to all new or reconstructed roadways, and infrastructure to support enhanced transit service will be incorporated into proposed projects where applicable.

The ESTS assessed various options to add road network capacity. A combination of projects was identified as the best long-term solution. The projects, as shown in **Figure ES.1**, include:

- From Alternative 2:
  - Improve intersections with acute short-term capacity issues
- From Alternative 3:
  - Realign Ashburnham Drive north of Maniece Avenue (Project #1 on **Figure ES.1**)
  - Urbanize Maniece Avenue, Old Norwood Road, and McFarlane Street (Project #2)
  - Construct new (replacement) McFarlane Street bridge over the Trent Canal (Project #3)
  - Reconstruct Parkhill Road East east of Leahy's Lane (Project #5)
- From Alternative 4:
  - Widen Ashburnham Drive south of Maria Street (Project #7), Television Road (Project #8), and Parkhill Road East west of Leahy's Lane (including the Otonabee River crossing) (Project #10)
  - Widen/realign County Road 4 (subject to Peterborough County) (Project #9)
  - Protect corridor for potential future Sherbrooke Street/Maria Street connection and extension of Maria Street easterly to Television Road (Project #12). Widening of the Maria Street bridge over the Trent Canal could occur separately.

Recognizing that the ESTS is a long-range plan, the study recommends protection of a corridor (rather than construction of the road connection) as the need for the proposed new crossing is not expected to arise until the end of the 2051 planning horizon. Corridor protection would typically involve limiting development of the lands around a potential new bridge crossing of the Otonabee River to uses compatible with such a facility.

If need for the new facility arises in the future, as anticipated, an environmental assessment (EA) study would be required to assess all potential solutions in more detail. Additional consultation activities would be undertaken as part of the future EA to allow for community and stakeholder input into the planning and design process.



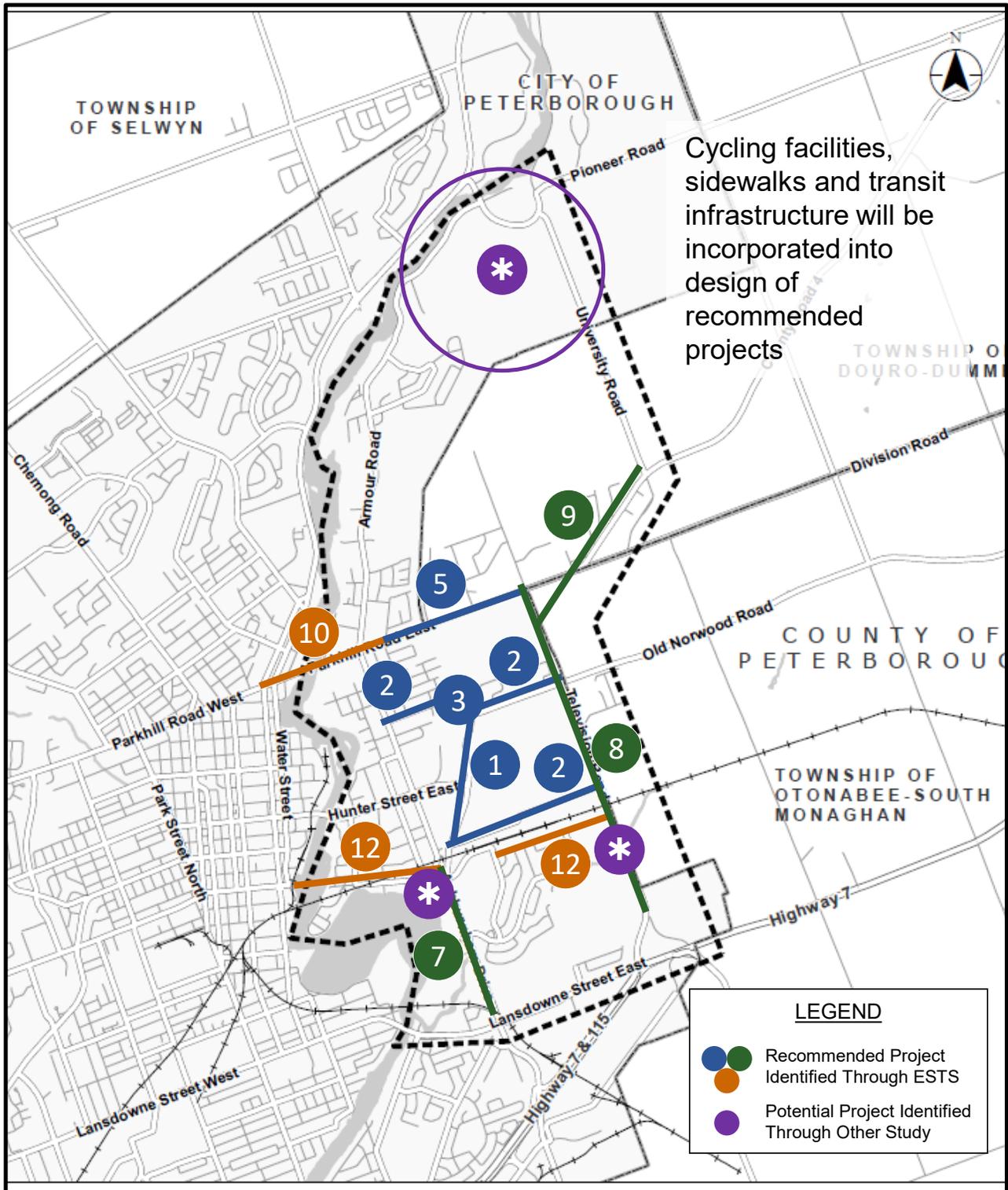


FIGURE ES.1: RECOMMENDED ROAD NETWORK STRATEGY



- From other studies underway by the City or Parks Canada (which will be implemented as part of those initiatives):
  - Replace Maria Street bridge over the Trent Canal and Television Road bridge
  - Realign Armour Road north of Cunningham Boulevard
  - Upgrade University Road and Pioneer Road
  - Widen Nassau Mills Road and replace bridges over the Otonabee River and Trent Canal

### Active Transportation Strategy

The active transportation strategy will enable walking and cycling to be viable and attractive travel options for most short trips to, from, and within the study area. Specific actions include:

- Implement the recommendations of the City-wide Cycling Master Plan. This includes new on-road facilities on the realigned portion of Ashburnham Drive, Television Road, Parkhill Road East, Old Norwood Road, Maria Street, and Marsdale Drive. It also includes off-road multi-use trails on the east side of Little Lake, the west side of the Trent Canal, and the Maria Street corridor (west of Television Road). The plan also recommends various city-wide policy measures and programs, which would affect the study area;
- Incorporate active transportation facilities into new or altered roads at the design stage. These facilities include sidewalks, pedestrian crossings, and cycling infrastructure;
- Include sidewalks on both sides of all new road construction and in new development areas;
- Prioritize the implementation of missing sidewalks in neighbourhoods in line with City plans and available funding;
- Retain the existing Trent Canal bridge at McFarlane Street for active transportation use, if feasible; and
- Provide a new active transportation facility along the east side of the Trent Canal after the new alignment is constructed.

### Transit Strategy

The transit strategy will ensure public transit is a viable and attractive option for most longer trips to, from and within the study area. Specific actions include:

- Implement the recommendations of the City-wide Transit Study, including:
  - Reconfiguring the route network into a grid system;
  - Increasing service levels to a mix of 15-minute and 30-minute headways;



- Expanding service to key areas; and
- Testing new on-demand service in high-need areas and in place of existing low-demand fixed-route services.
- Provide pedestrians facilities that support transit users in line with the active transportation strategy in the above section.

## Implementation

### Phasing

The recommended road projects were separated into two groups for phasing purposes given the considerable cost and long lead-time for implementation.

The initial group of priorities include:

- Intersection improvements (see above)
- Ashburnham Drive realignment north of Maniece Avenue
- Maniece Avenue, Old Norwood Road, and McFarlane Street urbanization
- New (replacement) McFarlane Street bridge

The next group of priorities include:

- Parkhill Road East reconstruction east of Leahy's Lane
- Television Road widening
- County Road 4 (Warsaw Road) widening/realignment (subject to Peterborough County)
- Parkhill Road East widening (including the Otonabee River crossing) west of Leahy's Lane
- Ashburnham Drive widening south of Maria Street

The plan also recommends protection of a corridor for a potential future Sherbrooke Street/Maria Street connection. It is anticipated this connection would be implemented in the longer-term (beyond 20 years) only if other road network actions are unable to resolve anticipated future capacity deficiencies. Construction of the Maria Street extension to Television Road and widening of the bridge over the Trent Canal could occur independent of the connection.

### Cost Estimates

Costs for the recommended road projects were estimated based on the methodology and benchmark costs used in the City's *2019 Development Charges Background Study* (DC Study). Fundamental assumptions made in the DC Study pertaining to design standards,



service levels, and cost adjustments were maintained. Costs quoted in the DC Study for specific projects were carried forward.

**Table ES.2** summarizes the recommended road projects and their estimated costs separated into corridor and intersection improvements. The estimated cost for the projects listed in the table totals approximately \$128 million.

**TABLE ES.2: RECOMMENDED ROAD PROJECTS AND ESTIMATED COSTS**

Street	Limits	Description	Cost (\$M)
<b>Corridors</b>			
Ashburnham Drive (Project #1)	Maniece Avenue to Old Norwood Road/McFarlane Street	New 2 lane Road (realignment)	\$11.090
Maniece Avenue (Project #2)	Ashburnham Drive to Television Road	Reconstruction to Urban Standard	\$8.640
Old Norwood Road (Project #2)	Ashburnham Drive to Television Road	Reconstruction to Urban Standard	\$5.310
McFarlane Street (Project #2)	Armour Road to Trent Canal	Reconstruction to Urban Standard	\$4.160
McFarlane Street (Project #3)	Across Trent Canal	New 2 lane Bridge and Road (realignment)	\$4,080
Parkhill Road East (Project #5)	Leahy's Lane to Television Road	Reconstruction to Urban Standard	\$8.410
Ashburnham Drive (Project #7)	Lansdowne Street East to Maria Street	Widening to 5 lanes	\$11.030
Television Road (Project #8)	Lansdowne Street East to South of Parkhill Road	Widening to 4 lanes (includes bridge widening)	\$46.150
Parkhill Road East (Project #10)	Water Street to Leahy's Lane	Widening to 4 lanes (includes bridge widening)	\$18,540
<b>SUBTOTAL Corridors</b>			<b>\$117.410</b>
<b>Intersections</b>			
Parkhill Road East and Armour Road		Intersection Improvement	\$3.400
Parkhill Road East and Television Road		Intersection Improvement	\$1.000
Old Norwood Road and Television Road		Intersection Improvement	\$1.500
Paul Rexe Boulevard and Television Road		Intersection Improvement	\$0.760
Maria Street and Armour Road		Intersection Improvement	\$0.500
Lansdowne Street East and Ashburnham Drive		Intersection Improvement	\$3.400
<b>SUBTOTAL Intersections</b>			<b>\$10.560</b>
<b>TOTAL</b>			<b>\$127.970</b>



**Table ES.3** summarizes the estimated costs for the potential future Sherbrooke Street/ Maria Street connection. Based on very preliminary estimates, the cost for the entire project totals approximately \$82 million.

**TABLE ES.3: ESTIMATED COSTS FOR POTENTIAL FUTURE SHERBROOKE STREET/ MARIA STREET CONNECTION (PROJECT #12)**

Street	Limits	Description	Cost (\$M)
Sherbrooke Street	George Street to Otonabee River	Widening to 4 lanes	\$1.280
Maria Street	Across Otonabee River	New 2 lane Bridge	\$23.680
Maria Street	Otonabee River to Rogers Street	Reconstruct to Urban Standard (including new CPR bridge)	\$31.990
Maria Street	Rogers Street to Ashburnham Drive	Widening to 4 lanes (including widening or replacement of Trent Canal bridge)	\$17.310
Maria Street	Walker Road to Television Road	New 2 lane Road	\$7.500
<b>TOTAL</b>			<b>\$81.760</b>

### Provincial Highway Corridor

A new Provincial Highway in the designated corridor would not alleviate the need for City road expansion. The Study Team examined the effects a north-south highway may have on traffic conditions on study area roads. The analysis showed a new highway reduced traffic on study area roads, but not by enough to eliminate the need for City road widenings.

Eliminating the corridor would free up lands in CleanTech Commons to allow better configuration of the road network and increased potential for development.

Provincial Highways in and around the study area currently or are expected to have capacity deficiencies. These capacity issues are/will be for MTO to address. For this reason, it is recommended that MTO undertake the necessary analysis to determine the need to continue to protect for an East Side by-pass of the City of Peterborough and, if the need is confirmed, to review the designated route and update the route planning study as appropriate, in consultation with the City, Peterborough County, and the local municipalities in the County.

