



City of  
**Peterborough**

---

**To:** **Members of the General Committee**

**From:** **Michael Papadacos**  
**Interim Commissioner of Infrastructure and Planning Services**

**Meeting Date:** **March 14, 2022**

**Subject:** **Transportation Master Plan Phase 4 – Approval of Infrastructure and Policy Recommendations Report IPSTR22-003**

---

## **Purpose**

A report to seek approval of the recommended Transportation Infrastructure and supportive Policy recommendations of the City-wide Transportation Master Plan, and to update Council on the next steps for the project.

## **Recommendations**

That Council approves the recommendations outlined in Report IPSTR22-003, dated March 14, 2022, of the Interim Commissioner, Infrastructure and Planning Services as follows:

- a) That the presentation by WSP Canada Group on the Transportation Master Plan be received;
- b) That the recommended Transportation Infrastructure projects summarized in Appendix A, be approved in principle;
- c) That the supportive Transportation Policy recommendations summarized on pages 13 to 16 of this report, and in Appendix C, be approved in principle;
- d) That the Transportation Master Plan project team finalize the Transportation Master Plan Final Report and publish for public review;
- e) That the Schedule D of the new Official Plan be updated to reflect the recommendations described in this report; and

- f) That a project budget of \$600,000 be created for the completion of a Municipal Class EA Study for operational and safety improvements in Special Study Area A (Clonsilla Avenue / Sherbrooke Street / Goodfellow Road area), using pre-approved funding transferred from the uncommitted balance of the Future High Use Arterial Road project.

## Budget and Financial Implications

The estimated capital costs associated with the recommendations outlined in the Transportation Master Plan (TMP) are just over \$900,000,000 (expressed in 2022 dollars) which will be required over the 30 year horizon of the plan, as summarized in Table 1. This translates into an average of \$30.0 M annually, however the timing of projects will influence the actual annual capital budget requests.

Future Councils will determine the pace of investment to implement the recommendations in the TMP based on actual growth and infrastructure priorities over the 30-year plan horizon.

**Table 1 – Summary of Capital Costs for TMP Recommendations**

<b>Recommended Initiatives</b>	<b>Estimated 30 Year Capital Costs (\$2022)</b>
Road Improvements*	\$684,000,000
Transit Infrastructure	\$112,000,000
Walking Infrastructure	\$64,000,000
Cycling Infrastructure	\$48,000,000
City Funded Projects	\$30,000,000
External Funding	\$18,000,000
<b>Total Capital</b>	<b>\$908,000,000</b>

\*includes all right-of-way improvements (underground services and utilities, walking facilities, cycling facilities, etc.)

Funding for capital projects will include traditional tax supported funding, development charges applied to new growth, funding from external government programs (i.e. federal/provincial gas tax, Climate Change funding programs, infrastructure grant programs), and existing City reserve funds. Many of the roadway capital projects will also include new walking and cycling infrastructure, which is over and above the amounts estimated in Table 1 for stand alone cycling infrastructure. Roadway capital project estimates also include costs for upgrades to other aging infrastructure such as underground services and utilities, which make sense to do at the same time, and therefore a portion of the overall costs for some projects may draw on waste water reserve funding, flood reduction master plan reserve funding or cost sharing with utility companies. Some of the capital projects recommended in the TMP are already reflected

in current capital budget forecasts, which are updated each year as part of the budget development process.

Implementation of the Ultimate Cycling Network improvements will extend beyond the original 20 year horizon assumed in the Cycling Master Plan. With the inclusion of additional projects in the Spark Scenario, funded through external sources, it is expected that up to 160 km of new cycling infrastructure would be developed by the 2051 horizon of the TMP.

By 2051, the service level enhancements recommended in the TMP are expected to require an additional \$10,860,000 (expressed in 2022 dollars) in annual operating costs for additional maintenance of new roads, trails, and sidewalks, plus enhanced service levels for transit. Over the 30 year horizon of the plan, it is anticipated that service levels will be gradually increased as the community grows and funding for service level increases will be subject to annual budget approvals.

The TMP has identified the need to develop specific transportation improvement recommendations in a number of Special Study Areas through separate Class EA studies. The Special Study Area A includes the Clonsilla Avenue / Goodfellow Road / Sherbrooke Street Area, and represents the first priority for initiating this additional work. The estimated cost for completing the Class EA study for Special Study Area A is estimated to be \$ 600,000, and can be funded from the uncommitted capital funding in the Future High Use Arterial Road project. Funding to complete separate studies for the other Special Study Areas will be incorporated into future capital budget requests.

## **Background**

Council at their meeting of May 27, 2019, approved the following motion:

- a) That staff be directed to begin a Transportation Master Plan;
- b) That a report on the Terms of Reference for this study be presented to Council no later than December 2019; and
- c) That staff present the findings of the Transportation Master Plan to Council no later than November 2021.

## **TMP Process**

TMP's are broad community-based planning documents that are structured to examine the need for new infrastructure on a system-wide basis while incorporating land use considerations and environmental principles into the municipal planning and decision-making process. A TMP often recommends a combination of policies and new or upgraded infrastructure to support the long-term growth in the community. The plan also provides a guide to assist in day-to-day municipal decision-making, annual capital and operating budget forecasting, and priority setting.

TMP's are not static documents. They are intended to be reviewed and updated every 5-10 years to account for changes to the planning context in a community, including changes to growth forecasts, changes to the way people travel, implications of external initiatives (such as Via Rail), evolving community priorities, and the resulting changes to policy and infrastructure needs that may arise.

The consulting team commenced the work on the TMP in June 2020. The TMP is being developed under the framework approved by Council in Report IPSTR19-028, which includes a five-phase process incorporating a transparent, evidence-based, decision-making process that includes extensive engagement with the community and with Council.

The process is consistent with the Municipal Class Environmental Assessment (MCEA) process, through which a TMP typically completes the first two phases of the five-phased MCEA process used for all municipal infrastructure projects, including:

- Development of a problem/opportunity statement (MCEA-Phase 1)
  - The Council approved framework splits this phase into two phases:
    - Phase 1 – Develop an overall Vision and Objectives to guide the TMP
    - Phase 2 – Assessment of current and future Challenges and Opportunities
- Development and evaluation of alternative Solutions (MCEA-Phase 2)
  - The Council approved framework splits this phase into three phases;
    - Phase 3 - Transportation Strategy Development & Mode Share Targets,
    - Phase 4 – Determine Infrastructure Improvement Needs, and
    - Phase 5 – Develop Recommended Plan and Implementation Schedule

Many of the larger infrastructure projects recommended in the TMP will still require further study prior to being approved for implementation. For most projects, the completion of Phases 3-5 of the Municipal Class EA planning process will still be required and further to additional project-specific consultation includes:

- Alternative Design Concepts for Preferred Solution (MCEA-Phase 3)
- Completion of an Environmental Study Report (MCEA-Phase 4)
- Project Implementation (MCEA-Phase 5)

On May 25, 2021, Council approved TMP Phase 1 report IPSTR21-005. This report established a Transportation Vision to guide the study, and a series of Objectives and

Performance Criteria to assist in evaluating alternatives, evaluating and selecting projects, and monitoring ongoing performance of the Transportation System.

At their meeting of November 8, 2021, Council approved the TMP Phase 2 and 3 report IPSTR21-018, with amendments, which established a Transportation Strategy to guide the development of the final recommendations in the TMP which included Mode Share Targets for the City to encourage a fundamental shift in travel behaviour and help to achieve the City's Climate Change goals. A summary of the final Council approved recommendations are as follows:

- a) That the presentation by WSP Canada Group on the Transportation Master Plan be received;
- b) That the Transportation Master Plan recommend the following Mode Share Goals as aspirational targets for the City to encourage shifts in travel behaviour and attitudes towards transportation:
  - i. By 2051 the vision for transportation in the City will result in 25% of all trips completed by walking or cycling, 10% of all trips will use an enhanced transit system, and auto travel will be reduced to 65% of all trips.
- c) That the recommended Hybrid Strategy 3-4, as described in more detail on page 9 of this report, be approved as a basis for completion of the Transportation Master Plan to guide the development of detailed recommendations on infrastructure projects, policies, and funding requirements, including:
  - i. An aggressive investment in expansion of the sidewalk network;
  - ii. Implementing the Hybrid Accelerate/Spark Scenario from the Cycling Master Plan, as recently approved by Council in Report IPSTR21-009;
  - iii. Adopting policies to encourage a shift in travel modes including increasing the cost of parking and expanding the areas where paid parking would be charged;
  - iv. Investigating policies and other incentives / measures to increase the number of zero emission vehicles in the public and private fleets;
  - v. Investing in new transit services by increasing service hours by 71% over the next 30 years to add new routes and / or improve peak period frequency of service and implementing additional subsidization of transit passes to lower the cost of transit, improve equity, and encourage additional ridership;
  - vi. Developing a road network improvement plan that:

- (1) Adopts higher thresholds of acceptable traffic volumes compared to available capacity before road improvements would be considered to address capacity deficiencies;
  - (2) Prioritizes road and intersection improvements that enhance safety or improve transit travel times;
  - (3) Provides separated cycling facilities on major collector and arterial roads identified for new cycling routes, and implements dedicated space for cycling where feasible;
  - (4) Includes a Smart Signal implementation plan for major roadway corridors to reduce delays and emissions;
  - (5) Incorporates Connected or Autonomous Vehicle (CAV) technology at intersections to support signal priority for transit vehicles and emergency response vehicles; and
  - (6) Adopts new policy measures to guide capital project priorities and planning, including:
    - A Goods Movement Strategy - to support commercial vehicle access to employment areas and the downtown
    - A Complete Streets Policy - to guide the development of multi-modal transportation corridors, and
    - A Road Safety Plan incorporating a safe systems approach - to identify key initiatives to enhance road safety for all users.
  - (7) Incorporates the following strategic road network improvement recommendations, including:
    - No New North-South Arterial Road capacity on the west side of the City,
    - New Operational and safety improvements that will be required in key locations on the west side of the City.
    - New East-West Capacity for crossing the Otonabee River, to be referred to the East Side Transportation Study;
    - New North-South arterial road capacity East of the Otonabee River, to be referred to the East Side Transportation Study; and
- d) That Staff be directed to report back to Council, prior to the end of March 2022, to establish a timeline and budget to undertake the preparation of a Terms of Reference for a focused Individual EA Study to examine localized operational

and safety improvements that may be required in key locations on the west side of the City as described in the report;

In addition to the main recommendations contained in Report IPSTR21-018 Council also passed the following motions:

- e) That the phrase from page 32 of Report IPSTR21-018 “however alternatives utilizing portions of the lands reserved for the corridor may be considered” be deleted; and

C.vi(7) “Road network improvements shall not utilize portions of the lands reserved for the Parkway corridor.”

### **Community Engagement**

Community engagement is an important aspect of this project. While the MCEA process stipulates a minimum of two points of contact with the public, the process to develop the City’s TMP is going far beyond these requirements.

In addition to formal presentations to Council at key decision points in the project, the community engagement plan is structured to reach out as broadly as possible to various groups, community organizations, First Nations communities, and members of the public who are interested in participating in the project.

### **Phase 4 Engagement:**

The Phase 4 round of engagement was built upon the information presented and feedback received during Phases 1 to 3. Recommendations from the Transit Route Review Study, the Cycling Master Plan (CMP) and the Eastside Transportation Study were incorporated and presented during this round of engagement. The purpose of the Phase 4 engagement was to :

- Present the preliminary infrastructure recommendations to support the approved Transportation Strategy;
- Present the key Infrastructure and Transportation Demand Management policy recommendations that were designed to support support the multi-modal transportation networks; and
- Share information and receive feedback on the key Infrastructure and policy recommendations.

Input received during this round of engagement was used to finalize the recommended infrastructure and policy recommendations to be presented to Council for approval. The Phase 4 engagement activities included:

- A meeting in January 2022 with the Technical Committee and the Project Steering Committee to share the draft Infrastructure Recommendations and Policy Initiatives;

- A meeting in January 2022 with the Community Working Group;
- Organizing a Virtual Public Information Centre (PIC) to engage with the members of the public through the [connectptbo.ca](http://connectptbo.ca) website, between January 28 and February 11, including an online “virtual” PIC meeting on February 3, 2022, to seek feedback on the draft Infrastructure Recommendations and Policy Initiatives of the TMP. The virtual PIC meeting was organized together with the separate Eastside Transportation study for the area east of the Otonabee River and north of Lansdowne Street East;
- An online Public Feedback Survey open between January 28 and February 11, 2022, which allowed residents to provide feedback on the preliminary recommendations from the Consulting Team;
- A meeting with the Peterborough Environmental Advisory Committee on February 16, 2022; and
- A meeting on March 4, 2022, with the Project Steering Committee to finalize the Phase 4 recommendations presented to Council.

The [connectptbo.ca](http://connectptbo.ca) website recorded approximately 460 page visits during the Phase 4 consultation, with 65 views of the online presentation and the submission of 60 feedback forms in response. In total approximately 90 participants participated and provided feedback during the virtual PIC meeting organized in two separate sessions at noon and at 6:30 pm on the evening on February 3, 2022. The meeting featured a presentation from the Eastside Transportation Study and Transportation Master Plan project teams, followed by a question and answer session.

Key themes emerging from the comments received included interest in safety measures and accessibility measures being incorporated into road improvements, mixed reaction to the proposal to protect for a new bridge across the Otonabee River at Sherbrooke Street / Maria Street, and concerns about how to fund the infrastructure program. On the policy side, there was support for the Complete Streets approach and proposed Goods Movement policies, an interest in more details regarding parking policy recommendations and locations for new paid parking, and a desire to see broader expansion of Electric Vehicle charging stations beyond City-owned facilities.

A summary of the feedback received during the Phase 4 public and stakeholder engagement program is included in Appendix C. An additional Consultation Summary Report has been included on the [connectptbo.ca/moveptbo](http://connectptbo.ca/moveptbo) website.



## **Transportation Master Plan – Phase 4 – Infrastructure Improvement Recommendations**

In Phase 4, a multi-modal approach has been taken to the development of Infrastructure recommendations, which includes road network improvements, transit priority measures, and cycling/active transportation infrastructure.

Draft recommendations from Phase 4 are summarized below.

### **Cycling Improvements**

The recommended cycling network being presented in the Transportation Master Plan is based on the proposed Cycling Network developed as part of the Cycling Master Plan and reflects the Hybrid Accelerate-Spark scenario approved by Council through Report IPSTR21-009 – Cycling Master Plan Update.

The proposed Ultimate Cycling Network is designed to add 80 km of new city funded cycling infrastructure, in line with the Accelerate scenario, plus an additional 80 km of potential new cycling facilities were identified that would reach the Spark Scenario targets. Achieving the additional network links associated with the Spark scenario will require funding from senior levels of government to supplement City investments and will require an extended timeline for reaching this goal over the next 30 years.

Initial priorities for investment of City funding will strive to complete upgrades to approximately 12 km of the existing cycling network and to implement the Crosstown Cycling Network in the short to medium time horizon (within the next 20 years). This Crosstown Network will add approximately 54 km of new facilities to the existing network, with 80% of this network being suitable for cyclists of all ages and abilities.

The Crosstown Network and Ultimate Cycling Network maps developed as part of the Cycling Master Plan are included in Appendix A.

### **Transit Priority to Support Enhanced Frequency**

The approved Transportation Strategy is based on increasing the frequency of transit services to build and attract new ridership. Increased frequency also requires improved reliability of transit service. Transit priority treatments are recommended on key transit corridors to improve transit operations, maintain on-time reliability, and reduce travel time by transit compared to travel by automobile. Transit priority measures are typically most beneficial when there is a combination of high ridership volumes and unstable road network operations that impact bus travel times. Transit priority measures can include simply re-timing traffic signals to benefit transit, giving signal priority to transit vehicles at intersections, and/or providing localized road improvements to benefit transit such as intersection bus by-pass lanes.

Water Street North, Parkhill Road, Sherbrooke Street, Lansdowne Street, and portions of Hilliard Street and Marina Boulevard have been identified as candidate routes for some form of Transit Priority treatments due to anticipated high future bus ridership and

moderate to high delays on the road network. Water Street, in the vicinity of Nassau Mills Road, Water Street and George Street at Parkhill Road, and Armour Road at Parkhill Road have been identified as potential locations for intersection treatments to provide bus by-pass lanes to improve transit travel time at these key locations which feature forecasted future bus ridership of 150-300 passenger per hour on 8 to 25 buses per hour in the peak direction of service. These recommendations will be further reviewed and assessed as part of capital projects in these areas to determine the feasibility of implementation.

### **Eastside Transportation Study Improvements**

For areas east of Otonabee river and North of Lansdowne street east, the TMP adopted the recommendations of the separate Eastside Transportation Study which assessed transportation infrastructure needs and priorities associated with development planned in East City and the Liftlock Secondary Plan area. Infrastructure recommendations from this study have been incorporated into the overall road network improvements summarized in Appendix A.

### **A Strategic Road Network Improvement Plan**

The road network improvement recommendations developed in the TMP, incorporate recommendations from the Eastside Transportation Study, and have been grouped into three broad categories including:

- road improvements to support the development of new growth areas – these projects include standalone intersection improvements to support new development, the reconstruction of older roads to bring them up to modern urban standards including adding sidewalks and cycling lanes where appropriate, and the protection of future road corridors through new or emerging development areas;
- road improvements to enhance safety – which includes upgrades to intersections to improve the way they operate or to improve safety, and widening some roads to add centre turn lanes to enhance safety; and
- strategic road improvements to address the need for new capacity – which includes strategic road widenings in the area of Trent University, Parkhill Road, Television Road and Ashburnham Drive, combined with the protection of a new crossing of the

Otonabee River connecting Sherbrooke Street and Maria Street to address the need for additional river crossing capacity over the long term.

### **Special Study Areas**

The TMP identified four ‘Special Study Areas’ that will require more detailed study and additional focused engagement with residents and other stakeholder groups before specific improvement recommendations can be identified.

#### **Special Study Areas A and B**

The work by the consulting team during Phases 2 and 3 of the study concluded that new North-South Arterial Road capacity is not recommended on the west side of the City to address forecasted travel demands to the year 2051. However, existing safety and operational issues at key intersections and on key road links can be expected to further deteriorate as travel demands grow, particularly during peak travel periods.

Instead of new north-south capacity through the entire study area, operational improvements were recommended at key locations to ensure that intersections and road links can accommodate future demands (including new cycling and walking infrastructure) and that the road network can support enhanced transit services. For the purpose of the TMP, these areas have been identified as Special Study Areas.

Special Study Area A includes the roads and intersections in the Clonsilla Avenue / Goodfellow Road / Sherbrooke Street Area. Special Study Area B, includes the area bounded by Ackison Road, Lily Lake Road, Parkhill Road, Fairbairn Street, Highland Road and Chemong Road. The recommended approach to addressing deficiencies in these areas will focus on optimizing the performance of the existing network, making strategic road / intersection improvements, investing in transit, and investing in new cycling and walking infrastructure.

During the previous Parkway Class EA study, these two areas were studied in greater detail and several infrastructure improvement alternatives were evaluated. The study was not approved by the Ministry of the Environment, Conservation and Parks (MECP) and the Ministry Issued an Order, September 16, 2016, that required the City to undertake an Individual Environmental Assessment Study for the project for review and approval by the Minister.

Recent discussions with Ministry Staff have confirmed that, since the TMP is not recommending a new North-South corridor in the west side of the City and the scope of recommended improvements in the Master Plan are focussed on optimizing the performance of intersections and road links to accommodate future demands and has a different purpose from the original Parkway Corridor project, the previous Minister’s Order would not apply and these projects would fall under the Municipal Class EA process. A copy of the Ministry response is attached in Appendix B.

Accordingly, staff recommend that these projects should be undertaken following the Schedule C process in the Municipal Class EA; however, considering the extensive interest in these study areas an initial ‘study design’ be incorporated into each study to clearly define the range of alternatives to be considered and the methodology for evaluating alternatives prior to initiating the studies. The ‘study design’ document will be prepared through consultation with the community and stakeholders, and will be presented to Council prior to undertaking the detailed work. In accordance with Council direction, road network improvements to be considered in these Special Study Areas shall not utilize portions of the lands reserved for the Parkway corridor.

Staff are recommending that the Class EA study for Special Study Area A be undertaken first as this represents one of the highest priority areas for addressing operational and safety concerns. It would also be advisable to undertake the Class EA for Study Area B after completion of the Jackson Park Management Plan, which would provide additional context and direction with respect to identifying the range of reasonable alternatives in this study area.

The cost for completing the Class EA study for the Special Study Area A is estimated to be \$ 600,000, and the estimated time for completing the study is 20 months. This includes the costs associated with the additional consultation and preparation of the Study Design document. For Special Study Area B, the estimated cost is \$ 700,000, and the estimated time for completing the study is 28 months.

### **Special Study Area C**

As part of the work for the Eastside Transportation Study, the need for improvement to County Road 4 were identified to accommodate long term growth in travel demands in conjunction with recommended widening of Television Road, Nassau Mills Road, and improvements to University Road. As County Road 4 is a road under the jurisdiction of the County of Peterborough, solutions to address future congestion in this area will need to be implemented in coordination with the County and local Townships. The County is currently preparing its own Transportation Master Plan, and City representatives are participating in the project Steering Committee. Work on the County study has also recognized the need for improvements to County Road 4, and specific recommendations will be included in the County TMP to address this area.

### **Special Study Area D**

Special Study Area D incorporates road network improvements that will be necessary to support future growth allocated to the Coldsprings Secondary Plan Area through the new Official Plan. The City’s new Official Plan identifies approximately 80 hectares of developable land as prestige employment and approximately 60 hectares for residential purposes. The Ministry of Transportation has identified the need for improvements to the Highway 7/115 and Bensfort Road interchange as the growth in the Coldsprings Area evolves, and this was supported by the Coldsprings Transportation Study, completed by the City in 2014.

With the change in land use completed in the new Official Plan, previous work on the Coldsprings Transportation Study will need to be updated, and a Class EA study will need to be completed to determine the extent of improvements required in the interchange area to support future build out of the Coldsprings Lands. The timing for this future study will depend on finalization of the land use planning for this area, re-negotiating the cost sharing agreement with the Ministry of Transportation to fund the study, and securing the City share of the capital funding to complete the necessary studies.

### **Transportation Master Plan Policy Initiatives**

A number of key policy initiatives will be required to support the approved Transportation Strategy. Some of the key policy initiatives such as Complete Streets, Goods Movement, Road Safety, and Emerging Technologies are directed to the way we plan, design, operate and prioritize infrastructure investments. Policy measures in the area of parking, transit fare discount programs, and cycling policies are an extension of our current Transportation Demand Management Programs which are designed to support and encourage a shift in travel behaviours to meet our mode share targets. A number of specific policy recommendations in the TMP will be brought back to Council in the future as part of specific topic-based reports for full consideration and approval.

A summary of the recommended policy measures is provided below, with a more detailed overview provided in Appendix C. The full Road Safety Strategy Report has been included on the [connectptbo.ca/moveptbo](http://connectptbo.ca/moveptbo) website.

### **New Infrastructure Policy Initiatives**

- Complete Streets is a design philosophy that focuses on planning streets to better accommodate all modes of travel, rationalizing how the available road right-of-way space gets allocated between different travel modes, considering the needs of vulnerable users in the design process and promoting sustainable modes of travel and improved livability and quality of life in the City. Key policy recommendations in a Complete Streets approach include designing with all users in mind, updating City Design Standards to incorporate Complete Streets design concepts, tailoring the roadway classification system to better reflect user needs and priorities, and incorporating missing infrastructure into roadway rehabilitation projects.
- Goods Movement is an important consideration to ensure that our transportation network is planned and designed to accommodate various types of truck travel through the City in order to support industries, stores, businesses, and residents that rely on the delivery of goods on a day-to-day basis. Key policy recommendations include establishing a network of truck supportive routes through the City to facilitate various categories of truck movements. This network could include signed routes to direct trucks through the City on roadways that are suited for truck traffic and away from neighbourhoods. The focus of this network

would be to influence the way key truck supportive routes are designed and operated. Primary routes would support connectivity to the Provincial Highway network and key industrial parks in the City, Regional routes would support connections through the City and between the City and municipalities in the County of Peterborough, and Local routes would focus on supporting the delivery of goods to businesses and commercial areas in the City.

- Road Safety is shown as an infrastructure policy initiative, but in reality the recommended Road Safety Plan is much broader and includes a combination of targeted Education, Enforcement, and Engineering measures that are expected to reduce serious injuries and fatalities on our roads by approximately 50% over the next 20 years. The Road Safety Plan adopts a safe systems approach for the design of new infrastructure and includes five key areas of emphasis, including Safe School Zones, Safety for Vulnerable Users, Safe Neighbourhoods, Safe Corridors, and Safe Intersections. Various policy recommendations in the Road Safety Plan include reduced speed limits in the downtown, neighbourhoods and in school zones; targeted education programs for school areas, aggressive/distracted driving, and pedestrian awareness; implementation of traffic calming measures in neighbourhoods and improvements to key intersections and arterial roads to improve safety; and investigating the use of automated speed enforcement and red light cameras to improve driver behaviour and compliance with existing rules of the road.
- Emerging technologies can be used to improve the way our transportation system operates, make it easier or more efficient for users to access transportation services and can assist in reducing emissions and meeting our Greenhouse Gas Emission reduction targets. The conversion of gasoline and diesel powered vehicles to low emission fuel sources will be needed to achieve deep reductions in Greenhouse Gas Emission in the City. Key policy recommendations in this area include pursuing federal or provincial grants to convert the City Transit fleet (and other City Fleet vehicles) to low emission vehicles, expanding the number of Electric Vehicle charging stations across the City to improve access and support conversion of private vehicles to e-vehicles, using technology to improve truck movements and deliveries, exploring digital wayfinding technologies for vehicle routing and finding parking, supporting future connected vehicle technologies through upgrades to the traffic signal system, and expanding on the Smart Signal

pilot project that the City has been testing to reduce delays and emissions on key roadway corridors.

### **New Transportation Demand Management Initiatives**

The City has an existing Transportation Demand Management (TDM) program that encourages residents to consider more sustainable modes of travel as an alternative to driving alone by automobile. Programs include education and promotion of walking or cycling to school, a strategic sidewalk program to prioritize construction of missing sidewalk links, support for carpooling, and various campaigns and programs to promote cycling and other community based initiatives that highlight opportunities to rethink how residents travel.

New TDM policy recommendations included in the TMP to enhance the existing programs and support the approved Transportation Strategy include:

- Parking policy initiatives including pricing, managing the supply of parking, and providing infrastructure to support those who choose to use other modes of travel are necessary to influence more people to shift their travel behaviours. The recommended parking policy initiatives include increasing the cost of all-day parking in City lots and garages so that they are higher than the cost of a monthly transit pass (while keeping rates for short term parking costs lower to support shopping and visiting the downtown), expanding the locations where paid parking is charged throughout the City including City facilities and through an on-street parking permit program in neighbourhoods, enhancing cycling and transit amenities to support those who choose to leave their cars at home, and updating our planning and zoning by-laws to modify parking requirements for new developments.
- Transit Fare Discount Programs can be used to encourage new ridership (which will contribute to meeting Greenhouse Gas Emission reduction targets) and promote improved equity in the access to transportation services in the community. The recommended transit fare policy initiatives include building on the recent program to provide free transit for children under 12 to expand this program to children under the age of 18 (in consultation with school boards) and to pilot a reduced fare program for low income residents.
- Cycling policy measures were also developed as part of the Cycling Master Plan to support the implementation of new cycling infrastructure and to provide programming support to encourage more residents to consider cycling for some of their trips. There are 23 key policy initiatives in the Cycling Master Plan grouped under five key headings that include: Creating an Irresistible Network; Encouraging All-Season Riding; Pursue Design Excellence; Build a Cycling Culture; and Go for

Gold. More information on the Cycling Master Plan recommendations can be found on the City website <https://www.connectptbo.ca/cycling>.

### Transportation Master Plan Costs and Project Phasing

Implementation of the infrastructure components of the TMP are estimated to cost approximately \$910,000,000 (\$2022) over the 30 year horizon of the plan as summarized in Table 2.

Future Councils will determine the pace of investment to implement the recommendations in the TMP based on actual growth and infrastructure priorities over the 30-year plan horizon.

Between 2019 and 2021, the City has allocated an average of \$21,000,000 in annual capital funding for reconstruction and widening of roadways, new walking and cycling facilities, and new transit infrastructure. Additional funding for roadway preservation work (resurfacing) is in addition to this previous level of investment.

Over the 30 horizon of the TMP, the annual capital funding need is expected to increase to approximately \$30,000,000, expressed in 2022\$. With continued population growth there will be a larger tax base and increased Development Charges to support the increased capital funding requirements. Funding for roadway preservation work will continue to be an important part of future capital programs and will be in addition to the specific projects identified in the TMP.

**Table 2 – 30 Year Capital Investment Requirements**

<b>Recommended Initiatives</b>	<b>Estimated 30 Year Capital Costs (\$2022)</b>
Road Improvements	\$684,000,000
Short Term (0-10 Years)	\$160,460,000
Medium Term (10-20 Years)	\$170,900,000
Long Term (20-30 Years)	\$352,350,000
Transit Infrastructure	\$112,000,000
Walking Infrastructure	\$64,000,000
Cycling Infrastructure	\$48,000,000
<i>City Funded Projects</i>	\$30,000,000
<i>External Funding</i>	\$18,000,000
<b>Total Capital</b>	<b>\$908,000,000</b>

For the purpose of planning, road improvement costs have been allocated into short, medium and long term horizons based on the anticipated needs arising from growth, priorities associated with the approved Transportation Strategy, and recognizing the



need for additional planning and design studies to be completed for larger projects prior to implementation. Larger projects which add new capacity have typically been assigned to the longer term horizon, and the need for these projects will be reviewed and assessed during subsequent updates to the TMP.

Approximately \$400,000,000 of the \$684,000,000 in road improvement costs are already included in long term capital budget forecasts contained in the 2022 approved budget documents. Additional new capital projects identified through the TMP will be incorporated into subsequent updates of the Development Charge Background Study and the resulting Development Charge By-law, and in future Capital Budget requests.

Specific road network improvement cost estimates for the projects identified in the TMP have been based on existing capital budget forecasts or indicative cost estimates from similar types of projects that have been completed in the past. No design work has been completed as part of the TMP, therefore the estimated costs for each project will be reviewed and updated through specific preliminary and detail design processes as each project proceeds through to implementation.

The Cycling Master Plan recommendations as discussed in more detail in Report IPSTR22-001, includes upgrades for the existing network and construction of the Crosstown Network in the short to medium term horizons. Transit infrastructure investments include new buses to increase service levels and to facilitate conversion of the bus fleet to zero emission vehicles. Walking infrastructure expansions will provide approximately 100-150 km of new sidewalks across the City, in areas where sidewalks are currently missing, and will include a program of accessibility upgrades for existing sidewalks. This is in addition to new sidewalks provided by developers as part of new subdivisions. Opportunities to secure external funding for walking, cycling and transit infrastructure will be reviewed and will be incorporated into annual capital budget forecasts presented to Council.

A detailed summary of the recommended road network improvement projects by time horizon is provided in Appendix A.

## **Contribution to Climate Change Action Plan and Strategies**

As reported previously in Report IPSTR21-018, the approved Transportation Strategy is expected to result in a 10-13% reduction in per capita GHG emissions compared to the baseline for 2051, primarily due to shifts in travel behaviour. This equates to an estimated reduction in annual emissions of approximately 14,000 tCO<sub>2</sub>e compared to the status quo.

The recommended road network improvements summarized in Appendix A will also reduce congestion during peak periods and as a result will also reduce emissions from fuel use. By 2051 the road network improvements alone are estimated to result in an additional 55% reduction in emissions from the community fleet during the afternoon peak period. As approximately 27% of daily travel occurs in the afternoon peak period,

this level of reduction could reduce annual emissions by a further 10-15%, assuming no change to the community fleet of vehicles.

Further reductions in Community based emissions will be realized as more zero emission vehicles are purchased by residents and businesses. The Federal Government has set targets for 100% of new light vehicle sales to be zero emission vehicles by 2035, and with the current average age of passenger vehicles on the road today of just under 10 years, the full conversion of the private fleet of light duty vehicles to zero emission vehicles can be anticipated by around 2040-2050 depending on the nature of incentive programs to encourage conversion.

The approved Transportation Strategy also includes a significant expansion of transit service to encourage shifts in travel behaviour, which will increase Corporate GHG emissions, until the City can transition to a low emission bus fleet.

The City has initiated an Alternative Fuel Feasibility Study for the Transit Fleet to consider the full range of costs and operational / implementation considerations that need to be considered with different low to zero emission fuel technologies, and to recommend an approach for the City to guide future bus purchases and the design of a new bus storage garage. This study is expected to be completed by the end of 2022, with a presentation of recommendations for consideration by Council anticipated for 2023.

## **Next Steps**

With Council approval of the recommendations of this report, Phase 5 of the TMP project will be initiated. This phase will focus on finalizing the project including the identification of implementation priorities, finalizing the phasing of various capital projects and initiatives, developing a monitoring plan to support future updates to the plan, and completing the final reporting and documentation activities for the project.

## **Summary**

The Transportation Master Plan is being developed in accordance with the Municipal Class Environmental Assessment (MCEA) process and the planning framework approved by the Council at the outset of the study. The project team has completed Phases 1 through 4 of the study and, through extensive consultation with the community and stakeholders, have identified projects to develop a multi-modal transportation network to accommodate growth in Peterborough to 2051. The TMP includes road network improvements, transit priority measures, cycling infrastructure and key policy initiatives around complete streets, goods movement, road safety, emerging transportation technology, and expanding our current Transportation Demand

Management measures with new initiatives that include parking, transit fare discount programs, and cycling policies to encourage shifts in the way people travel around the City.

Submitted by,

Michael Papadacos, P.Eng.  
Interim Commissioner, Infrastructure and Planning Services

**Contact Name**

Kevin Jones  
Manager, Transportation  
Phone 705-742-7777 ext. 1895  
Toll-Free: 1-855-738-3755  
Fax 705-876-4621  
E-mail address: [kjones@peterborough.ca](mailto:kjones@peterborough.ca)

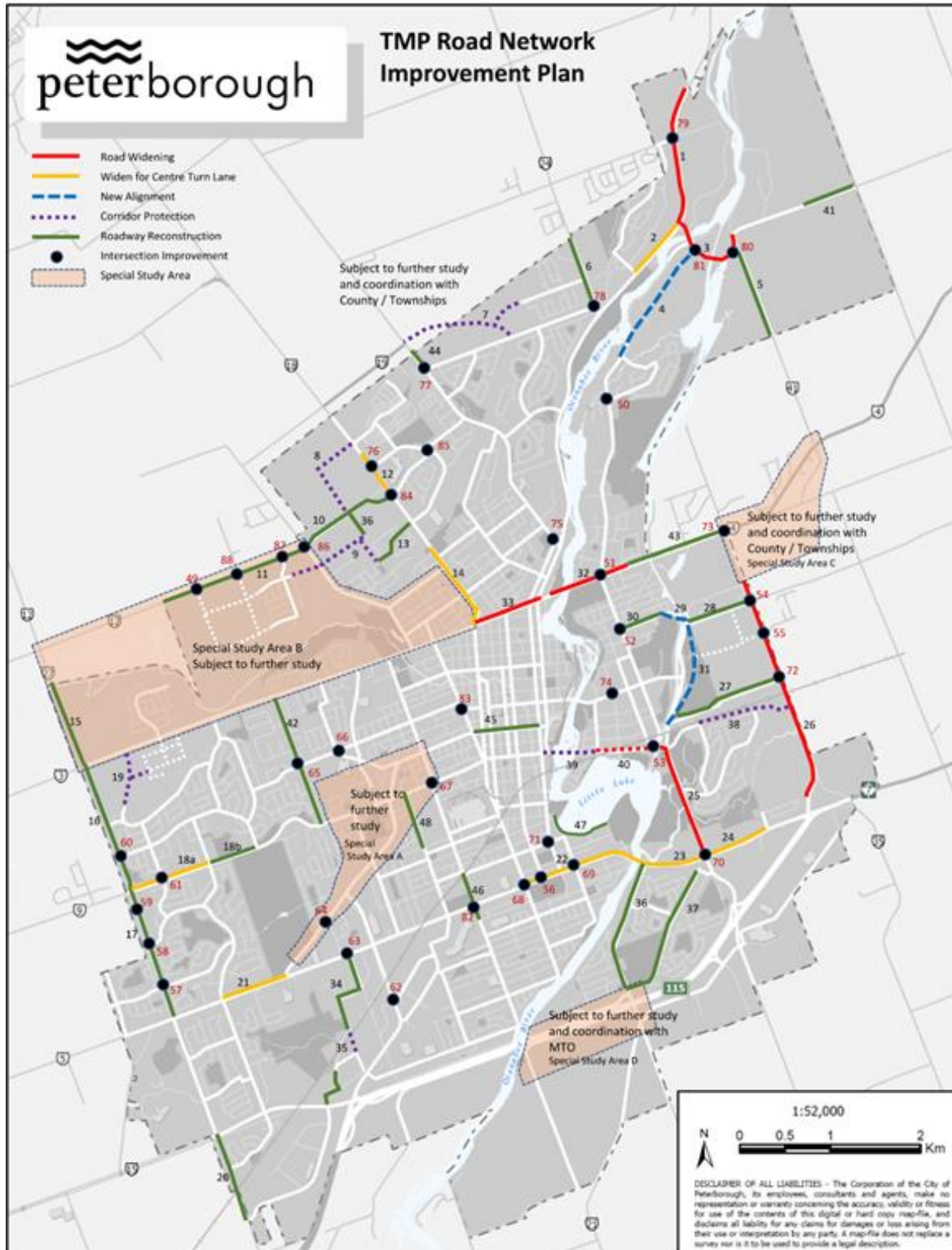
Vinod Soman  
Senior Project Manager- Transportation  
Phone 705-742-7777 ext. 1749  
Fax (705)-876-4621  
E-mail address: [vsoman@peterborough.ca](mailto:vsoman@peterborough.ca)

**Attachments**

Appendix A – Road and Cycling Network Recommendations  
Appendix B – Copy of correspondence from MOECC  
Appendix C – Draft Phase 4 Report

## Appendix A – Road and Cycling Network Recommendations

### TMP Road Network Improvements



## Road Network Improvement Projects

### Short Term Priorities (0-10 years)

Project #	Street	Limits / Cross Street	Improvements	Indicative Cost
4	Armour Road	Cunningham Boulevard to Nassau Mills Road	New 2 Lane Road Realignment	\$21,900,000
13	Simons Avenue / Hillside Street	Chemong Road to New Collector Road	Reconstruction to Urban Standard - Collector Road	\$5,400,000
14	Chemong Road	Parkhill Road to North of Sunset Boulevard	Widen to 5 lanes	\$37,500,000
17	Brealey Drive	Lansdowne Street W to Sherbrooke Street	Reconstruction to Urban Standard - Arterial	\$14,300,000
18	Sherbrooke Street	Glenforest Boulevard to West City Limit	a) Widen to 3 lanes b) Reconstruction to Urban Standard - Arterial	\$20,750,000
21	Lansdowne Street W	Spillsbury Drive to Clonsilla Avenue	Widen to 5 lanes	\$7,000,000
22	Lansdowne Street W	Park Street to George Street	Widen to 5 lanes	\$3,000,000
28	Old Norwood Road	Ashburnham Drive to Television Road	Reconstruction to Urban Standard - Collector Road	\$5,300,000
35	Harper Road Rail Crossing	Fisher Drive to North of CP Rail Corridor	New 2 Lane Road Realignment	\$3,600,000
45	Charlotte Street	Park Street to Water Street	Reconstruction to Urban Standard - Arterial	\$14,510,000
47	Crescent Street	Perry Street to Haggart Street	Reconstruction to Urban Standard one-way street	\$2,400,000
48	Lily Lake Road	Street B (Heideman Street)	Install Left / Right Turn lanes / Future Signals when Warranted	\$500,000
49	Lily Lake Road	Street C (Dolman Street)	Install Left / Right Turn lanes / Future Signals when Warranted	\$500,000
50	Armour Road	Francis Stewart Road	Install Signals	\$500,000
51	Armour Road	Parkhill Road	Install N/S Left Turn; SB Right Turn; E-W Left Turn Lanes	\$3,400,000
55	Television Road	Paul Rexe Boulevard	Install Signals + West Approach	\$800,000
56	Lansdowne Street	Aylmer Street	Install Signals and Left Turn Lanes	Cost included in Project #22
57	Brealey Drive	Cherryhill Boulevard	Install Signals + Left Turn Lanes	Cost included in Project #17
58	Brealey Drive	Kawartha Heights Boulevard	Install Signals + Left Turn Lanes	Cost included in Project #17
59	Brealey Drive	Hewitt Drive	Install Signals + Left Turn Lanes	Cost included in Project #17
60	Brealey Drive	Glenforest Boulevard	Install Signals + Left Turn Lanes	\$1,000,000
61	Sherbrooke Street	Denure Drive	Install E-W Left Turn Lanes / Permanent Signals	Cost included in Project #18
63	Lansdowne Street	Webber Avenue	Upgrade turn lanes N/S	\$400,000

64	Webber Avenue	Clonsilla Avenue	Provide E-W Left Turn Lanes + Signals	\$1,000,000
67	Sherbrooke Street	Monaghan Road	Improve Turning Radius / Provide Left Turn Lanes	\$1,000,000
68	Lansdowne Street	Park Street	Realign N/S approach to improve sight lines	Cost included in Project #22
69	Lansdowne Street	Lock Street	Provide E-W Left Turn Lanes	\$3,000,000
71	George Street	Romaine Street	Provide Signals and Enhanced Trail Crossing	\$1,000,000
74	Hunter Street	Mark Street	Traffic Signals	\$500,000
75	George Street	Hilliard Street	Traffic Signals and Enhanced Trail Crossing	\$500,000
77	Hilliard Street	Cumberland Avenue	Install Signals	\$500,000
79	Water Street	Woodland Boulevard	Install Left Turn Lanes and Traffic Signals	\$4,000,000
80	Nassau Mills Road	University Road	Install Turn Lanes / Traffic Signals / realignment	\$1,000,000
81	Nassau Mills Road	Armour Road	Install Turn Lanes / Traffic Signals / realignment	Cost included in Project #4
82	Monaghan Road	Lansdowne Place Entrance	Install Signals + Enhanced Trail Crossing	\$1,000,000
83	Hunter Street	Park Street	Right-turn channelization (slip lanes) reconstructed to eliminate the channelization	\$200,000
85	Towerhill Road	Millroy Drive	Install Signals / Enhanced Crossings	\$500,000
86	Towerhill Road	Fairbairn Street	Install Signals and Turn Lanes (consider roundabout)	\$3,000,000
87	Lily Lake Road	Street A (York Drive)	Install Left / Right Turn lanes / Future Signals when Warranted	\$500,000
<b>Total Indicative Cost</b>				<b>\$160,460,000</b>

**Medium Term Priorities (10-20 Years)**

Project #	Street	Limits / Cross Street	Improvements	Indicative Cost
1	Water Street	Nassau Mills Road to North City Limit	Widen to 4 lanes	\$21,200,000
2	Water Street	University Heights Boulevard to Nassau Mills Road	Widen to 5 lanes	\$7,500,000
16	Brealey Drive	Sherbrooke Street to Parkhill Road	Reconstruction to Urban Standard - Arterial	\$13,700,000
26	Television Road	Lansdowne Street E to South of Parkhill Road	Widen to 4 lanes	\$46,200,000
29	McFarlane Street	New 2 Lane Bridge Across Trent Canal	New 2 Lane Road Realignment	\$6,600,000

30	McFarlane Street	Armour Road to Trent Canal	Reconstruction to Urban Standard - Collector Road	\$4,200,000
31	Ashburnham Drive	Maniece Avenue to Old Norwood Road / McFarlane Street	New 2 Lane Road Realignment	\$11,100,000
34	Webber / Rye Street	CP Rail to Lansdowne Street W	Reconstruction to Urban Standard - Collector Road	\$7,900,000
36	River Road South	Otonabee Drive to Lansdowne Street	Reconstruction to Urban Standard - Arterial	\$21,500,000
42	Wallis Drive	Sherbrooke Street to Parkhill Road	Reconstruction to Urban Standard - Arterial	\$6,100,000
52	Armour Road	McFarlane Street	Install SB Left Turn + Signals	\$1,000,000
53	Armour Road	Maria Street	Install Signals - Interconnect to Swing Bridge and Ashburnham Drive	\$500,000
54	Television Road	Old Norwood Road	Install NB/SB Left Turn Lanes + Signals	\$1,500,000
62	Parkway	Kingsway	Install Signals / remove channelized right turn	\$1,000,000
65	Wallis Drive	Weller Street	Provide Signals and Left Turn Lanes	\$1,000,000
66	Weller Street	Hospital Drive	Realignment of Weller Street	\$2,500,000
70	Lansdowne Street	Ashburnham Drive	Realign - Provide 4 Lanes N/S through intersection, New SB RT Lane	\$3,400,000
72	Television Road	Maniece Avenue	NB Left Turn Lane	\$200,000
73	Television Road	Parkhill Road	Urbanize and Provide Signals (or Roundabout)	\$1,000,000
76	Chemong Road	Milroy Drive North	SB Left Turn Lane	\$200,000
78	Cumberland Avenue	Carnegie Avenue / Water Street	Reconfigure intersection, signals (or Roundabout)	\$8,600,000
84	Chemong Road	Towerhill Road	Widen E-W approaches to 5 lanes	\$4,000,000
<b>Total Indicative Cost</b>				<b>\$170,900,000</b>

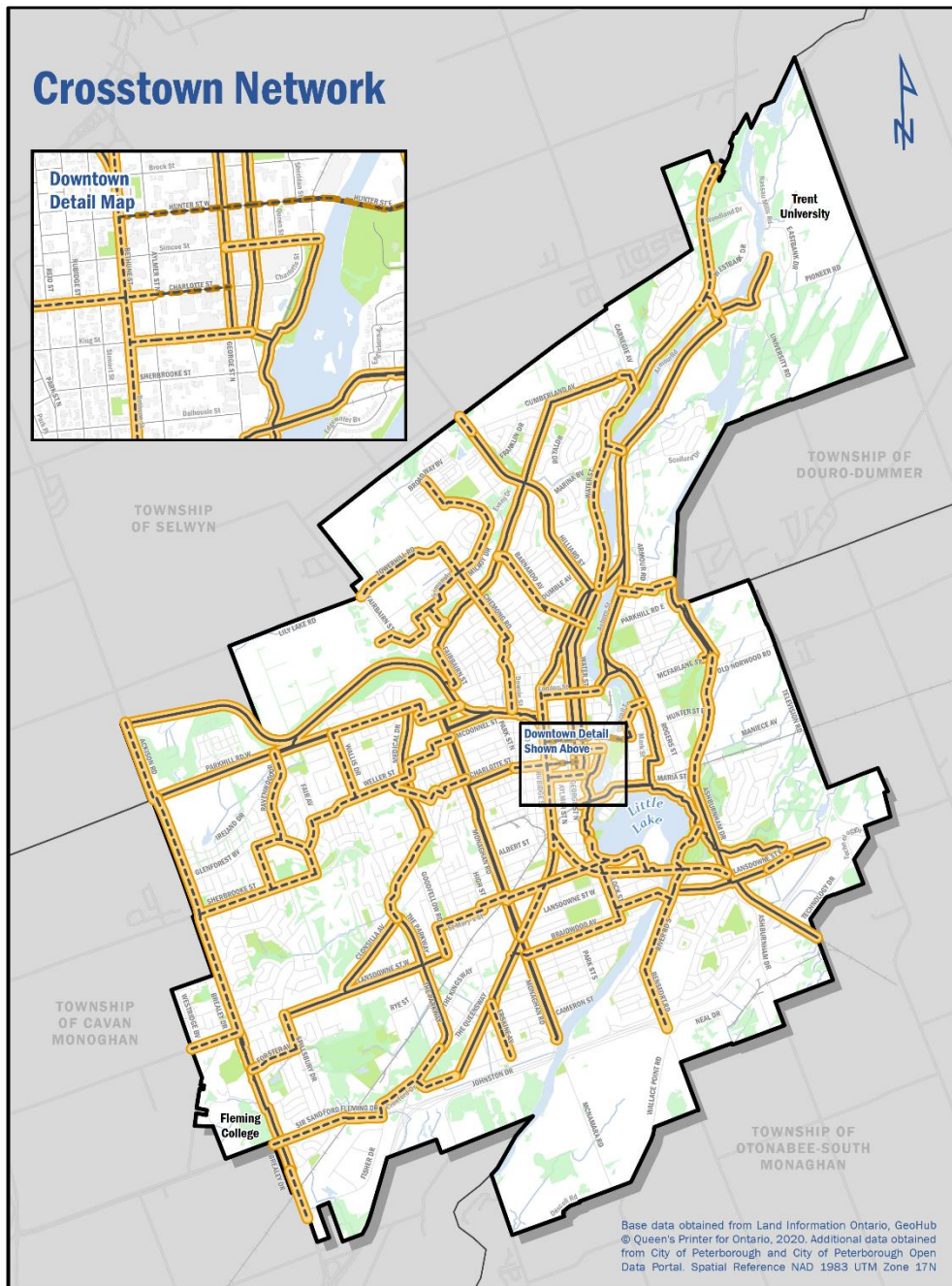
**Long Term Priorities (20-30 Years)**

Project #	Street	Limits / Cross Street	Improvements	Indicative Cost
3	Nassau Mills Road	Water Street to Pioneer Road	Widen to 4 lanes (including Bridges)	\$50,200,000
5	University Road	Nassau Mills Road to City Limit	Reconstruction to Urban Standard - Arterial	\$8,600,000
6	Carnegie Avenue	Cumberland Avenue to City Limit	Reconstruction to Urban Standard - Arterial	\$6,000,000
7	Future Roads	Cumberland Avenue to Hilliard Street	Corridor Protection - New Arterial / Collector	\$10,300,000
8	Future Roads	Towerhill Road to Chemong Road	Corridor Protection - New Collector	\$6,600,000
9	Future Roads	West of Fairbairn Street to Hillview Drive / Hillside Street	Corridor Protection - New Collector	\$7,800,000

10	Towerhill Road	Fairbairn Street to Chemong Road	Reconstruction to Urban Standard - Arterial	\$9,000,000
11	Lily Lake Road	Fairbairn Street to City Limit	Reconstruction to Urban Standard - Arterial	\$26,800,000
12	Chemong Road	Towerhill Road to Broadway Boulevard	Widen to 5 lanes	\$4,200,000
15	Ackison Road	Parkhill Road to City Limit	Reconstruction to Urban Standard - Arterial	\$12,700,000
19	Nornabell Avenue Extension	Ireland Drive to Parkhill Road	Corridor Protection - New Collector	\$4,400,000
20	Brealey Drive	Sir Sandford Fleming Drive to City Limit	Reconstruction to Urban Standard - Arterial	\$6,000,000
23	Lansdowne Street E	a) George Street to Otonabee River b) River Road to Ashburnham Drive	Widen to 5 lanes	\$15,200,000
24	Lansdowne Street E	Ashburnham Drive to Willowcreek Plaza	Widen to 5 lanes	\$3,800,000
25	Ashburnham Drive	Lansdowne Street E to Maria Street	Widen to 5 lanes	\$11,000,000
27	Maniece Avenue	Ashburnham Drive to Television Road	Reconstruction to Urban Standard - Collector Road	\$8,600,000
32	Parkhill Road	Water Street to East of Leahy's Lane	Widen to 4 lanes	\$18,540,000
33	Parkhill Road	Chemong Road to Water Street	Widen to 4 lanes	\$25,000,000
37	Otonabee Drive	River Road S to Lansdowne Street	Reconstruction to Urban Standard - Collector Road	\$10,600,000
38	Maria Street	Walker Avenue to Television Road	Corridor Protection - New 2 lane Arterial	\$7,500,000
39	Sherbrooke Street	George Street to Maria Street	Corridor Protection - New 4 lane Arterial (Bridge Crossing)	\$25,000,000
40	Maria Street	Otonabee River to Ashburnham Drive	Widen to 4 lanes (including new CP Bridge and New Canal Crossing)	\$49,200,000
41	Pioneer Road	CleanTech Commons to 9th Line	Reconstruction to Urban Standard - Arterial	\$7,000,000
43	Parkhill Road	Leahy's Lane to East of Television Road	Reconstruction to Urban Standard - Arterial	\$8,410,000
44	Hilliard Street	Cumberland Avenue to City Limit	Reconstruction to Urban Standard - Arterial	\$1,800,000
46	Monaghan Road	Romaine Street to Edison Avenue	Reconstruction to enhance safety	\$3,500,000
48	High Street	Sherbrooke Street to Chamberlain Street	Reconstruction to Urban Standard	\$4,600,000
<b>Total Indicative Cost</b>				<b>\$352,350,000</b>

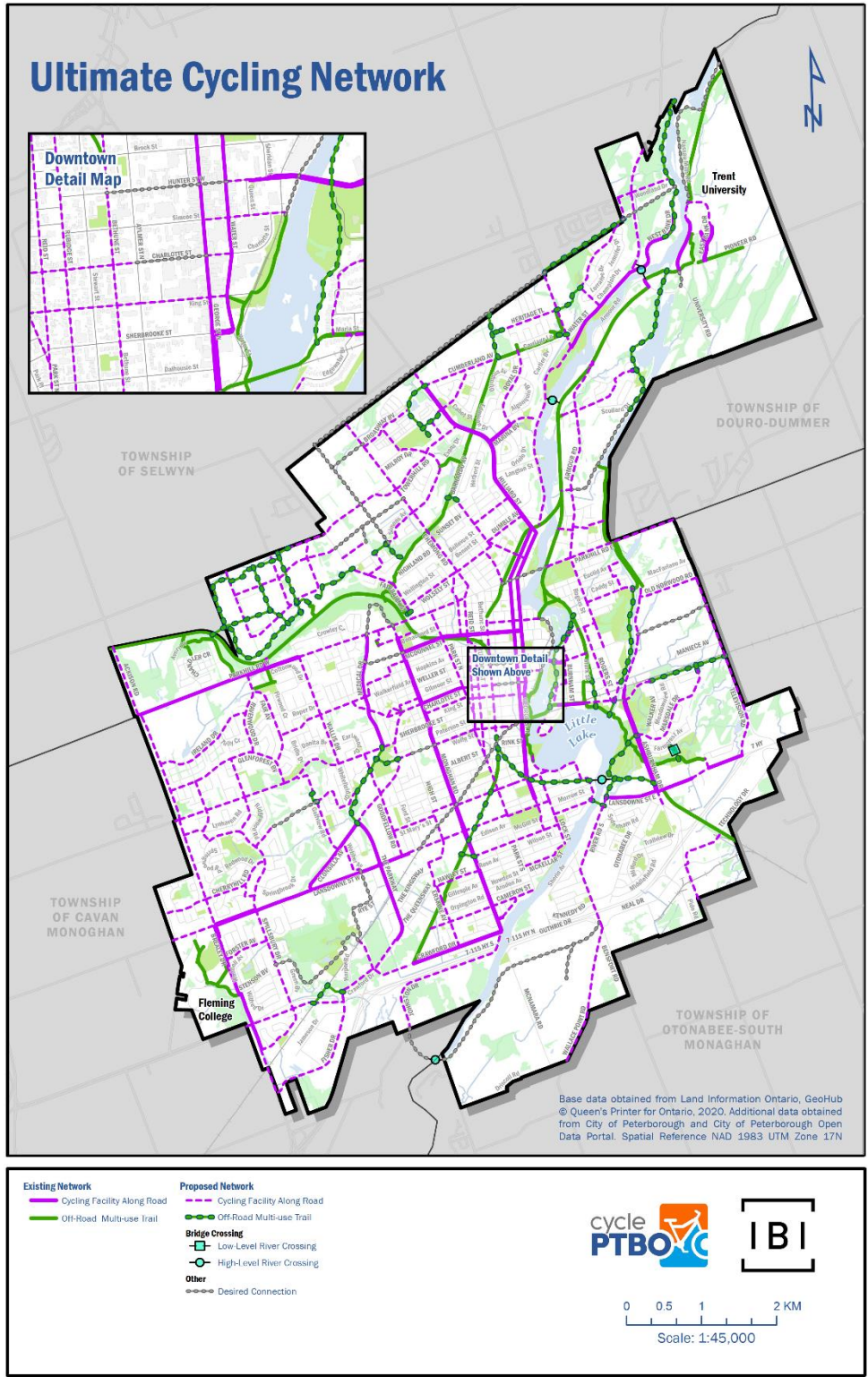


### Crosstown Cycling Network Map



<ul style="list-style-type: none"> <li>— Existing Cycling Network Segment</li> <li>- - - Proposed Cycling Network Segment</li> <li>— Crosstown Route</li> <li>- - - Desired Connection Crosstown Route</li> </ul>	 
<p>0 0.5 1 2 KM</p> <p>Scale: 1:45,000</p>	

### Ultimate Cycling Network Map



**Appendix B – Copy of correspondence from MOECC – page 1 of 2**



**Ministry of the  
Environment,  
Conservation and Parks**

**Ministère de  
l'Environnement, de la  
Protection de la nature et  
des Parcs**

Environmental Assessment  
Branch

Direction des évaluations  
environnementales

1<sup>st</sup> Floor  
135 St. Clair Avenue W  
Toronto ON M4V 1P5  
**Tel.:** 416 314-8001  
**Fax.:** 416 314-8452

Rez-de-chaussée  
135, avenue St. Clair Ouest  
Toronto ON M4V 1P5  
**Tél. :** 416 314-8001  
**Télééc. :** 416 314-8452

February 16, 2022

Kevin Jones  
Manager, Transportation  
City of Peterborough  
Email: [KJones@peterborough.ca](mailto:KJones@peterborough.ca)

Dear Kevin Jones:

Thank you for meeting with the ministry on February 2, 2022 to discuss the City of Peterborough's updated Transportation Master Plan and the City's proposal to proceed with specific intersection and road improvements.

As you are aware, in 2021, the City had requested feedback from the ministry on how the above noted project proposal relates to the Minister's 2016 Order regarding the Parkway Corridor project and the most appropriate environmental assessment (EA) process to use to move forward with these improvements.

In response to this request the ministry reviewed the project proposal report provided by the City on December 10, 2021, that summarized the proposed road improvements which included intersection, operational and safety initiatives identified in the updated Transportation Master Plan and the City's approach to meeting its requirements under the *Environmental Assessment Act*.

Based on the review of the materials provided it is understood that the updated Master Plan no longer anticipates a Parkway Corridor road project and instead the undertakings identified in the Master Plan appear to optimize the performance of existing intersections and road links to accommodate future demands and has a different purpose from the Parkway Corridor project (major new north-south arterial road capacity). It is also understood that this approach is confirmed by a City Council resolution.

**Appendix B – Copy of correspondence from MOECC – page 2 of 2**

As such, it is the ministry's position that the above noted improvements is a different undertaking from the Parkway Corridor and the Minister's Order would not apply. As discussed with the City, the proposal for specific intersection and road improvements would appear to fall under the Municipal Class EA process.

As you know, the Parkway Corridor project in its entirety continues to be subject to section 6.1(2) of the Act and the Minister's 2016 Order requiring an individual EA.

If you have any further questions regarding EA requirements, please contact Jordan Hughes, Project Evaluator at 437-770-6953 or [Jordan.Hughes@ontario.ca](mailto:Jordan.Hughes@ontario.ca)

Yours Sincerely,

*Kathleen O'Neill*

Kathleen O'Neill  
Director,  
Environmental Assessment Branch

Cc:

Robert J Dunford, Senior Project Manager, City of Peterborough  
Vinod Soman, Senior Project Manager, City of Peterborough