Peterborough County

2022 Transportation Master Plan Update

Executive Summary

October 2022

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Executive Summary

Introduction

The **Peterborough County Transportation Master Plan** (TMP) guides the municipality in planning, developing, and operating its transportation system. Originally adopted in 2004 and last updated in 2014, the plan identifies transportation policies, facilities, and services to meet the needs of residents and businesses, with recommendations for new and improved infrastructure to assist the County with capital planning, prioritization, and preparation for future growth.

With many of the short-term actions from the 2014 plan now implemented, the County initiated this Transportation Master Plan (TMP) Update to review the longer-term recommendations not yet initiated and identify emerging needs and areas for improvement. Like the previous review, the 2022 TMP Update focuses on identifying:

- Short and long-term transportation infrastructure needs;
- Transportation network improvements that best address the needs;
- Enhancements to the policies and standards that guide the planning, development, and operation of the County's transportation system; and
- Costs to implement the plan recommendations and priorities and funding opportunities for the proposed improvements.

This TMP update addresses transportation needs to the year 2051, in alignment with the planning horizon of the new County Official Plan adopted by County Council on June 29, 2022. The update was completed in conjunction with the review of the County's Development Charges Background Study. The roadway expansion projects identified in this plan formed the basis of the growth-related capital program for the Development Charges By-law adopted by County Council on May 4, 2022.

The plan was prepared following the Municipal Class Environmental Assessment (MCEA) process for Master Plans, completing requirements for Phase 1 (opportunity statement) and Phase 2 (alternatives assessment).

Consistent with environmental planning principles, the study included a comprehensive engagement program offering the public, review agencies, other municipalities, and First Nations and Indigenous Peoples a variety of opportunities to learn about the TMP and provide input into the update of the long-range transportation strategy for Peterborough County. The program featured a range of consultation, outreach, and communication initiatives to involve a broad spectrum of participants. Two rounds of formal engagement were conducted, with opportunities to participate in consultation events promoted through the project website and social media. The County also held virtual meetings with representatives of Curve Lake First Nation, the Ministry of

Transportation (MTO), and its local municipalities to present information and gather feedback. The Summary Reports and engagement materials contained in the Technical Compendium capture the activities and findings of the program.

Plan Context and Existing Conditions

Peterborough County is located on the Treaty 20 Michi Saagiig territory and in the traditional territory of the Michi Saagiig and Chippewa Nations, collectively known as the Williams Treaties First Nations, and is home to Curve Lake and Hiawatha First Nations communities. The County is an upper-tier municipality representing eight local municipalities (Townships of Asphodel-Norwood, North Kawartha, Cavan-Monaghan, Douro-Dummer, Selwyn, Havelock-Belmont-Methuen and Otonabee-South Monaghan, and Municipality of Trent Lakes). According to the 2021 Census of Canada, the County has a population of approximately 64,000 residents distributed over an area of about 4,000 square kilometres, plus a large seasonal residential component.

From a land use perspective, the southern half of the County is predominantly agricultural in nature with several small settlement areas, while the northern part comprises a diverse Canadian Shield landscape. Crown lands, active forestry, and aggregate extraction industries are also prevalent in the north. Four municipally serviced settlement areas exist in the southern part of the County: Havelock, Lakefield, Millbrook, and Norwood. These communities serve as the primary focus for new major development.

The first step in developing the plan was to understand the current state of the County. Existing conditions were reviewed to determine the current transportation-related challenges and opportunities. This review included an assessment of achievements of the 2014 TMP Update, recent trends and emerging issues, population and employment change, travel behaviours and patterns, and the transportation network infrastructure.

The TMP Update builds on the land use and transportation planning policy framework established by the Province of Ontario, Peterborough County, and the City of Peterborough, particularly the new County Official Plan adopted by County Council on June 29, 2022. The Policy Context in the Technical Compendium details the myriad municipal and provincial plans and policies that have informed the plans, highlighting relevant directives, regulations, and initiatives contained in each document.

Future Conditions

Peterborough County is projected to grow to a population of 82,000 people (from 63,800) and employment of 26,000 jobs (from 16,000) by 2051. Total population and employment are forecast to increase by about 29% and 65%, respectively, with the overall rate of anticipated growth faster over the next 30 years than it was during the last 30 years.

Table ES.1 summarizes the population and employment forecasts for the County and its local municipalities between 2021 and 2051. About 76% of all population growth and 67% of all employment growth is forecast to occur in the Townships of Cavan Monaghan (40% and 40%), Selwyn (19% and 11%), and Asphodel-Norwood (17% and 16%). The remaining growth is forecast to be distributed relatively evenly across the other five local municipalities in the County, with the Townships of Otonabee-South Monaghan (9% and 10%) and Havelock-Belmont-Methuen (5% and 9%) accommodating most of this remaining growth. All areas of the County are anticipated to grow at faster than historical rates.

Table ES.1: Forecast Population and Employment Growth

Municipality	Population				Employment			
	2021	2051	Growth	Share	2021	2051	Growth	Share
Asphodel-Norwood	4,760	8,140	3,380	18.6%	1,100	2,290	1,190	11.4%
Cavan Monaghan	10,230	17,540	7,310	40.2%	3,040	7,210	4,170	40.0%
Douro-Dummer	7,800	8,410	610	3.4%	1,450	2,140	690	6.6%
Havelock-Belmont-Methuen	5,190	6,050	860	4.7%	1,720	2,660	940	9.0%
North Kawartha	2,940	3,630	690	3.8%	720	820	100	1.0%
Otonabee-South Monaghan	7,240	8,870	1,630	9.0%	1,950	3,010	1,060	10.2%
Selwyn	19,060	22,110	3,050	16.8%	4,970	6,620	1,650	15.8%
Trent Lakes	6,580	7,250	670	3.7%	1,030	1,660	630	6.0%
Peterborough County	**63,800**	**82,000**	**18,200**		**15,980**	**26,410***	**10,430**	

The TMP Update relied on three methods to forecast future (2051) traffic volumes and road network capacity deficiencies on County roads:

- For roads in the **rural areas** of the County, 2051 daily traffic volumes were forecast by applying a uniform growth factor of 1.0% per annum (compounded) (herein referred to as the Growth Factor method) to existing (2021) average annual daily traffic (AADT) volumes.
- On roads in the **areas surrounding the City of Peterborough**, namely the Townships of Asphodel-Norwood, Cavan Monaghan, Douro-Dummer, Otonabee-South Monaghan, Selwyn, and the westerly portions of Havelock-Belmont-Methuen, 2051 afternoon peak hour traffic volumes were forecast using the City of Peterborough Travel Forecasting Model (herein referred to as the Model or Model method).
- For the **settlement areas** of Bridgenorth, Ennismore, Lakefield, Millbrook, and Norwood, 2051 morning and afternoon peak hour traffic volumes were forecast at

the intersection level using more detailed subarea models developed specifically for each community as part of this study.

The assessment highlights existing conditions and prevailing trends that will shape and influence the County's transportation system in the coming years. It is important to recognize and plan for these opportunities and challenges to develop a transportation network that serves all users. The following summarizes the key transportation opportunities and challenges facing the County:

- **Continued growth could impact how people move around the County.** The County aims to serve forecast growth in a safe, sustainable, and cost-effective manner that facilitates travel by different modes and limits congestion. However, traffic volumes on certain County roads are expected to exceed available capacity with forecast population and employment growth, leading to undesirable operating conditions in these locations, which are mostly within or near designated settlement areas.
- **Continued reliance on the automobile for virtually all trip making could have environmental, economic, societal, and health consequences.** Reducing dependence on motorized vehicles can help mitigate roadway congestion (in locations forecast to experience high volumes), combat climate change, improve public health and user safety, and make the transportation system more equitable to all users. However, expanding the range of mobility options in rural environments can prove challenging given the longer trip lengths, lower population densities, and fiscal constraints.
- **Improvements to road safety could save lives and reduce injuries caused by motor vehicle collisions.** Strategic investments in road safety initiatives, including public education, technologies, infrastructure improvements, and law enforcement, can help make streets safer for all people, particularly vulnerable road users like pedestrians and cyclists.
- **Fiscal constraints make meeting mounting needs and competing priorities difficult.** Finding an optimal balance between expenditures on transportation infrastructure maintenance, rehabilitation, and expansion presents challenges, especially with limited resources. The desire to invest in active transportation facilities and other emerging priorities further complicates this challenge.
- **New technologies and changing public attitudes could help expand the range of options to move people and goods.** The County will need to adapt its transportation and land use planning policies and practices to benefit from these emerging mobility choices.

The recommended strategy to address the Problem and Opportunity Statement comprises two parts being:

- The **County Road Network Plan** identifies the roadway expansion, corridor improvement, and intersection improvement projects proposed to meet future transportation needs; and
- The **Transportation Policies** comprise a range of directives intended to guide and support the management and operation of the transportation system. Policies pertaining to road network planning, roadway design, roadway safety and operations, non-auto modes, and emerging technologies.

County Road Network Plan

County Road Network Plan details the proposed infrastructure investments to address current and future needs. The plan comprises three parts being:

- **Roadway Expansions** – Any project that involves adding vehicle travel lanes, including road widenings and new corridors;
- **Corridor Improvements** – Any project that modifies an existing roadway corridor to improve operational and/or safety performance, including two-way left-turn lanes and centre median islands; and
- **Intersection Improvements** – Any project that modifies an existing roadway intersection to improve operational and/or safety performance, including turn lanes and signalization.

Transportation Policies

A range of County policies guide and support the management and operation of the transportation system, particularly the County road network. The TMP Update included a review of existing guidance and emerging issues to ensure the transportation policy framework reflects industry best practice and remains relevant for objective decision-making now and into the future. The review examined the following 22 policy areas, broken into five categories:

Road Network Planning:	• Road Classification System • Special Character Roads • Corridor Protection • Level of Service • Road Transfer Rationalization
Roadway Design:	• Clear Zones • Building Setback/Structure Setback • Traffic Noise • Equivalent Single Axle Loads in Pavement Design
Roadway Safety and Operations:	• Global Speed Limit • School Zones • Automated Speed Enforcement

	• Emergency Detour Routes • No-Truck Routes • Oversized/Overweight Vehicle Loads • Pavement Markings
Non-Auto Modes:	• Active Transportation • Rural Transit • Rail
Emerging Technologies:	• Electric Kick Style Scooters • Automated, Connected, and Electric Vehicles • Information Technology

Implementation

Successful implementation of the TMP Update will ultimately depend on the cooperation and active participation of many stakeholders, including the local municipalities, the provincial government, conservation authorities, other public agencies, the business and development community, and local citizens. The plan provides a framework for collaboration between stakeholders and will be relied upon to guide the County's future transportation decisions and actions.

The plan describes the process and tools to implement the County Road Network Plan and the recommended Transportation Policies. Proposed infrastructure and program investments are incorporated into an action plan that prioritizes the capital projects into three horizons (0-10 years, 10-20 years, and 20+ years) based on anticipated implementation timing. High-level phasing and cost estimates are also provided, as appropriate. The plan also includes advice on potential amendments to the County Official Plan.

Table ES.2 details the recommended phasing and indicative costs of the road expansion and corridor improvement projects with the anticipated Municipal Class EA schedule for the undertaking. The total cost of the recommended road expansion and corridor improvement program is estimated at approximately $113.3 million dollars. Typical, ongoing maintenance and rehabilitation costs are not included in this estimate.

Table ES.3 details the recommended phasing and indicative costs of the intersection improvement projects. The total cost of the growth-related intersection improvement program is estimated at approximately $6.0 million dollars. Other projects where indicative costs could be estimated totalled about $580,000. Of the remaining initiatives, it is anticipated that County staff will undertake the 20 with indicative costs denoted as "Internal", depending on available resources. For the final 21 projects, with indicative costs identified as "TBC", further, more detailed information is required to prepare a representative estimate. All these projects fall in the 10-20 or 20+ year horizons. Typical, ongoing maintenance and rehabilitation costs are also not included in these estimates.

Table ES.2: Recommended Phasing and Indicative Costs of Road Expansion/Corridor Improvement Projects

Road		Proposed Improvement	Municipal Class EA Schedule	Timing (Years)	Indicative Cost
1	County Road 4 (Warsaw Road) – Television Road to County Road 41 (University Road)	New alignment and widening to 4 lanes	C	10-20	$7,680,000
2	County Road 10 – County Road 21 (King Street) to Fallis Line	Corridor improvements (turn lanes, utility relocation, property, traffic control signals). Also corridor study/Municipal Class EA.	C	0-10	$9,800,000
3	County Road 10 – Fallis Line to Highway 115	Widening to 4 lanes	C	10-20	$11,207,000
4	County Road 12 (Lily Lake Road) – County Road 27 (Ackison Road) to City of Peterborough Limit	Reconstruction and widening to 4/5 lanes	C	20+	$6,560,000
5	County Road 18 (Chemong Road) – City of Peterborough Limit to 0.6 km N. of County Road 19 (Line Road 3)	Widening to 5 lanes (centre turn lane)	C	10-20	$2,197,000
6	County Road 18 (Chemong Road) – 1 km N. of County Road 19 (Line Road 3) to County Road 1 (Lindsay Road)	Widening to 5 lanes (centre turn lane)	C	10-20	$1,896,000
7	County Road 18 (Chemong Road) – County Road 1 (Lindsay Road) to Bridgenorth	Widening to 4/5 lanes (including signals at Fifth Line)	C	10-20	$6,600,000
8	County Road 18 (Ward Street) – South Limit of Bridgenorth to County Road 14 (Bridge Road)	Corridor improvements	C	0-10	$17,460,000
9	County Road 28 – Fraserville to Highway 7/115	Widening to 4/5 lanes	C	10-20	$9,300,000
10	County Road 29 (Lakefield Road) – City of Peterborough Limit to 7th Line	Widening to 4/5 lanes	C	20+	$14,760,000
11	County Road 29 (Lakefield Road/Water Street) – Lakefield Improvements	New 2 lane arterial and bridge crossing of Otonabee River	C	20+	$25,800,000
Total					**$113,260,000**

Table ES.3: Recommended Phasing and Indicative Costs of Intersection Improvement Projects

#	Intersection	Recommended Improvement	Rationale		Timing (Years)	Indicative Cost
			Operations	Safety		
1	County Road 1 (Lindsay Road) and County Road 12 (Fifes Bay Road)	Provide advanced warning signage for stop control		●	0-10	Internal
		Install eastbound right-turn taper*	●		0-10	$75,000
		Install northbound right-turn taper*	●		0-10	$75,000
		Install traffic control signals* (or roundabout)	●	●	10-20	$275,000
2	County Road 1 (Lindsay Road) and County Road 18 (Chemong Road)	Provide advanced warning signage for channelized right turn lane		●	0-10	Internal
		Realign channelized eastbound right-turn lane		●	10-20	TBC
		Remove channelized eastbound right-turn lane		●	20+	TBC
3	County Road 2 and County Road 28	Update on-road parking regulations		●	0-10	Internal
		Add raised curb or pavement markings for driveways on the east side		●	0-10	$50,000
		Trim trees to address northeast corner sight obstruction		●	0-10	Internal
		Install southbound left-turn lane*	●		0-10	$175,000
		Install northbound right-turn lane*	●		10-20	$100,000
		Remove tree obstructing northeast corner sightline		●	20+	Internal
4	County Road 4 (Warsaw Road) and Nassau Road/Douro Seventh Line	Add side road stop bar and turn lane pavement markings		●	0-10	Internal
		Trim trees to address southwest corner sight obstruction		●	0-10	Internal
		Extend westbound right-turn lane		●	0-10	$100,000
		Realign intersection outside horizontal curve		●	20+	TBC
		Consider installing roundabout (study)	●	●	20+	$10,000

Table ES.3: Recommended Phasing and Indicative Costs of Intersection Improvement Projects

#	Intersection	Recommended Improvement	Rationale		Timing (Years)	Indicative Cost
			Operations	Safety		
6	County Road 8 (Webster Road) and County Road 38 (South Street)	Install advanced warning signage for intersection		●	0-10	Internal
		Trim trees to address southeast corner sight obstruction		●	0-10	Internal
		Realign east approach		●	20+	TBC
		Consider installing roundabout (study)	●	●	20+	$10,000
7	County Road 11 (Moncrief Line) and County Road 28	Complete illumination assessment		●	10-20	$5,000
8	County Road 12 (Fifes Bay Road)/County Road 27 (Ackison Road) and County Road 12 (Lily Lake Road)/2nd Line Smith	Install flashing beacon		●	0-10	$5,000
		Install northbound right-turn lane*	●		0-10	$100,000
		Install traffic control signals (with development)*	●		10-20	$275,000
		Install left-turn lanes (with development)*	●		10-20	$175,000
		Install westbound right-turn taper*	●		10-20	$75,000
		Enhanced pavement for north approach		●	10-20	TBC
		Change grade for north approach		●	20+	TBC
		Grade hill to address northwest corner sight obstruction		●	20+	TBC
9	County Road 14 (Yankee Line) and County Road 16 (Robinson Road)	Add raised curb or pavement markings on south side for access management		●	0-10	$50,000
		Install traffic control signals* (or roundabout)	●	●	10-20	$275,000
		Install roadside protection on south side		●	10-20	TBC
		Extend northbound merge lane*		●	20+	$75,000

Table ES.3: Recommended Phasing and Indicative Costs of Intersection Improvement Projects

#	Intersection	Recommended Improvement	Rationale		Timing (Years)	Indicative Cost
			Operations	Safety		
10	County Road 14 (Bridge Road) and County Road 18 (Ward Street)	Install advanced warning signage for channelized right-turn lanes		●	0-10	Internal
		Add eastbound right-turn lane arrow		●	0-10	$10,000
		Reroute driveway connection on east side		●	10-20	TBC
		Realign channelized right-turn lanes		●	10-20	TBC
		Remove channelized right-turn lanes		●	20+	TBC
		Consider installing roundabout (study)	●	●	20+	$10,000
11	County Road 18 (Chemong Road) and County Road 19/3rd Line Smith	Install westbound right-turn lane*	●		0-10	$100,000
12	County Road 18 (8th Line Smith) and County Road 23 (Buckhorn Road)	Install westbound right-turn lane*	●		0-10	$100,000
		Install southbound right-turn taper*	●		0-10	$75,000
		Install traffic control signals*	●	●	10-20	$275,000
13	County Road 18 (8th Line Smith) and County Road 24 (Centre Line Smith)	Add eastbound right-turn arrow		●	0-10	$10,000
		Trim trees to address northeast corner sight obstruction		●	0-10	Internal
		Install eastbound left-turn lane*	●		0-10	$175,000
		Install westbound left-turn lane*	●		0-10	$175,000
14	County Road 18 (8th Line Smith) and County Road 25 (Youngs Point Road)	Install westbound right-turn taper*	●		0-10	$75,000
		Install eastbound left-turn lane*	●		10-20	$175,000
		Restrict cut-through traffic at west side private property		●	10-20	TBC
		Consider installing roundabout (study)	●	●	20+	$10,000

Table ES.3: Recommended Phasing and Indicative Costs of Intersection Improvement Projects

#	Intersection	Recommended Improvement	Rationale		Timing (Years)	Indicative Cost
			Operations	Safety		
15	County Road 22 (Curve Lake Road) and Gazelle Trail	Complete illumination assessment		●	0-10	$5,000
		Trim trees to address sight obstructions on all corners		●	0-10	Internal
16	County Road 22 (Curve Lake Road)/16th Line Smith and County Road 23 (Buckhorn Road)	Add raised curb or pavement markings for church driveway		●	0-10	$50,000
		Install eastbound right-turn lane*	●		0-10	$100,000
		Install southbound right-turn lane*	●		0-10	$100,000
		Install traffic control signals (or roundabout)*	●	●	0-10	$2,160,000
		Complete illumination assessment		●	10-20	$5,000
		Convert northbound lanes to left and thru-right lane		●	10-20	TBC
		Install northbound left-turn lane*	●		10-20	$175,000
17	County Road 23 (Buckhorn Road) and County Road 29 (Lakefield Road)	Add southbound right-turn pavement markings and/or signage and extend acceleration lane*		●	0-10	$75,000
		Remove 60 km/h warning sign		●	0-10	Internal
		Add edge line east side of Lakefield Road		●	0-10	Internal
		Install raised centre median islands		●	10-20	TBC
		Consolidate private accesses		●	10-20	TBC
		Realign roads to intersect perpendicularly		●	20+	TBC
		Install traffic control signals* (or roundabout)	●	●	20+	$275,000
18	County Road 23 (Buckhorn Road)/ County Road 36 and County Road 36/ County Road 37 (Lakehurst Road)	Install advanced warning signage for intersection		●	0-10	Internal
		Install roadside protection on east and west sides		●	10-20	TBC
		Add pavement widening on northeast and southwest corners to support dedicated northbound and southbound left-turn lanes. Remove or replace overhead lane designation signs.*	●	●	0-10	$180,000

Table ES.3: Recommended Phasing and Indicative Costs of Intersection Improvement Projects

#	Intersection	Recommended Improvement	Rationale		Timing (Years)	Indicative Cost
			Operations	Safety		
		Realign roads to intersect perpendicularly		●	20+	TBC
19 & 20	County Road 28 and Third Line and County Road 28 and Zion Line	Install checkerboard signs opposite T-intersections		●	0-10	Internal
		Install southbound left-turn lane*	●		0-10	$175,000
		Complete illumination assessment		●	10-20	$5,000
		Reduce curb radius on southeast corner		●	10-20	TBC
21	County Road 28 and Larmer Line	Install southbound right-turn taper*	●		0-10	$75,000
		Complete illumination assessment		●	10-20	$5,000
22	County Road 29 (Bridge Street) and County Road 32 (Water Street)	Add north and south right-turn lane pavement markings and/or signage		●	0-10	Internal
		Install raised centre median island		●	10-20	TBC
23	County Road 35 (Keene Road) and Base Line	Install (un)paved shoulders		●	0-10	$100,000
		Install hazard markings on hydro poles within the clearance zone		●	0-10	Internal
		Trim trees to address obstructions within sight triangles		●	0-10	Internal
24	County Road 36 and County Road 507	Install advanced warning and chevron signage for intersection		●	0-10	Internal
		Complete illumination assessment		●	10-20	$5,000
		Realign intersection outside horizontal curve		●	20+	TBC
Subtotal:		**Growth-Related Project Costs**				**$6,005,000**
		Other Projects with Indicative Cost Estimates				**$580,000**
Count:		**Internal Projects**			**20**	
		Cost to be Confirmed Projects (TBC)			**21**	

Figure ES.1 illustrates just the recommended growth-related road improvements, comprising both the road expansion and corridor improvement projects listed in **Table ES.2** and the growth-related intersection improvement works denoted with an asterisk (*) in **Table ES.3**. County Council endorsed these projects through its approval, on May 2, 2022, of the development-related capital roads program contained in Appendix C of the County's 2022 Development Charges Background Study.

Table ES.4 details the recommended phasing and indicative costs of the transportation policies and studies proposed in the TMP Update. The total cost for the 11 initiatives is estimated at approximately $525,000. It is anticipated that County staff will undertake the five initiatives with indicative costs denoted as "Internal", depending on available resources.

Table ES.4: Recommended Phasing and Indicative Costs of Proposed Policies and Studies

Policy		Anticipated Timing	Indicative Cost
1.	Lakefield Network Study	Short-term	$100,000
2.	Special Character Roadway Design Guidelines	Medium-term	$50,000
3.	Clear-Zone Policy	Short-term	Internal
4.	Road Setback Policy and By-law	Short-term	Internal
5.	Road Traffic Noise Policy	Short-term	Internal
6.	Road Safety Strategy	Short-term	$150,000
7.	Permissive Truck Route Policy	Short-term	Internal
8.	Oversize/Overweight Vehicles and Loads Policy	Short-term	Internal
9.	County Road 10 Railway Crossing Study	Medium-term	$75,000
10.	Automated, Connected and Electric (ACE) Vehicles Strategic Action Plan	Medium-term	$75,000
11.	Intelligent Transportation Systems Strategic Action Plan	Medium-term	$75,000
TOTAL			**$525,000**

The plan recommends developing an ongoing monitoring program and completing reviews of the TMP Update every five years to determine the need for a detailed formal update in the future. Monitoring will also provide an indication of the necessity for an update.

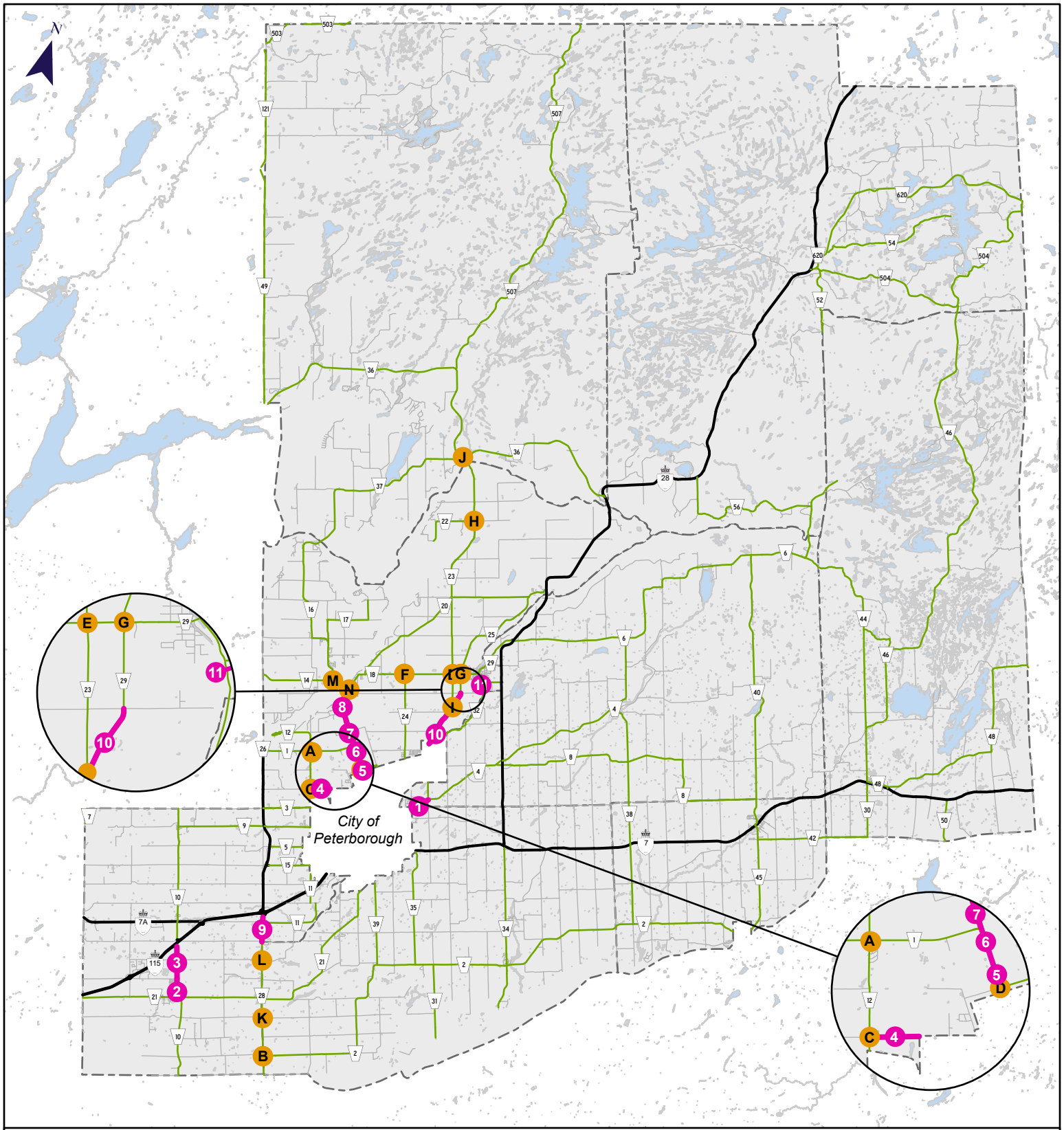

FIGURE ES.1:
PROPOSED GROWTH RELATED ROAD IMPROVEMENTS

Peterborough County
Our History - Your Future

2022 TRANSPORTATION MASTER PLAN UPDATE

October 2022

Plan Recommendations

The following table summarizes the 65 actions recommended in the 2022 TMP Update:

#	Recommendation
Chapter 5 – Road Network Plan	
1	Resume the Ward Street Widening Class Environmental Assessment and revisit the problem and opportunity statement considering Council Resolution No. 81-2022.
2	Protect sufficient right-of-way on County Road 18 (Ward Street) between Champlain Road and Bridge Road based on the findings of the Class EA study.
3	Undertake a Lakefield Network Study to identify the preferred location of the recommended new two-lane arterial road and bridge crossing of the Otonabee River.
4	Undertake a corridor study following the Municipal Class Environmental Assessment to confirm the extent and configuration of the proposed road works for County Road 10.
Chapter 6 – Transportation Policies	
5	Introduce a formal County Road Classification System (Class A, Class B, and Class C) (per **Table 6.1**) and County Road Network schedule (per **Figure 6.1**) into the new County Official Plan.
6	Specify right-of-way, entrance spacing, and select geometric design criteria for each class, with corresponding policies pertaining to their application, when incorporating the provisions into the new County Official Plan.
7	Introduce a Special Character Road designation in the new County Official Plan that allows exemptions to geometric design and/or maintenance standards if upgrading the facility to meet prevailing criteria would significantly (and detrimentally) alter its scenic and/or historic character.
8	Designate the road segments shown on **Figure 6.1** as Special Character Roads in the new County Official Plan.
9	Develop evaluation criteria and design guidelines specific to the County for Special Character Roads.
10	Designate the road corridors shown on **Figure 6.1** for corridor protection in the new County Official Plan.
11	Add a table or map schedule specifying required road allowance (right-of-way) widths by County road and/or a generic policy indicating typical widths by roadway category (e.g., 36 metres for Class A County roads, 30 metres for Class B County roads)
12	Include a policy in the new County Official Plan defining the mechanisms to acquire and protect designated corridors.

#	Recommendation
13	Request the Ministry of Transportation to undertake the necessary analysis to determine the need to continue to protect for the east side by-pass of the City of Peterborough and, if the need is confirmed, review the designated route and update the route planning study as appropriate.
14	Modify the level of service criteria set out in the County of Peterborough Traffic Impact Study Guidelines by increasing the critical v/c ratio for left turn movements at signalized intersections from 0.85 to 0.95.
15	Adopt the following transportation analysis performance measures and criteria: • Network Planning – Threshold v/c ratio of 0.9 for screenline and corridor level analyses and road link capacities set out in Table 6.3. • Operational Reviews – Criteria set out in the County's Traffic Impact Assessment Guidelines with the change for left-turn movements.
16	Adopt the Ministry of Transportation method for measuring pavement surface condition.
17	Explore opportunities to rationalize the municipal road system serving the County in collaboration with the local municipalities, focusing on specific road sections or subareas.
18	Adopt a road rationalization policy based on the principles, methodology, criteria, and weightings set out in the technical memorandum on road rationalization for assessing candidate County and local municipal roads for transfer.
19	Consider the potential transfer of the following County roads to the local municipalities: • County Road 48 (Ontario Street/Quebec Street/George Street/Mary Street) (Havelock-Belmont-Methuen) • County Road 12 (Maryland Drive) (Selwyn)
20	Consider the potential transfer of the following local municipal roads to the County: • Tapley Quarter Line from County Road 21 to Highway 7A (Cavan Monaghan) • Line Road 3 from Fairbairn Street to County Road 18 (Chemong Road) and Fairbairn Street from the City of Peterborough Boundary to Line Road 3 (Selwyn)
21	Revise the Clear Zone Policy to reflect industry best practice and current County procedures, specifically: • Replace the Clear Zone Width table with guidance from the updated Transportation Association of Canada *Geometric Design Guide for Canadian Roads* • Update the methods of addressing collision hazards • Add commentary and criteria to consider exceptions and exemptions, with guidance specific to settlement areas, low volume roads, and Special Character Roadways

#	Recommendation
22	Implement a Road Setback Policy and By-law pursuant to Section 58 of the *Municipal Act, 2001*, which includes: • Specifications for setback distances and sight triangles • Process for applying for a permit • Strategy for coordination with the local municipalities • Administration and enforcement provisions
23	Adopt a road traffic noise policy based on the guidelines and requirements set out in the technical memorandum on traffic noise, which requires Noise Impact Studies and mitigation measures, if needed, for: • Development applications for noise sensitive land uses adjacent to County roads and Provincial highways • County road reconstruction and expansion projects • Existing developments impacted by noise from County roads
24	Prepare pavement designs based on Equivalent Single Axle Loads (ESALs) and not solely on the Average Annual Daily Traffic (AADT) unless truck data is not available.
25	Use the Ministry of Transportation methodology for determining Equivalent Single Axle Loads (ESALs) based on the Average Annual Daily Traffic (AADT), commercial vehicle loading, and roadway cross-section.
26	Develop a County Road Safety Strategy to set out safety goals, objectives, and action plans to guide the County and its road safety partners towards creating safer roads and reducing the number of fatal and injury collisions on roads in Peterborough County.
27	Continue to apply the methodology set out in the Transportation Association of Canada *Canadian Guidelines for Establishing Posted Speed Limits* in setting speed limits on County roads
28	Maintain the statutory 50 km/h speed limit on roads within Settlement Areas designated in the new County Official Plan and 80 km/h on roads in the rural area.
29	Conduct regular reviews of posted speed limits.
30	Use the School Zone Input Worksheet detailed in the Transportation Association of Canada *School and Playground Areas and Zones: Guidelines for Application and Implementation* in considering new and revising existing school zones on County roads.
31	Set the speed limit no lower than 40 km/h in school zones and denote with SCHOOL ZONE MAXIMUM SPEED WHEN FLASHING signs (Rb-6a), including flashing amber beacons.
32	Update the criteria and process for establishing a Community Safety Zone on a County road, including eliminating the requirement for the local municipality to finance the preparation and installation of Community Safety Zone signage.

#	Recommendation
33	Assess the merit of implementing Automated Speed Enforcement, including reviews of safety statistics, potential sites, financial implications, and Administrative Monetary Penalty System for adjudicating fines.
34	Liaise with other agencies for opportunities to share resources.
35	Encourage the expansion of the Emergency Detour Route network within the County to include detours for Highway 7 and select County roads.
36	Introduce a Permissive Truck Route policy that directs heavy vehicles to preferred routes with signage.
37	Undertake cost-benefit review to upgrade pavement during rehabilitation projects to accommodate all-season truck traffic on routes leading to key trucking destinations.
38	Analyze existing and future commercial vehicle demand to identify key corridors.
39	Formalize Oversize/Overweight Vehicles and Loads Policy.
40	Revise the current permit process to: • Request additional information from the application • Align with the No Truck Routes Policy • Provide carriers with additional guidance for truck routing • Allow annual permit holders to operate outside normal periods
41	Adopt applicable standards outlined by the Province of Ontario and Transportation Association of Canada for the design and installation of traffic management devices on County roads.
42	Apply the standards outlined in Ontario Traffic Manual *Book 11 (Pavement, Hazard and Delineation Markings)* for the application of edge lines on County roads (continuous single solid retroreflective about 10 cm wide).
43	Implement the supporting programs, policies, and infrastructure as identified in the Active Transportation Master Plan.
44	Incorporate an active transportation policy into the new County Official Plan.
45	Consider creating a County Active Transportation schedule in the new County Official Plan.
46	Update and integrate the Active Transportation Master Plan with the next update of the County Transportation Master Plan.
47	Confirm *Accessibility for Ontarians with Disabilities Act* requirements (to provide complementary specialized transit service where conventional (fixed route) service is delivered) and initiate conversations with Caremobile.
48	Monitor the success of The Link and consider if a closer collaboration with the project partners might be mutually beneficial in the future.
49	Undertake targeted public engagement in select communities to assess transit feasibility in the County (beginning with Cavan Monaghan likely).
50	Evaluate other potential transit opportunities in the County.

#	Recommendation
51	Form a Rail Working Group of County staff and/or Council representatives to facilitate relevant communication on passenger and freight rail service within and through the County.
52	Communicate with VIA Rail High Frequency Rail planning staff to better understand the impacts of the proposal on future passenger rail service in the County, as well as freight service in local communities.
53	Assess the need for further County studies to supplement the work being completed for the VIA Rail High Frequency Rail project and pursue grant funding if available.
54	Consult businesses currently using the corridor to better understand freight rail needs now and in the future.
55	Complete a railway crossing study to determine the plan for the CP Rail Line crossing of County Road 10.
56	Do not introduce a by-law to permit e-scooter use on County roads.
57	Develop an Automated, Connected and Electric Vehicles strategic action plan outlining the tasks required to prepare for their inevitable deployment in the County.
58	Introduce an Automated, Connected and Electric vehicle public education program based on the recommendations of the strategic action plan.
59	Permit the testing and deployment of connected and automated vehicles on County roads following approval of the strategic action plan.
60	Explore opportunities to expand technology already in use by the County, including Global Positioning Systems, Automatic Vehicle Location Systems, Dynamic Roadway and Speed Warning Systems and Traveller Information Systems (Municipal511).
61	Investigate Dynamic Roadway and Speed Warning Systems focused on mitigating collisions with animals.
62	Develop an Intelligent Transportation Systems strategic action plan outlining the tasks required to better leverage emerging technologies.
Chapter 7 – Implementation	
63	Implement a regular, ongoing monitoring program and set performance measures and targets to track progress.
64	Prepare a periodic report to County Council on the State of the Transportation System.
65	Review the Transportation Master Plan every five years, ideally in conjunction with updates to the County of Peterborough Official Plan and Development Charges Background Study.