

The Corporation of the City of Kawartha Lakes
Agenda
Active Transportation Master Plan Task Force

ATMPTF2024-01

Tuesday, April 23, 2024

3:00 P.M.

Electronic Participation Meeting

Members:

Councillor Pat Warren

Daryl Broadworth

John Bush

Arthur Hornibook

Barbara MacPherson

Glenda Morris

Peter Petrosoniak

Greg Scott

Sajeev Sivayogarajah

John Speirs

Bill Steffler

NOTE: This is an electronic participation meeting. Please contact nord@kawarthalakes.ca should you wish to view the proceedings and the zoom link will be provided.

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1.	Call to Order	
1.1	Introductions	
1.2	Appointment of Chair	
1.3	Appointment of Vice Chair	
2.	Adoption of Agenda	
3.	Declaration of Pecuniary Interest	
4.	Adoption of Minutes from Previous Meeting	3 - 10
	City of Kawartha Lakes Active Transportation Master Plan Task Force meeting of July 13, 2023.	
	That the minutes of the Active Transportation Master Plan Task Force meeting of July 13, 2023 be received.	
5.	Deputations	
6.	Correspondence	
7.	New Business	
7.1	ATMPTF2024-01.7.1 Active Transportation Master Plan Task Force Recommendation on the February 2024 City of Kawartha Lakes Kawartha Moves Active Transportation Master Pan Report.	11 - 170
	That the ATMP Task Force endorse the proposed City of Kawartha Lakes Active Transportation Master Plan (ATMP) February 2024 Master Plan Report for presentation to Committee of the Whole on June 4, 2024.	
8.	Next Meeting	
9.	Adjournment	

The Corporation of the City of Kawartha Lakes
Minutes
Active Transportation Master Plan Task Force Meeting

ATMPTF2023-04
Thursday, July 13, 2023
10:30 A.M.
Council Chambers
City Hall
26 Francis Street, Lindsay, Ontario K9V 5R8

Members:
Councillor Pat Warren
Daryl Broadworth
John Bush
Arthur Hornibrook
Barbara MacPherson
Glenda Morris
Peter Petrosoniak
Greg Scott
Sajeev Sivayogarajah
John Speirs
Bill Steffler
Nick White

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1. **Call to Order**

Task Force members in attendance: Councillor Pat Warren, Daryl Broadworth, John Bush, Arthur Hornibrook, Glenda Morris, Peter Petrosoniak, John Speirs, Bill Steffler, Greg Scott

Absent Task Force members: Barbara MacPherson, Sajeew Sivayogarajah, Nick White

Municipal Representatives/Staff in attendance: Paul Pentikainen, Supervisor Policy Planning, Max Faulhammer, Planner II, Nancy Ord, Administrative Assistant.

Consultants in Attendance: Claire Basinski, CIMA+, Jonathan Derworiz, WSP

Chair Steffler called the meeting to order at 10:34 a.m.

The Chair made a tribute to the significant accomplishments of Al MacPherson in advocating for historical plaques, grants and trails projects in Kawartha Lakes. Al MacPherson's dedication and service to the City of Kawartha Lakes were echoed by Task Force members and condolences extended to his widow, Barbara MacPherson, ATMP Task Force member. Members were invited to a farewell event for Al MacPherson on July 22, 2023 at Fleming College.

2. **Adoption of Agenda**

ATMPTF2023-009

Moved By P. Petrosoniak

Seconded By G. Morris

That the agenda be adopted as presented.

Carried

3. **Declaration of Pecuniary Interest**

There were no declarations of pecuniary interest disclosed.

4. **Adoption of Minutes from Previous Meeting**

ATMPTF2023-010

Moved By A. Hornibrook

Seconded By Councillor Warren

That the minutes of the April 19, 2023 Active Transportation Master Plan Task Force meeting be adopted.

Carried

5. Deputations

There were no deputations.

6. Correspondence

There was no correspondence presented.

7. New Business

7.1 Network Overview and Design

Slide presentation by C. Basinski provided detailed explanation of the proposed AT network and outlined the meeting's objective for Task Force members to:

- be updated on ATMP status with anticipated presentation to City Council before the end of 2023,
- have a greater understanding of the AT network and designs,
- buy-into the ATMP recommendations,
- discuss recommendation priorities, engagement and outreach opportunities.

Issues raised by Task Force members included:

- ATMP Ambitious Goals 2 and 3 address walking and cycling separately with built-up areas the focus for walking and cycling throughout Kawartha Lakes including rural areas.
- Strengthening Goals on connectivity to off-road features, between built-up areas and application to both rural and urban areas.
- Walking and hiking amenity needs differ. Amenities such as washrooms or benches have more value in built-up areas where there are more walkers who may be carrying groceries or walking with children.

C. Basinski highlighted the Network Development process indicating all comments had been considered and summarized detailed spreadsheets previously provided. The spreadsheets refer to a range of issues related to safe crossings, trail linkages, pedestrian amenities, traffic calming, need for paved shoulders in rural routes, gaps in the Network, challenging locations and maintenance issues.

The following were raised by Task Force members:

- The Dan Burden “walkabout” process and recommendations undertaken as part of the Bobcaygeon Active Transportation Study have been included. The ATMP will include recommendations for audits, staff training for walkability audits and maintenance at different times of year with varying conditions (e.g. lack of light, rainy or wintery weather).
- ‘Complete Streets’ approach for safe design for all users and other sidewalk uses (street furniture, trees, storm water management) was desirable.

C. Basinski provided an overview of the cycling and walking design approach for urban and rural facilities and referred to a series of illustrative maps.

The Task Force members raised the following:

- The need for rules to ensure AT design features are incorporated into new developments. C. Basinski indicated comments have been provided to City Staff on recent development proposals and the ATMP will suggest updates to policy documents (e.g. Official Plan).
- The ATMP include safety and design standards where trails are crossed by vehicles/roads ranging from a preference that Trails not be crossed to stop signs for vehicles. Specific reference was made to Alcorn Drive crossing the busy Legacy Trail.
- The ATMP will identify preferred design features for existing identified roadways or provide direction for new roadways. Minimum standards are provided for in boulevard multi-use paths, cycle tracks, separated bike lanes, bike lanes and advisory bike lanes where a shared roadway has a visually delineated space for cycling on the roadway.
- Duke Street in Bobcaygeon is very busy, has had many complaints about safety at the intersection of Main Street (where a Day Care is located) and should have sidewalks designated. C. Basinski indicated Duke Street can be highlighted in the walkability analysis and sidewalk inventory.
- Duke Street or County Road 8 is a major route between Fenelon Falls and Bobcaygeon and should be identified as a cycling route with design features added. C. Basinski will review Duke Street further noting its connectivity between Fenelon Falls and Bobcaygeon and the link to Highway 36 addressing cycling safety due to heavy truck and vehicle traffic.
- Parks should be coloured green on the Network mapping.

- Any intersection with a multi-use path be identified as an intersection/crossing improvement area. Many intersections noted do not show improvements and reference was made to crossings at McLaughlin and Kent Streets, Lindsay and Kent Streets.
- The ATMP include rules/standards for pedal assisted ebikes to ensure trails are not used for motorcycles. C. Basinski referred to comprehensive review in the Trails Master Plan of existing by-laws, an approach that will form part of the ATMP.
- The ATMP propose trails on both sides of rivers/waterways if possible in urban areas referring to new development area proposals, the Scugog River and the south end of Lindsay north of the fairgrounds. C. Basinski referred to the ATMP identification of linkages to rivers/waterways.
- Colborne Street between Highway 35 and Angeline Street is a nightmare for AT and consideration be given to a pedestrian bridge across Colborne Street to promote usage on both sides and to a traffic signal at Colborne and St. Joseph Streets with wider crossing for connectivity to Wilson Fields.

7.2 Recommendation Overview

C. Basinski's slide presentation raised the following Task Force issues:

- Options for providing hard copy documents rather than digital to Task Force members and tables be provided in Word document format rather than Excel.
- An Executive Summary of the ATMP be prepared.
- Public engagement over the Summer 2023 will be clarified after discussion with City Staff and may include maps/information online and potential open houses.
- Add existing trails to the overall Rural Area map.
- Safety designs for Highway 35 to County Road 45 be added as this route is used by cross country cyclists and the vehicles on the highway are moving at high speeds. C. Basinski clarified the Ministry of Transportation will not allow any AT features on its provincial highways.
- Public Health has/will be further involved in the AT once the Task Force has indicated it is comfortable with the ATMP recommendations.

- ATMP will incorporate a series of recommendations for bike education to encourage best cycling/walking practices, “walking school bus” initiatives and traffic calming within certain distance to schools as in the TM Plan. Initiating a “walking school bus” initiative would be affected by the capacity of volunteers and clarification on who will organize and implement.

The Task Force meeting was adjourned at 12:04 p.m. and reconvened at 1:02 p.m.

C. Basinski continued the presentation with a summary of fifty-four ATMP recommendations created from all comments received and grouped into guideline, policy, implementation, programming and monitoring recommendations which form the foundation of the ATMP. One revision was noted to clarify responsibility from Public Works Division to Engineering Division.

Task Force members raised the following:

- Recommendation #10 timing be sooner for asphalt shoulders as part of road rehabilitation and reconstruction projects.
- Recommendation #13 be changed to remove reference to “at least two bike corral stations within the downtown” to phrasing that applies a proportional number of corrals by specific urban area (e.g. Bobcaygeon should have at least four bike corrals).
- Recommendations #5 and #12 add reference to bike corrals in parks.
- Strong local AT policies will allay the potential effects of Bill 23 and developers not adhering to local AT recommendations.
- ‘Bicycle Friendly City’ and ‘Walkable Community’ designations can evolve from an approved ATMP and will lead to further initiatives, awards, plaques and on-line awareness.
- Setting implementation time limits, ‘Walk’ and ‘Active’ Scoring, annual AT meetings and ‘Ontario Bike Nights’ are means to show progress, AT improvement, goal setting and encourage support.
- To encourage walkability in the downtown area between Kent and Russell Streets, reduce the prioritizing of cars and remove the need for pedestrians to push buttons to activate walk indicators.
- The ATMP include stronger statements on contributing to environmental health. C. Basinski indicated statements to reflect a strong vision and specific recommendations that address climate change can be included.

Further the ATMP will work together with other policies (TMP, Official Plan, Healthy Environment Plan).

- Ranking of recommendations will likely be in the form of short/medium and long term prioritizing with the top five recommendations likely relating to staffing, funding, updating internal policies, updating development standards and partnership strategies (outside of Development Services Division).

Task Force member G. Morris left the meeting at 1:45 p.m.

Comments of Task Force members continued after C. Basinski provided an overview of next steps and new recommendations relating to updating mapping, coordination with other agencies/school boards/health representatives and templates for consistent monitoring.

Further Task Force comments raised the following:

- Costing for improvements such as paving road shoulders not be a separate budget line item but an integral part of road construction as paved shoulders extend the life of roads. Many AT projects will occur over time as part of road rebuilding, will not stand alone and will be coordinated with the TMP.
- The AT will refer to external funding options such as donations.
- The AT will not sit on the shelf but contain recommendations for updating every five years and monitoring.
- The ATMP will be ready for public input/comment within the next week once the JumpIn page has been prepared.
- A programming recommendation be added on education of biking rules. Recommendation #44 generally addresses education of trail etiquette for cyclists on a trail with pedestrians, safety provisions and signage.
- The ATMP will identify implementation partners, their involvement and ATMP projects to be included in Public Works Five-year capital works forecasts.

At this point in the meeting, the Task Force members convened to view posted large size copies of the network maps and to add specific comments and notations to clarify and correct technical details.

8. Next Meeting

It was noted future meetings of the ATMP Task Force will be via zoom and members will be canvassed for meeting dates.

9. Adjournment

ATMPTF2023-011

Moved By B. Steffler

Seconded By P. Petroseniak

That the Active Transportation Master Plan Task Force meeting be adjourned at 2:37 p.m.

Carried



City of Kawartha Lakes Active Transportation Master Plan (ATMP)

February 2024
Master Plan Report

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Land Acknowledgement

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

The City of Kawartha Lakes respectfully acknowledges that we are situated on Mississauga lands and the traditional territory covered by the Williams Treaties.

We are grateful for the opportunity to be here, and we thank all the generations of people who have taken care of this land - for thousands of years. We recognize and deeply appreciate their historic connection to this place. We also recognize the contributions of Métis, Inuit, and other Indigenous peoples, both in shaping and strengthening this community and country as a whole.

This recognition is connected to our collective commitment to make the promise and the challenge of Truth and Reconciliation real in our community.

Team Acknowledgement

We want to thank the considerable efforts of the City of Kawartha Lakes staff, City partners and stakeholders and members of the consultant team who guided the development of the ATMP.

City of Kawartha Lakes Staff

Jonathan Derworiz

Mark Jull

Maximilian Faulhammer

Richard Holy

Active Transportation Task Force

This ATMP is dedicated to the ever passionate and supportive trail and active transportation enthusiast Allan McPherson who's involvement in all things AT and trails has made the City of Kawartha Lakes a better place to live, work and play.

Daryl Broadworth

Patrick O'Reilly

John Spiers

John Bush

Peter Petrosioniak

Bill Steffler

Arthur Hornibrook

George Pineau

Pat Warren

Barbara MacPherson

Mary Jean Porteous

Nick White

Melissa McFarland

Greg Scott

Ellen Woodward

Glenda Morris

Sajeev Sivayogarajah

CIMA+ Consulting Team

Claire Basinski

Anushree Banerjee

Samantha Leger

Brandon Quigley

Peter Brocks

Amy Parker

We would also like to acknowledge the considerable efforts and meaningful input provided by numerous other stakeholders and residents of the City of Kawartha Lakes.

Part 1.

Purpose & Process

Starting in 2021, the City of Kawartha Lakes embarked on the development of a long-range City-wide Active Transportation Master Plan (ATMP). The ATMP is being driven by past strategic commitments and objectives of the City, including past efforts of active transportation stakeholders and community partners. The ATMP is not intended to be a stand-alone document; it was developed as a flexible and adaptable tool that can be used by all municipal staff who have a role in the planning, design, and implementation of AT-related initiatives. The ATMP is also meant to align with other recent and ongoing policies and plans, including but not limited to City's Trails Master Plan, new Rural Zoning By-law, Growth Management Strategy, and upcoming Transportation Master Plan. The ATMP is meant to build on previous work in Kawartha Lakes, promoting increased use of active forms of transportation, while providing a path to advance a clearly articulated vision and associated goals.

The intent of developing the ATMP is to...

- > Provide guidance on improving active travel at the City-wide level.
- > Identify recommendations to inform future policy development and project delivery.
- > "Action" high-level policy directions from the Official Plan.
- > Provide guidance to inform implementation tools, tactics, policies, and programs.

The Active Transportation Master Plan (ATMP) was developed using a process that fulfills the engagement and technical requirements of the Municipal Class Environmental Assessment (MCEA) Process meaning that many of the projects identified as part of the AT network are considered pre-approved and are able to proceed through to implementation at such a time that the City is able to allocate budget to do so.

This document marks a milestone in the City of Kawartha Lakes' journey to support sustainability, healthy communities, and resilience. It is an optimistic and aspirational document which provides ambitious targets for infrastructure implementation, policy and program development, and capacity building. Section 1.0 of the ATMP contains information regarding the approach and process used to develop the ATMP, how the plan is intended to align with other municipal efforts and an overview of the content of the report and how it is intended to be used.

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

1.1 ATMP Purpose & Objectives

The City of Kawartha Lakes ATMP is a functional master plan which has been developed to guide the city-wide planning, design and implementation of active transportation facilities, policies, and programs. The primary objectives for the ATMP's development was...

To create a long-range (20+ year) strategic planning document with supporting policies, programs, tools, and design solutions to improve the overall understanding of and support for active transportation in Kawartha Lakes.

More specifically, throughout the development of the ATMP, the City wished to achieve the following objectives...

Objective	Considerations
Improved Behaviour	Determine the needs of existing and potential AT users in Kawartha
Feasibility	Create an implementable strategy that aligns with strategic priorities
Connectivity	Create a continuous and connected system of AT facilities across the city
Seasonality	Accommodate for seasonal fluctuations and unique AT needs
Integration	Ensure that the ATMP is integrated with the trails plan and other relevant planning projects
Multi-modality	Support improvements to the availability of different modes
Capacity	Support improved capacity through internal structure and external partnerships
Accessibility	Ensure that routes and facilities are designed and promoted in such a way that barriers to access are removed
Future Focus	Provide long-range policy support and support growth targets

Table 1 . Overview of ATMP Project Objectives

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

At its core, the intent of this plan is to provide the City of Kawartha Lakes with a set of tools and tactics to achieve the City's multi-modal mobility goals, and to address the unique aspirations and concerns of residents and visitors through a greater focus on active transportation and trails. When developing the ATMP, the project team weaved three key considerations into each component:



Safety

The condition of being protected from or unlikely to cause danger, risk, or injury



Equity

The quality of being fair and impartial in either the approach or outcome



Comfort

Promoting physical ease and opportunities for relaxation that create an improved user experience

In applying these considerations to the ATMP process...

The City is committed to an All Ages and Abilities (AAA) approach to AT in Kawartha Lakes; with a goal of creating greater or improved transportation mobility for all.

Mobility refers to the ability to move seamlessly between destinations, whether that be for the purpose of transportation (e.g., functional day-to-day travel between destinations) or recreation (e.g., trips that are made for enjoyment or exercise). Transportation and recreational mobility should be interchangeable and directly influence each other. For the purposes of the ATMP, the intent is to identify recommendations and solutions that influence transportation mobility.

The following is an overview of the various elements related to transportation mobility which were incorporated into the ATMP process and are considered some of the key components of future ATMP planning and design considerations.

- > **Destinations** – Where people need and want to go for their favourite trip
- > **Accessibility** – How accessibility for all is provided within the design constraints of public space
- > **Inclusivity** – How those who live, work, and play within the City are accommodated along with those who need support
- > **Barriers** – Addressing the tangible and intangible aspects of the network that prevent use and participation
- > **Risk Management** – Appropriately monitoring and managing service provided relative to the need
- > **Demand** – How existing demand as well as anticipated demand with improved design is addressed

1.2 Project Overview

The ATMP was developed using an iterative and coordination-focused process, integrating the technical and engagement components into a responsive and adaptable work program. The project was completed in three phases as illustrated in **Figure 1**.

A core component of the work plan is the consideration and integration of opinions, interest and perspectives from community members, stakeholders, and decision-makers. Throughout the project, a number of different points of engagement and outreach were undertaken.

The objectives of our engagement program were to...

- > Inform audiences of the project's initiation, including the purposes and desired outcomes of the ATMP.
- > Provide information to increase awareness and understanding of the opportunities, challenges, and the best and comparable practices related to AT planning and design.
- > Co-create ATMP recommendations and infrastructure improvements to achieve wider municipal aspirations.
- > Build relationships with community members and stakeholders to support ongoing efforts related to implementation and encouragement.

A detailed summary of the input received has been provided to City staff as part of the consultation record and can be made available if determined to be appropriate. However, throughout the ATMP document, the key highlights from the input received and how it was used to inform outcomes have been presented.

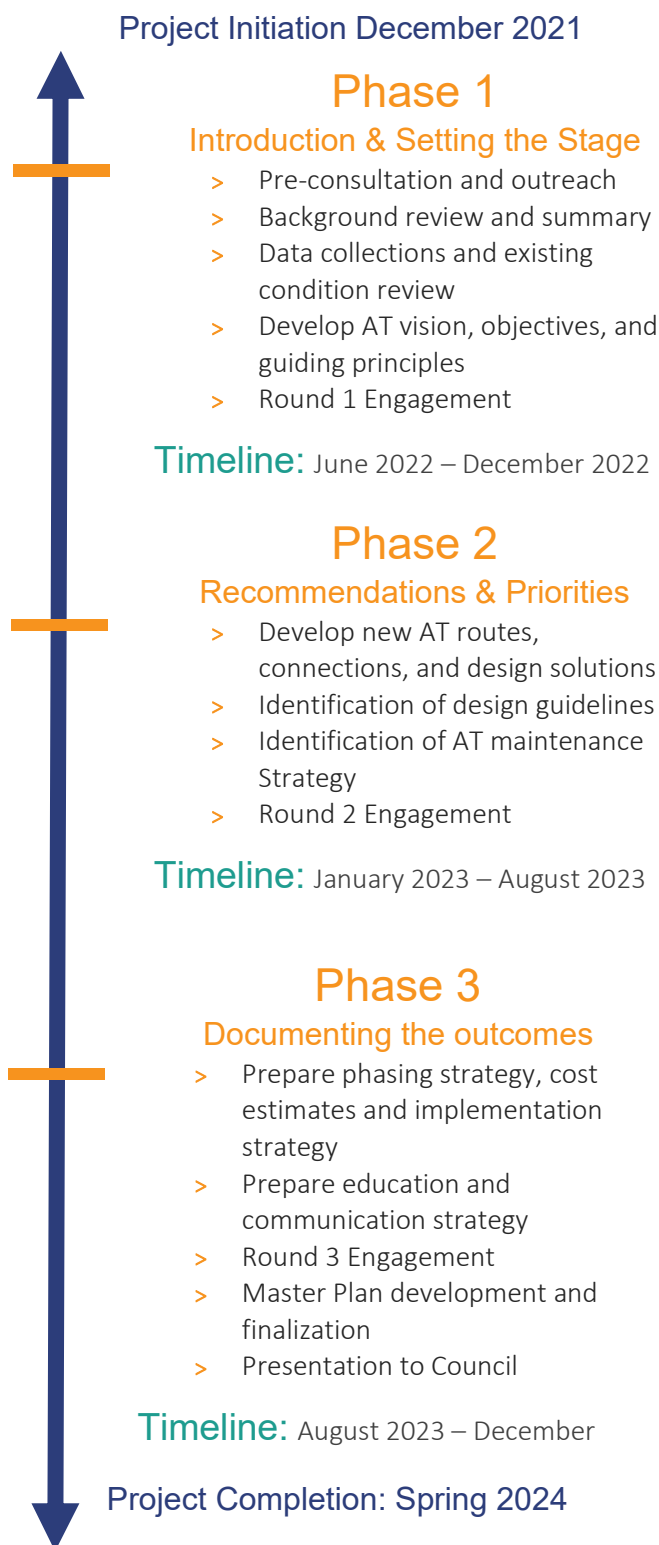


Figure 1. ATMP Project Plan & Schedule

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

1.3 Master Plan Alignment

The city-wide Active Transportation Master Plan was prepared at the same time as a number of other strategic planning related initiatives. Of particular interest to staff and stakeholders was the coordination of the ATMP with the Trails Master Plan Update – which was initiated and completed just prior to the completion of the ATMP.

Throughout the development of the ATMP and the Trails Master Plan, questions were raised regarding the rationale for undertaking two separate master plans. Simply put, the plans were developed by two separate departments at the City. Because the ATMP is intended to be more of a policy-driven document, it was the City's Long-range Planning Department that led its previous development. However, due to the recreational nature of the Trails Master Plan update, this project was completed by the Parks and Recreation Department.

While typically referenced in a similar context and manner, trails, and active transportation cover two different topics and have unique aspects and approaches to planning and design.



Trails are a very specific type of facility that are typically found off-road, connecting people to natural areas for primarily recreational purposes. Trails can be used for both active and non-active / motorized forms of transportation.



Active transportation refers to human-powered ways of getting around, such as walking, cycling, or other self-propelled methods of travel. Active transportation planning looks to provide interventions and routing solutions that accommodate and encourage the behaviours and needs of these forms of transportation.

Although active transportation plans sometimes address off-road trails, they primarily focus on on-road or in-boulevard facilities, such as cycling infrastructure (e.g., bike lanes, cycle tracks, signed routes, etc.) or pedestrian improvements (i.e. sidewalks). An ATMP typically provides infrastructure plans, along with recommended policies and programs to encourage different types of active trips in various locations throughout a municipality, including for utilitarian and commuting purposes or recreational purposes.

Throughout the development of the ATMP, there was considerable coordination and integration between the ATMP and the Trails Master Plan update. As functional strategies, they both focus on programming and implementation which will require ongoing annual coordination and alignment. More specifically, similarities and overlaps in the two projects included:

1. Feedback gathered through engagement activities.
2. Quality of design and accessibility.
3. Coordination of implementation timeline.
4. Leveraging new development opportunities.
5. Policy alignment and support.
6. Education and encouragement of the public.
7. Engage an overall culture shift.

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

While there are some key similarities between the plans, there are also critical differences. On a day-to-day basis, they are intended to be used as separate documents by two distinct City departments working towards municipal and departmental goals and priorities. This is noted due to the confusion that sometimes emerges regarding scope and scale of the two plans.

Both city-wide projects are intended to influence active mode use in different respects. **Table 2** provides a more detailed overview of the unique scope elements and aspects of consideration for the ATMP, and trails plan relative to the typical master planning topics.

Table 2. Summary of Master Plan Elements for the ATMP and Trails Master Plan Update

Components	ATMP	Trail Plan Update
Design	<ul style="list-style-type: none"> > Active Transportation Mode-Specific > Interaction with other road users > Wider multi-modal priorities > Higher density in built-up areas > Connections to major destinations for day-to-day trips 	<ul style="list-style-type: none"> > AT Users & Beyond > Primarily for recreational rather than utilitarian trips, but these may overlap. > Environmental impacts more likely to be assessed > Consideration of AT and other users
System Development	<ul style="list-style-type: none"> > Roads First Approach > Interaction with other road users > Road Classification assumptions relative to design needs > First and last mile considerations (i.e. connections to transit) 	<ul style="list-style-type: none"> > Trails First Approach > Prioritization of natural spaces > Primarily off-road, with connectivity through strategic on-road links
Process	<ul style="list-style-type: none"> > Data / Safety Driven > Facility recommendations based mostly on quantitative data > Driven by safety of users 	<ul style="list-style-type: none"> > Experience Driven > Consideration and application of design solutions to trail user needs > User mapping > Influence of environment on experience > Criteria integration
Vision	<ul style="list-style-type: none"> > New Vision > Alignment with current guidelines > Policy-driven > Focused on connectivity > Multi-modal integration > Demand-based improvements > Learning from comparable jurisdictions 	<ul style="list-style-type: none"> > Update & Re-envision > Reviewing and revisiting past recommendations > Re-engaging stakeholders > Infusing new guidelines > Asset management focus > Building on past successes

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

In addition to the ATMP, the City is also preparing a Transportation Master Plan (TMP). The TMP was initiated in the later stages of the ATMP development; this means that the ATMP was developed with some prior data / information assumptions. This does not mean that the recommendations found within the ATMP are not considered accurate or valid, but it highlights that as the City proceeds with the implementation of the ATMP, and as more up-to-date data or other information comes available, including data collected as part of the TMP or other City initiatives, that it be used to confirm and validate the ATMP's recommendations prior to design and implementation.

Similar to an ATMP, a TMP provides high-level policy, design and implementation direction related to the overall transportation system, including facilities and routes for various modes, such as automobiles and transit, as well as active modes. The outcomes of the ATMP should be integrated and incorporated into the TMP recommendations to provide a consistent and comprehensive approach to active transportation improvement. There will be a number of project outcomes as part of the TMP that will significantly influence and support AT efforts, including but not limited to:

- > Complete streets policies – supporting the consideration and design for all street users with safety and comfort in mind.
- > Vision zero / road safety approaches – finding opportunities for strategic improvements to enhance overall safety for all road users.
- > Revisiting of municipal road classifications – investigating how roads are classified throughout the municipality from both a land-use and road function perspective, ensuring that there is consideration for and accommodation of all users.
- > Capital project planning – the identification of proposed infrastructure improvements and associated budgeting over the course of a 5-, 10- or 15-year horizon. Opportunities to ensure economies of scale for the implementation of AT infrastructure are critical to facilitating coordination of municipal project efforts.

The City of Kawartha Lakes should continue to advocate for the integration of AT projects and improvements, as well as the prioritization of AT users (where appropriate) as they continue with the development and adoption of the TMP, and through future coordination between the ATMP, TMP, and the Trails Master Plan update.

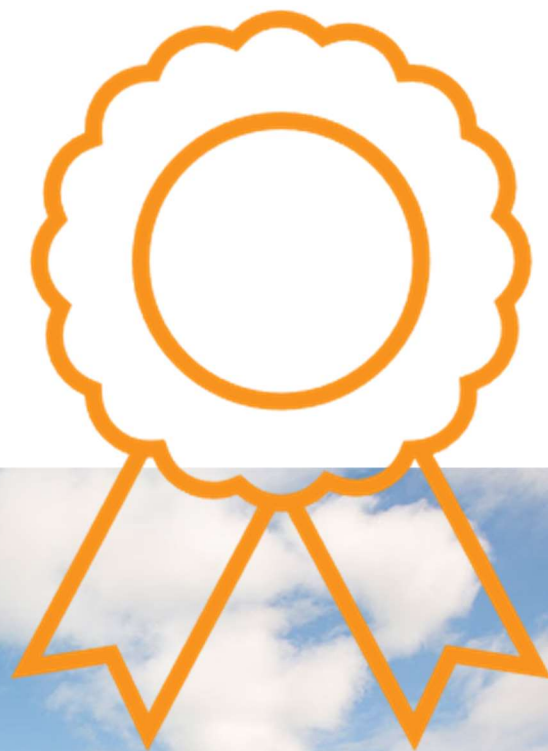
Developing separate plans will provide the City with opportunities for...

- > A greater degree of flexibility which will allow the City to address trail development (facility) as well as multi-modal aspirations through concurrent initiatives.
- > Alignment by ensuring the dual support is provided so that the plans receive equal commitment and AT-related initiatives are able to move forward
- > An opportunity for there to be multiple layers of support and opportunities for certain plans to address certain aspects or components of multi-modal or active transportation support.
- > A greater degree of efficiency with the opportunity to explore all potential routes and corridors for active transportation including very complex conditions as well as quick wins.
- > Layers of financial support, including multiple internal and external sources with combined efforts to facilitate implementation and next steps.

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

Last but certainly not least are the considerable land-use planning tools that are being developed and adopted by the City at this time. There are two municipal plans of this nature: the Rural Zoning By-law and the Comprehensive Zoning By-law. Both documents are integral to the decision-making of the City's planning process. They are implementation tools to help guide where and how the City is built based on the direction included within the City's Official Plan and as set out by Council and other decision-makers.

The City is committed to building and providing residential, commercial and employment areas, etc. All of the tools noted above work together to establish systems and services that create the safe, resilient, sustainable, and healthy communities that are critical to the future of the City of Kawartha Lakes.



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1.4 Content & Application

The ATMP document has been developed to serve as a flexible and adaptable tool to guide the strategic and day-to-day implementation of active transportation supportive tactics and projects. The master plan report has been organized into five chapters which present the process, rationale, and outcomes of the ATMP process. **Error! Reference source not found.** provides a summary and overview of the ATMP content and its intended use.

Table 3. Overview of ATMP Content & Application

Chapter	Content	Application
Chapter 2.0	<ul style="list-style-type: none"> > Chapter 2.0 provides an overview background to the ATMP including the work completed to understand the existing context and conditions i.e. policies, programs, and best / comparable practices 	<ul style="list-style-type: none"> > Information found within chapter 2.0 can be used to communicate the existing conditions prior to the implementation of the ATMP and in future assessments of growth or success
Chapter 3.0	<ul style="list-style-type: none"> > Chapter 3.0 presents the information gathered through engagement and outreach and the foundations of the ATMP i.e. the ATMP vision statement, objectives, and ambitious goals 	<ul style="list-style-type: none"> > Information found within chapter 3.0 can be used to validate how the ATMP was informed by public and stakeholder input and to communicate the purpose, intent, and priorities of the plan
Chapter 4.0	<ul style="list-style-type: none"> > Chapter 4.0 highlights the ATMP recommendations for the ATMP network, policies, and programs 	<ul style="list-style-type: none"> > Information found within chapter 4.0 summarizes the “what” is being recommended as part of the ATMP including proposed routes, policy changes and program options
Chapter 5.0	<ul style="list-style-type: none"> > Chapter 5.0 details a suggested implementation strategy including phasing, costing, roles and responsibilities, monitoring and evaluation practices, partnerships, and communication tactics 	<ul style="list-style-type: none"> > Information found within chapter 5.0 is meant to inform the day-to-day coordination of ATMP implementation by City staff and its partners

The content of the ATMP is built around two core components, the proposed active transportation network, and a series of supportive recommendations. Recommendations are meant to:

- > Provide guidance to turn the plan’s vision and goals into specific actions
- > Provide guidance to develop new or modify existing policies
- > Establish targets for annual decision making, funding, and phasing
- > Set out processes and practices for internal and external coordination

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There are six (6) categories of recommendations which are intended to help guide the efforts and actions of staff. The categories and associated recommendations were developed based on best and comparable practices as well as the most effective and impactful approach for the City. The following is an overview of the categories.

Network

- > Foundational recommendations that ensure that the ATMP network is being used as the guide for the future planning of active transportation infrastructure

Guidelines

- > Direction to support the design of active transportation facilities and supporting amenities.

Policies

- > Amendments or enhancements that are needed to support the integration and implementation of the ATMP and to influence future land use and infrastructure planning practices.

Programming

- > tactics that influence the way in which people understand AT and change behaviours to encourage more active transportation use.

Implementation

- > day-to-day practices and processes that guide how staff facilitate the implementation of the ATMP in coordination with external agencies and other partners.

Monitoring

- > opportunities to determine the impact and influence of implementation, ensure accountability, and to adapt as needed to fit community needs and interests as they evolve.

The City takes a policy and planning based approach to the ATMP but understands that many of the recommendations found within the ATMP have an impact on other municipal departments.



What was assumed when preparing the ATMP recommendations?

- > The recommendations are not phased but provide an assessment of the level of effort or degree of ease related to their implementation based on the amount of support.
- > There are a significant number of recommendations which represent a series of aspirational actions that will occur. To focus efforts, priority recommendations have been identified which are to be the focus of the City.
- > Priority recommendations do not mean that they should be the only focus. Depending on the funding and capacity of the City in a given year, the priority recommendations should be those that the City moves forward with first or continues with.
- > Potential partnerships have been identified, representing the potential internal and external groups to support the City in their implementation of specific recommendations. It should be noted that partnerships may change considerably over time, and the City may pursue partnerships with organizations or agencies not identified in the ATMP as opportunities arise.
- > There are some overlapping or complementary recommendations within the ATMP and the Trails Master Plan update. These have been highlighted within the ATMP, and where possible implementation is to be coordinated to avoid the duplication of efforts.
- > There are some recommendations within the ATMP which have an impact on the outcomes of the TMP. Every effort should be made to ensure that there is continued coordination to facilitate the action of these recommendations.
- > The ATMP recommendations are intended to be reviewed on an annual basis to determine progress made and opportunities to identify new tactics and initiatives to work on the following year.
- > Recommendations are NOT policy. Unlike the Official Plan which includes municipal statutory policy, functional master plans are only able to provide implementation direction. As noted above, there are policy recommendations which identify implementation next steps which would take the content in the ATMP and embed it into municipal policy, where appropriate.
- > Depending on the nature of the recommendation, it may be appropriate to have stronger language to ensure that the recommendation is considered actionable. Where possible, the word “shall” has been used to strengthen recommendations.

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The recommendations are dispersed throughout the report, with content and information to support implementation, and to be used as a reference and guide by City staff as they proceed with the implementation of the ATMP.

All recommendations included within the ATMP have been diligently reviewed and considered with information provided to the City to support future implementation. A comprehensive recommendation implementation table has been prepared and provided to the City which includes the following information for each recommendation:

- > Timing
- > Implementation Leadership
- > Internal Impact
- > External Impact
- > Staffing Resources
- > Money Resources
- > External Funding Opportunities

The table is intended to be used as an internal resource to support the management of ATMP implementation.

The timeline for recommendations are not linked to a specific timeline but are associated with a specific horizon or year – unlike the proposed projects. Timing has been identified based the ease at which the recommendation is able to proceed. The options include:

- > Immediate (green) – recommendations can be implemented as soon as the plan is adopted
- > Alternate timing (yellow) – recommendations can be implemented once other initiatives or work has been completed
- > Requires investigation (orange) – recommendation which requires additional research / review to be undertaken to confirm next steps

These categories are consistent with the approach used for the TMPU recommendations. Implementation timing details are provided in Section 5.0, but the intent is for City staff to work together to determine annual priorities and work that can be completed to support implementation of the ATMP year-over-year.



Part 2.

Context & Considerations

The development of the Kawartha Lakes ATMP has been underpinned by a thorough exploration of local active transportation experiences and conditions. As this master plan is meant to be a blueprint and guide to achieve the City's active transportation vision, it must be reflective of the local context, while also following provincially and nationally accepted planning and design practices.

Active transportation is not a single mode of transportation but includes multiple self-propelled modes of travel, including walking and cycling, each of which has various different potential users with their own unique needs, desires, and places they want to go. Many active transportation master plans provide ambitious directions to achieve wider behaviour change in support of more sustainable and health modes of movement and mobility. While this shift in approach can be daunting, the number of individual and community benefits that can be realized are wide. It also allows for a greater degree of flexibility and adaptability when it comes to how a municipality supports the way in which people get to and from their daily activities and should be adaptable as people age.

To develop a plan that is both progressive and well-tailored to the context of Kawartha Lakes, a thorough understanding of the existing conditions was developed. This understanding was attained through a multi-faceted approach to background review and analysis including:

- > A review and analysis of the City's current policy framework, including current gaps, future opportunities, and ongoing challenges to establish the basis for future policy enhancements.
- > An investigation of the varied benefits of investing in active transportation as a community, including benefits and challenges to addressing active transportation with a focus on the unique context of Kawartha Lakes to demonstrate the issues for mitigation and opportunities for success.
- > An analysis of socio-demographic trends, local trip generators and current active transportation demand to paint a picture of who, how and why people move throughout the City.
- > A review of existing and previously planned infrastructure as the foundation for the identification of improvements and enhancements.

The findings are documented throughout Section 2.0 of the ATMP.

2.1 Challenges & Opportunities

The intent of the City of Kawartha Lakes was to develop an Active Transportation Master Plan that reflects and responds to the unique societal shifts that are being experienced as it relates to active transportation within the City. Unfortunately, in the past few decades, municipal transportation planning has too often prioritized automotive travel at the expense of other modes, creating car-dependent communities that limit people's mobility choices, exacerbate social inequality, worsen pollution, create congested roads, and eat up farmland and natural spaces through sprawling and inefficient urban land uses.

In the last 10 years society has seen a shift away from the single occupancy vehicle towards more sustainable and healthy modes of transportation, as new evidence demonstrates the broad benefits of active transportation to help support positive physical and mental health outcomes, make communities more equitable and affordable, combat climate change and protect the environment, support economic development and tourism, to name just a few.

Within the context of the City of Kawartha Lakes, active transportation is not something that Council or staff have historically focused on. However, there is an increasing interest in and demand for the City to make real and tangible commitments to shifting the way people move and their sense of safety and comfort when moving.

As the demographics of Kawartha Lakes shift, there needs to be a proactive approach to mitigating negative impacts of the current transportation system. There is a significant need for accessible alternatives which meet the needs of people of all ages and abilities – whether they live in the built-up areas of the community or in the rural areas. That said, these efforts do not come without a price tag which can be a departure from what the City is used too. It is important to re-position and re-think what it means to invest in active transportation and frame it as an investment in community, in the future, and in people.

Within the first phase of the project, the team undertook a detailed review of active transportation challenges and opportunities. The results of this review were compelling and helped to inform the development of recommendations – to address major concerns or barriers; or highlight opportunities to enhance and support community benefits. The following is a summary of those findings.



Environmental

Environmental refers to the impact that is experienced on the natural and physical environment as a result of carbon emissions, pollution, and other human-made factors.



Why does it matter?

Climate change poses many risks to human health and prosperity, including extreme weather events (e.g., floods, wildfires), reduced water quality, disruptions to food systems, and poor air quality. The impacts from global warming have already been observed, including locally, where in recent years, Kawartha Lakes has had milder winters with less snow and hotter summers with longer heat waves. The City of Kawartha Lakes has more than 51,000 hectares of forest, 11,00 hectares of grasslands, and 37,000 hectares of wetlands. These natural heritage areas provide impressive landscapes, provide habitats for native species, and protect climate stability. Investing in active transportation improvements and programs that replace car trips with walking and cycling trips can help preserve these lands and create a healthy and sustainable community that future generations can continue to enjoy.

CKL Opportunities

- > Transportation is the largest source of emissions in the City, accounting for approximately 45% of all greenhouse gas (GHG) emissions.
- > Kawartha Lakes will benefit from reduced air pollution and traffic congestion by creating safe and convenient trips by bicycle and on-foot.
- > Active transportation protects natural resources (less gas consumption).

CKL Challenges

- > The need to navigate the delicate balance between fostering sustainable transportation and preserving Kawartha Lakes' rich natural environments.
- > The potential disruption, fragmentation, or alteration of local habitats during infrastructure construction poses a particular concern, demanding careful consideration of the region's unique biodiversity.
- > The choice of construction materials, energy consumption, and emissions during development can impact the environmental integrity of Kawartha Lakes.

ATMP Application

- > The intent of the ATMP is to reduce the impacts of GHG emissions by offsetting trips by motor vehicles for day-to-day purposes.
- > The plan maximizes the opportunities of AT trips, both commuting and recreational.
- > The impact of active modes on the longevity of roadways and other services have been promoted.
- > The preservation of Kawartha Lakes natural heritage sites has been prioritised.

Societal

Societal refers to the values, demographics, and economics within a group of individuals involved in persistent social interaction or who share the same spatial territory.



Why does it matter?

Kawartha Lakes has a diverse population, with people of a range of ages, abilities, backgrounds, and income levels. In addition to its high senior population, individuals and families in Kawartha Lakes have a lower median income than the province as a whole. Designing urban spaces that provide safe and convenient trips, regardless of the mode of transportation is crucial, especially to those who may not be able to afford or have the ability to drive for regular trips. Improved transportation options, including through AT, helps ensure everyone is able to access food, jobs, education, health care, and more, every day.

CKL Opportunities

- > Active travel opportunities provide basic mobility to those who cannot afford to own cars.
- > Walking and cycling facility improvements benefit existing AT users and new users by providing facilities that are safe, comfortable, and accessible for all users.
- > Providing active transportation facilities for the first kilometre (i.e., between one's residence and public transit stops) and last kilometre (i.e., between public transit and the final destination) is vital to achieve a connected, and more accessible and attractive transportation network.

CKL Challenges

- > Deeply ingrained car-oriented habits, infrastructure and development make it challenging to shift cultural norms and perceptions surrounding transportation. People may resist the adoption of active transportation modes for diverse reasons.
- > Implementing active transportation facilities often encounters political challenges rooted in differing priorities, budget constraints, and conflicting interests.
- > Balancing the diverse needs of various stakeholders, including local businesses and residents, while ensuring the equitable distribution of resources, can also pose political hurdles.

ATMP Application

- > The ATMP will be designed to ensure all residents and visitors of Kawartha Lakes have the ability to choose active modes of travel, regardless of their age, ability, or comfort level.
- > This ATMP has been developed with all ages and abilities in mind, following guidance from national and provincial guidelines, standards, and best practices. Wherever possible, integration with public transit has been explored.
- > Meaningful engagement has helped to ensure this ATMP responds to community needs.

Health

Health refers to an individual's or community's ability to successfully interact with their biological, physical, and social environments.^{1,2}



Why does it matter?

Getting more people to take more trips by walking and cycling, whether for commuting, other daily utilitarian trips, or recreation, is an opportunity to get more residents experiencing the health benefits of AT. This is especially important in Kawartha Lakes, where 28% of the population is aged 65 or older (compared to 18% province-wide)³.

CKL Opportunities

- > Diabetes rates are lower in municipalities where walking and cycling are practical options.
- > People are more active if safe, accessible, and comfortable active transportation infrastructure is available to them.
- > Walking to and from public transit can help adults achieve 8 to 33 minutes more physical activity each day.
- > Regular exercise, including walking, helps improve mental health outcomes, including lower depression and anxiety levels and increasing social interactions.
- > Improving the daily commuting mode split is an opportunity to get more residents experiencing the health benefits of AT.

CKL Challenges

- > Currently, 93% of Kawartha Lakes residents opt to drive a car for their daily commute, with only 4% walking and 0.5% cycling.
- > There may be an inherent bias favoring car-centric planning in urban development, which can contribute to the marginalization of pedestrian and cyclist needs.

ATMP Application

- > Foster a network that makes it easier for residents to choose active modes for everyday trips.
- > Through an all ages and abilities approach, this ATMP aims to be inclusive and age-friendly ensuring that the health benefits of active transportation can benefit all users

¹ Sartorius Norman, "The meanings of health and its promotion" in Croation medical journal vol. 47,4 (2006): 662-4

² National Research Council, "Children's Health, The Nation's Wealth: Assessing and Improving Child Health", in National Academies Press (US), (2004)

³ 2021 Census

Economic

Economic refers to how available resources, services, and goods are organized and distributed across a geographic region which influences how funds are distributed.



Why does it matter?

On average, Kawartha Lakes sees more than 1.6 million tourists annually and has an annual population of 31,000 seasonal residents. Primary activities for tourists and seasonal residents include outdoor sports activities (53%) and visiting friends and relatives (39%)⁴. Tourism is an important part of the local economy in Kawartha Lakes, and active transportation investments can help support this by ensuring that the City remains an attractive travel destination through investments in facilities that cater to recreational uses, and help support vibrant, walkable destinations.

CKL Opportunities

- > Various types of in-boulevard trails support the trend of recreational travel.
- > Active transportation supports eco-tourism and sustainable tourism.
- > Multi-use pathways and trails are often destinations for short-term or weekend trips, while rural bicycle routes can attract people for full day or multi-day cycling experiences.
- > People on foot and on bike often shop more and spend more money locally than those driving.
- > Wider sidewalks, calmer and safer streets, and amenities create pedestrian-friendly shopping experiences that attract more people to visit.

CKL Challenges

- > Allocating funds to AT projects may compete with other pressing budgetary priorities.
- > Retrofitting existing urban areas with active transportation infrastructure can be expensive, requiring careful planning to minimize economic impacts on businesses and residents.
- > Despite the potential long-term benefits in terms of improved public health and reduced environmental costs, municipalities may face resistance due to the perception of higher upfront expenses.

ATMP Application

- > Given the significance of the tourism industry in Kawartha Lakes, route and facility opportunities that support tourism and economic development have been prioritized in this plan.
- > Opportunities to leverage partnerships with local and provincial tourism organizations have been explored as part of the ATMP's implementation

⁴ Data collected from pre-consultation survey.

2.2 Policies

Policies developed and adopted by a Municipality establish the framework that is used to guide where, how, and what is planned and implemented within a Municipality including land uses as well as servicing and infrastructure. Within the policy hierarchy there are various tools such as by-laws, guidelines, standards, or other implementation-based documents that guide municipal staff in their decision making.

Policy provides the blueprint for growth and development of a community, while also addressing critical matters related to mobility, environmental preservation, economic growth, social equity, infrastructure servicing, among others. In recent years there has been considerable enhancement and improvement in the policy support for Active Transportation and related infrastructure planning.

However, AT infrastructure implementation mainly relies on the existence of strong functional local plans at the municipal level, such as an ATMP. For widespread and consistent AT planning and infrastructure implementation, there should be policy improvements and amendments that both support and provide guidance for active transportation, including infrastructure, programming, and supportive land use.

The outcomes of the comprehensive policy review are documented in the following sections with additional information shared with the City which forms part of the project record.

The information contained within this section is intended to be used as a guide for future consideration as the City proceeds with updates, amendments, or the development of new policies. Additional recommendations are provided in chapter 4.0 of the ATMP.

A typical master plan requires a review and understanding of applicable policies and plans that have jurisdiction or influence over potential plan outcomes. For the ATMP policies were reviewed at the provincial and local level to determine the existing support for active transportation.

It is also important to understand where in the policy hierarchy the ATMP will “sit”. This helps to better understand what influence the ATMP will have once implemented and where additional support may be needed to facilitate implementation or higher-level policy support. An illustration of the existing policy hierarchy – as it existed at the time the ATMP was developed – was prepared and is provided on the following page.

Ultimately, as the ATMP will serve as a functional master plan, there will need to be updates to the City’s Official Plan to ensure policy consistency and reference within implementation tools to ensure action is undertaken.

Plans and policies were reviewed at the provincial and local levels. The intent of the review was three-fold:

1. To identify existing policies and gaps where there are potential opportunities for policy improvements.
2. To ensure that municipal policies, guidelines, and standards related to active transportation and transportation align with and support higher-level policy
3. To strategically embed active transportation into the City’s most impactful policies.

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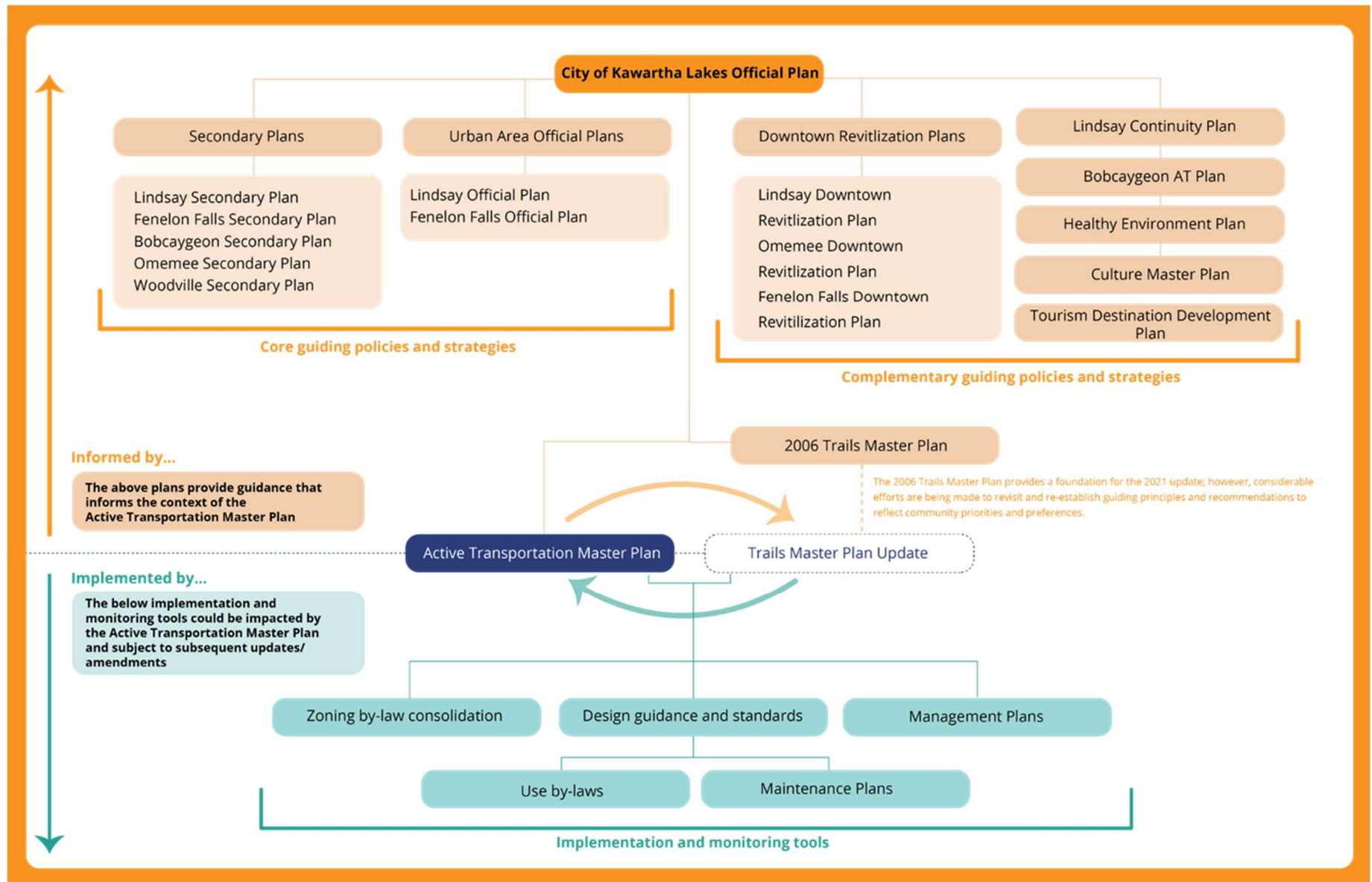


Figure 2 . Summary of Applicable Policies & Plans at the City of Kawartha Lakes

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The existing policy review was undertaken in two stages. First, a policy summary was completed for all applicable policies and plans including statutory policy documents down to design guideline and standard level. Next, policies and plans were reviewed using a key term search to determine the degree of support within the existing policy document and to identify opportunities for improvement.

A key term search is a planning tool that is used whereby a series of terms are selected based on project objectives and priorities, as well as best practices. These terms are then used to review each policy and the number of occurrences of the term is noted thus determining the degree of support and the impact of policy influence.

For the Kawartha Lakes ATMP, primary, secondary, and tertiary terms were identified and used to assess the applicability of existing municipal planning documents. The hierarchy of terms was determined best on a best practice whereby it is most critical to have reference to the primary terms but there may be opportunities for long-term improvement or amendments to incorporate secondary and tertiary terms where possible. The following is an overview of the primary terms that were identified:

- > Active Transportation / Recreation
- > Cycling/Bicycle/Bike
- > Walking/Pedestrian
- > Hiking/Hike
- > Connectivity
- > Waterfront
- > Recreation
- > Tourism
- > Trail
- > Rural Route
- > Snowshoe/Snowshoeing
- > Canoe/Kayak/Paddling
- > Pathway
- > Accessibility
- > Safety / Comfort

The full list of terms was provided to City staff and can be made available as needed. Results varied, however; with the following highlights to emerge:

Representation of primary terms like cycling, biking, walking, hiking, and trails etc. ranged from 1 to 5% for the secondary and urban area plans.



Primary terms were reflected more frequently within functional plans such as the Tourism Development Plan and the Cultural Master Plan.



Secondary terms (such as inclusive, multimodal, and first/last mile) appeared less across all the plans that were evaluated.



Based on the results of the key term assessment the plans with the greatest amount of support for active transportation terminology included:

- > City of Kawartha Lakes Official Plan
- > Lindsay Official Plan
- > Tourism Destination Plan
- > Cultural Master Plan

The plans which required improvement / enhancement include:

- > Omemee, Bobcaygeon, Woodville Secondary Plans
- > Fenelon Falls Official Plan
- > Omemee Downtown Revitalisation Plan
- > City of Kawartha Lakes Strategic Plan

Establishing a policy driven approach for the ATMP?

Developing an active transportation master plan driven by municipal policy is critical for fostering sustainable and resilient communities. Active transportation not only contributes to healthier lifestyles but also plays a pivotal role in reducing carbon emissions, alleviating traffic congestion, and promoting social inclusivity.

By embedding active transportation planning, design, implementation, and maintenance directions and recommendations into various policies, Kawartha Lakes will position itself with the necessary frameworks and directions which aim to:

- > Establish the necessary policy-based assumptions which can be used to support the planning, design, and implementation of community elements – servicing, infrastructure, and urban form – which are consistent with the principles and vision of the ATMP.
- > Incentivize the creation of urban development that prioritizes pedestrian and cycling infrastructure. For example, by incorporating policies related to urban planning, zoning, and transportation, a city can systematically create an interconnected and accessible network that encourages people to choose walking or cycling as viable modes of transportation.
- > Enhances the long-term sustainability of a community by signaling a commitment to creating healthier and more environmentally friendly urban spaces, aligning with broader goals related to public health, climate action, and social equity.

The ATMP is not a policy document. It is a functional master plan which includes recommendations which provide suggested actions which could inform future policy development. As noted above, the ATMP will need to be integrated / reflected in the overarching Municipal policy framework – more notably the Official Plan and the Zoning By-law – in order for a policy driven approach to be fully realized.

Integrating active transportation measures into these policies ensures that these considerations become integral components of decision-making processes, garnering consistent support from various stakeholders, and facilitating the allocation of resources for their implementation and maintenance. In essence, by ensuring that the ATMP is based in a policy-driven approach, the City is making a commitment to fostering a holistic and enduring approach to urban development that prioritizes the well-being of residents and the environment.

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2.3 Users & Uses

The way in which active transportation facilities are planned and designed inherently prioritizes consideration for the user i.e. the individual that is engaging in the activity and the use i.e. the type of mode or activity they are participating in and the reason for that trip. Prior to embarking on any assessment or the development of recommendations it was important to define appropriately and clearly what is meant by active transportation and what that means in terms of existing as well as future users.

Active transportation can refer to any form of non-motorized, human-powered transportation.

In most cases, active transportation focuses on two primary users (or modes):

1. Pedestrians - people who travel by foot, whether walking, running, using a wheelchair or other mobility aid, or pushing a stroller.
2. Cyclists - People who travel using a bicycle, either fully self propelled or assisted by an electric motor.

However, with emerging technology, that there are new types of users and modes that also need to be considered when planning and designing for active transportation, including:



For the purposes of the City of Kawartha Lakes ATMP, the focus was placed on the traditional forms of active transportation as noted above but with a future-focused perspective on providing innovative and proactive recommendations, policies, programs, and facilities to accommodate a wider range of evolving modal choices. Each mode choice has different types of design opportunities and assumptions which impact the way in which routes, facilities and amenities are planned and design and programs are developed. Table 4 provides an overview of typical considerations for each of the “primary” users that were considered when developing the Kawartha Lakes ATMP.

User	Description	Application
Pedestrian	Those who travel by foot including walkers, joggers, hikers, and runners.	<ul style="list-style-type: none"> > Low travel speeds > Minimum 1.0 m operating space > Pedestrian trips include commuter, recreational and touring / long distance purposes

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User	Description	Application
Cyclist	Those who use a bike for various purposes, including commuting, utilitarian purposes, recreational, and touring / long-distance.	<ul style="list-style-type: none"> > Average speed ranges from 10 to 20 km/h; may increase in excess of 30 km/h on downhill roads. > Typically require 1.5 m of horizontal operating space and 2.5 m of vertical operating space.
Disabled Users	Users that require assistance (e.g. wheelchairs, power chairs) to get around due to mobility limitations.	<ul style="list-style-type: none"> > Sections 80.8 and 80.10 of the Accessibility Standards for the Built Environment provide the technical requirements when designing and implementing new trails.
Other Users	Other user groups anticipated to use the active transportation network in locations where permitted may include e-bikes, all-terrain vehicles, and snowmobiles.	<ul style="list-style-type: none"> > E-bikes are typically permitted on all roads where conventional bicycles are permitted, but municipalities can limit usage through municipal by-laws

Table 4 . Summary of Typical Active Transportation Users & User Preferences

The above speaks to the “mode” choices which are typically the greatest area of focus when undertaking a plan of this nature. However, an active transportation user has many different aspects and considerations that influence their trip length, location, etc. It can be impacted by age, ability, skill and endurance levels, risk tolerance, and preferences for various types of trip experiences. In addition, it is heavily influenced by the type of trip that is being taken which is mostly determined by the destination.

Many AT trips are for recreational purposes, whether it be fun or fitness, while others are for more utilitarian purposes, such as to commute to jobs or school, visit friends or family, go shopping, or access other local services. To be successful, an active transportation network should appeal to a range of users looking for various experiences, particularly those that are most common, while providing a continuous network that connects to key destinations for recreational and utilitarian purposes.

Designing for active transportation users and uses is not a one-size-fits all approach. An ATMP of this scope and scale and in this geography means that the planning, design, maintenance, and implementation of infrastructure must provide individuals who live, work, and play within the area with the options and alternatives that are consistent with their lifestyles as well as their evolving habits. While defining the potential users and uses it is also important to determine specific preferences and user profiles within Kawartha Lakes. Through engagement and outreach with the public and stakeholders, a series of user profiles were developed illustrating “typical” active transportation users or individuals who would interact with active transportation users.

The user profiles, along with the mode specific design considerations were the basis for the planning and design of the AT network. A more detailed overview of the user profiles is provided in Section 3.1, summarizing the engagement efforts of this plans development and the input received.

2.4 Existing & Planned Conditions

The City of Kawartha Lakes is a fast-growing community and important tourism destination, with an extensive existing network of trails, sidewalks, and cycling routes in its urbanized communities, and numerous rural routes for touring cyclists to explore. The development of a connected and continuous network of active transportation routes and facilities was one of the primary objectives of the ATMP process.

The goal of the AT network development process, detailed in Section 4.0 of the ATMP, is not intended to “reinvent the wheel” or “overstep past efforts”. The goal was to leverage the considerable successes of the City of Kawartha Lakes and build upon the existing and previously planned routes and facilities to establish a cohesive system of linkages for users of all ages and abilities.

Establishing a comprehensive understanding of the foundation from which the network was being developed was completed by reviewing and analyzing three components:

- > Location and status of existing and planned routes and facilities
- > Appropriateness of existing conditions and opportunities
- > Existing demand on the system
- > Local trip generators i.e., the major and minor destinations that create an interest in using active modes

The following is a summary of the assessment, the results and how it was used to inform the development of the ATMP network and other supporting recommendations found within the ATMP report.

2.4.1 Existing & Planned Conditions

Existing and planned conditions represent all of the active transportation facilities that have been implemented by the City or have been approved for future implementation. Mapping of the existing and previously planned conditions are provided in the City’s GIS database and through preliminary project mapping which formed the basis for the ATMP network.

The following is a summary of the facilities that are currently found within the City of Kawartha Lakes which accommodate active forms of transportation. Three (3) types of features were considered-existing, previously planned, and previously promoted- each of which are different in terms of condition, political support, design, and implementation. These are described in Table 5 below.

175 km

Sidewalks

350km

Bike Lanes

530 km

Touring Cycling Routes

300 km

Trails

**detailed in the trails master plan update. Off-road trails are not considered part of the scope of the ATMP but are a key consideration in a continuous and connected system of AT routes.*

For such a wide geography, the City of Kawartha Lakes has almost 1000 km of facilities that accommodate active transportation, providing access to major and minor destinations, areas of

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interest, areas of natural and cultural significance and recreational offerings.

Facility Type	Description
Existing	<ul style="list-style-type: none"> > Existing routes and facilities include any active transportation that has been built by the City and / or a partner agency which contributes to the overall AT network (including off-road trails). > Contextual on-demand information was collected based on publicly available information, data collected through traffic counts and field investigations, including the locations of parks/open spaces, key destinations, and land uses.
Previously Planned	<ul style="list-style-type: none"> > Include those that have been identified and adopted through existing City planning documents but have not yet been implemented. > These routes and facilities were identified using information collected from a wide variety of documents, including Environment Assessments, detailed design drawings, and plans such as the Lindsay Continuity Plan and Bobcaygeon Active Transportation Plan, as well as other sources of information such as municipally endorsed routing and routes recommended by stakeholder groups. > Also considered were planned capital projects that could be leveraged as an opportunity to incorporate AT infrastructure or where infrastructure was identified.
Previously Promoted	<p>Recommended / promoted cycling routes were generated based on considerable stakeholder input from a local cycling group and cycling enthusiasts and have some alignment with links in the Lindsay Continuity Plan. Notably, these routes are significantly different in urban and rural areas. They include:</p> <ul style="list-style-type: none"> > Cycling Touring Routes: Routes which are promoted by Kawartha Lakes Tourism and consist of nine continuous loop/connector routes, that typically connect urban settlement areas via rural roads > Secondary Cycling Routes: Routes that consist of a series of alternate routes that complement and enhance the main Cycling Touring Routes. > High Traffic Cycling Routes: Routes that consist of a series of shorter segments identified as having relatively high traffic. These segments are identified as a Cycling Touring or Secondary Cycling Route.

Table 5. Summary of Existing and Previously Planned Condition Considerations

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Not all information was “created equal” and as noted above, each of the three components of the existing and planned conditions has to be assessed to determine how it would be incorporated into the ATMP network development process. The following is an overview of the various data sets and source information that was used to establish the base conditions for the ATMP and the way in which they were each reviewed / incorporated into the network development process, as documented in Section 4.0 of the ATMP report.








	Input	Inclusion
Existing	Sidewalks	
	Bike Lanes	
	Trails	
Planned	Lindsay Continuity Plan – Proposed on-road routes	
	Development applications / site plan applications	
	Capital roadway improvements as identified through the budget process	
	Kawartha Lakes TMPU project recommendations	
Promoted	Bobcaygeon Active Transportation Master Plan – Cycling Routes	
	Kawartha Tourism Cycling Touring Routes	

Table 6 . Summary of Source Information for Base Mapping & Network Application



Proceeds no changes



Proceeds review required



Select options proceed, review required

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All of the existing and previously planned routes underwent a conditions assessment via a desktop investigation. The assessment leveraged source information from the City's GIS database, Google mapping tools (Google Earth, Streetview, etc.), Ontario Provincial Parks, Kawartha Conservation Authority, Strava heat maps, and videos and photos provided by trail users. Information was gathered through this process regarding route length, sightlines, surface types, surrounding context, road width, shoulder conditions, amenities, user types, parking, connectivity, environmental features, ownership, and crossings.

The review was intended to assess the need for improvements to existing and previously planned routes considering the way in which they were being incorporated into the ATMP network process. It was also used to inform the selection of potential enhancements, identify additional information to be gathered via field work, and provide the foundation for an asset management tool for the existing and future AT network.

Key takeaways of the existing conditions assessment included:

- > Identified routes were not signed, with the exception of some inconsistent legacy signage (in both urban and rural areas)
- > Urban areas currently have almost no on-road cycling facilities
- > Urban areas have a good sidewalk network in their central cores, but sidewalks are much more sparse in the urban periphery
- > Rural cycling routes mostly consisted of a mix of unpaved shoulders and no shoulders, with some sections of paved shoulders.

Now knowing the location of the existing and planned routes; the project team undertook a more detailed review of AT considerations and conditions to establish an even more fulsome picture of:

1. The condition of the existing and planned routes and facilities
2. The demand by existing users based on publicly sourced data sets
3. The trip generators i.e. the destinations that create interest in or need for AT trips



Existing & Planned Route Conditions

Approximately 530 kilometres of cycling touring routes and existing conditions were reviewed via a comprehensive desktop review and field investigation. As noted above, the intent was to review relevant information regarding the existing context and conditions to determine the overall facility compatibility. Information was gathered including the length of the facility, sightlines, status, surface type, surrounding context, width / shoulder condition, amenities, demand, user type, parking presence, connectivity, environmental features, ownership, and crossings.

The information was summarized in a detailed excel spreadsheet which has been provided to City staff as part of the overall project record. Once the information had been gathered an assessment of facility compatibility was undertaken. The facility compatibility review included a consideration of the route alignment relative to overall network goals and objectives and a review of Ontario Traffic Manual Book 18, specifically the facility selection nomograph which identifies a preliminary level of separation based on the conditions, average annual daily traffic volumes and posted or operating speed of the roadway. In addition to the two key considerations noted, existing and planned facility types (as identified) were reviewed, and the overall feasibility of the future needs was determined. Three potential results were determined:

- > Proceeds – with minor improvements - Alignment is supported, and facility is likely feasible with minor improvements to address guidelines and standards (i.e. traffic calming, signage, extension of facility/route)
- > Proceeds – new facility needed - alignment is supported, and new facilities or significant upgrades are needed to address guidelines and standards.
- > Does not proceed - Feasibility is challenging and/or the route connectivity is limited in the overall AT network context. Alternate routes should be investigated.

The results of this assessment were mapped as part of Interim Deliverable #1 and presented at Task Force Meeting #4 for commentary and consideration. To successfully implement the plan, it is critical for planned or promoted routes to be feasible and suit the anticipated users, following provincially accepted guidelines, standards, and municipal priorities. A detailed overview of the results is provided as part of the consultation record. An example of the type of output prepared is provided in Figure 3.

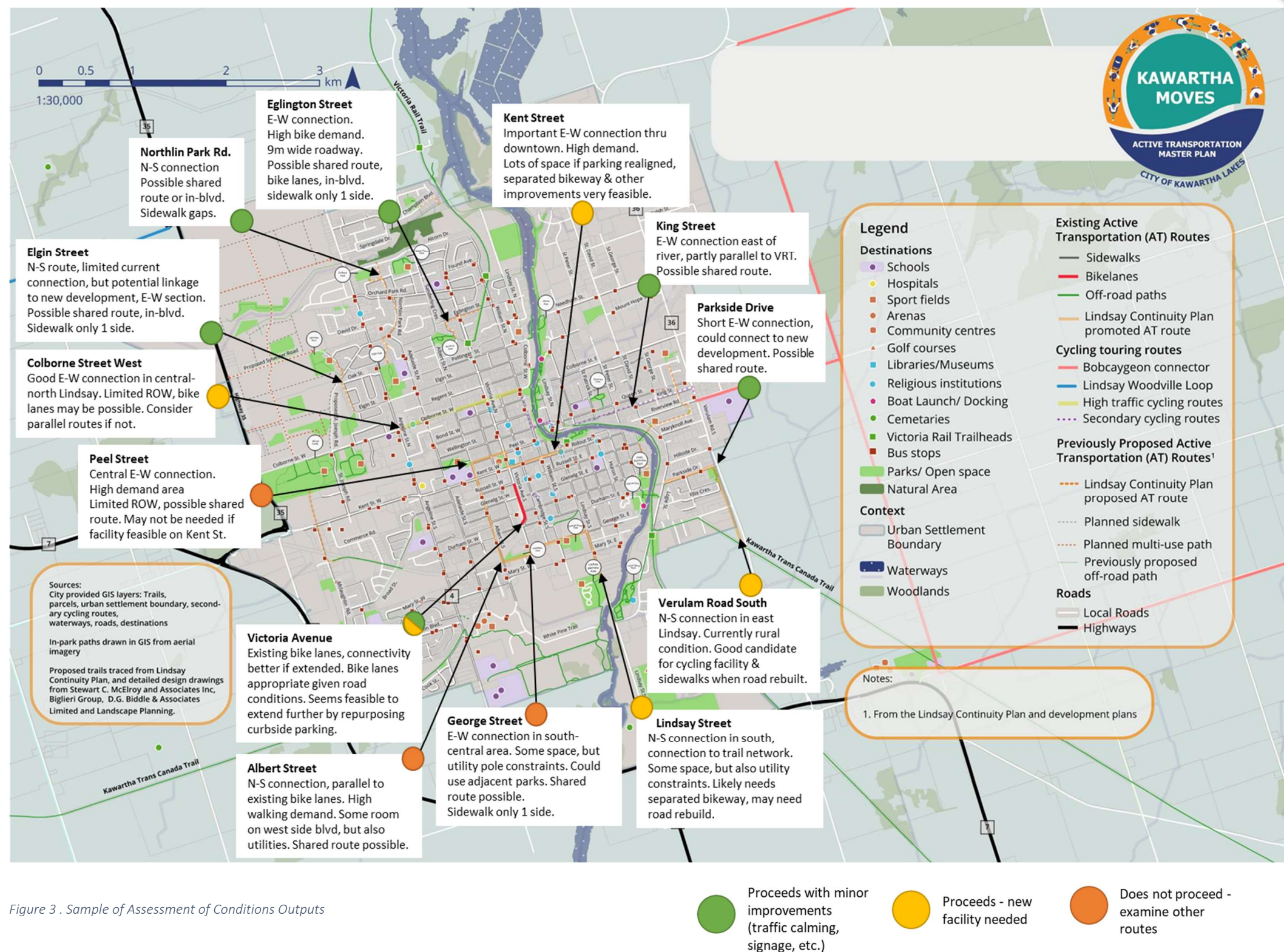


Figure 3 . Sample of Assessment of Conditions Outputs

Demand by Users

Understanding where active transportation users’ currently like to bike, walk, roll, etc. can help to provide a snapshot of the active transportation trends, opportunities and potential improvements that could be addressed through the development of this ATMP. From the previous assessment we know where the facilities exist, where they are planned and the condition of those routes / facilities. With information regarding where people currently like to use active forms of transportation, it provides further guidance on locations where existing routes could be improved, planned routes could be prioritized and / or missing links that could be explored through the development of the AT network.

As part of the project scope, traffic counts were identified at four locations due to their existing or potential demand for active transportation or other forms of transportation, and the potential presence of user conflicts. The intent was to use this information as the basis for future data collection and assessment of the impact of ATMP implementation. However, for the purposes of plans development, the information was considered as a means of demonstrating the basis from which improvements can be made, with specific areas identified for improvement prioritization. It is important to note that the traffic counts were completed in September 2021, meaning the data does not capture the full capacity of active transportation in the summer months, nor does it highlight the impacts to AT from the winter weather. Counts were completed during peak hours on the weekday as well as the weekend. Table 7 provides a summary of the traffic count results.

	Pedestrians	Cyclists
Colborne Street & Water Street	624	14
Parkwood Street & Sherwood Street	242	48
Logie Street and TCT crossing	76	22
Kent Street West between Commerce Road and Adelaide Street	269	72

Table 7 . Summary of Traffic Count Information Gathered in Kawartha Lakes September 2021

The traffic counts were further supplemented by publicly prepared data and information about existing use and route demand populated by Strava. Strava is a popular app and internet service that helps people track, record, and share information about their cycling, running, hiking, and other outdoor activities. They provide aggregate data to the public and municipalities, including via a heatmap that visualizes trips. It should be noted that this data only shows certain trips logged by users of the Strava app, and as it reflects voluntary and subjective information, it is not considered statistically valid. However, it does provide some insight about active transportation travel patterns in a given area – especially recreational and fitness-focused trips. As such, it likely overrepresents longer-distance trips, such as touring cycling trips, and underrepresents shorter and more utilitarian urban trips. Key takeaways from the analysis of Strava heat mapping in Kawartha Lakes are:

- > High volumes of walking activity occur within the urbanized areas of Kawartha Lakes, including Lindsay, Bobcaygeon, Fenelon Falls, and Omemee. The TCT has moderate activity, as does the VRT to Lindsay.
- > High volumes of cycling activity along the Victoria Rail Trail (VRT) from Kinmount to Lindsay and Kawartha Trans Canada Trail (TCT). Additional high activity clusters include the Lindsay and Bobcaygeon Urban Areas.
- > There is high cycling demand on much of Lindsay’s streets, including significant activity along the VRT and TCT.
- > There is high to moderate cycling demand on some of Bobcaygeon’s streets. Notably, there is high demand on some of the rural roads that connect into Bobcaygeon.
- > There is high to moderate cycling demand on some of Fenelon Falls’ streets, including high volumes along the VRT.

The graphics to the right illustrate a combination of the traffic counts and assessment of existing demand based on the available data. The more detailed set of maps that were prepared and presented during the plan’s development are included in the consultation record.

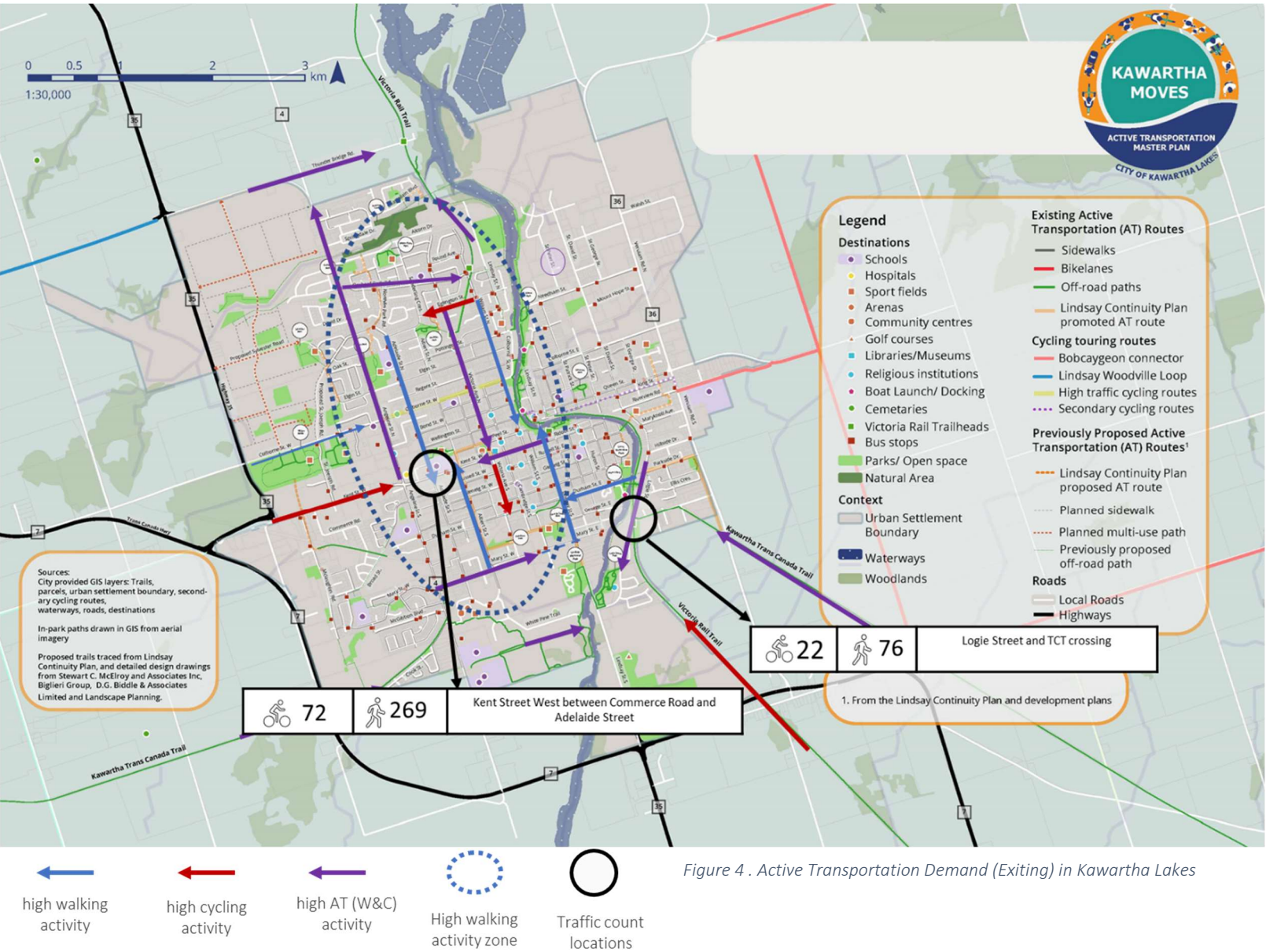


Figure 4 . Active Transportation Demand (Exiting) in Kawartha Lakes

AT Generators & Hubs

Trip generators are locations within an area that are either considered the origin or destination of a trip that is being taken which requires an individual to engage in transportation and mobility. Each and every day people travel to and from different locations undertaking trips where they are required to move using some form of transportation. For each trip an individual has the choice as to how they plan to “get there” i.e. what mode they will use to travel there and the route that they will take.

The type of destination drives the type of trip experience or purposes. Under the users and uses section of the ATMP, there are a number of different types of trips that could occur including utilitarian trips from home to trip or work, recreational trips for fun or fitness trips for health. These trip purposes are not mutually exclusive, but the categories help to better understand which type of trips could more likely be undertaken by active forms of transportation or in a more multi-modal approach.

Depending on where people live, the travel time and distance to destinations can vary significantly. For a City like Kawartha Lakes, the people who live within the communities of Bobcaygeon, Lindsay and Fenelon Falls have access to many of their day-to-day trip needs whereas the individuals who live within the rural areas require longer distance and time trips to get to where they need to go.

There is an understanding and expectations that for trips that are recreational or fitness in nature where the destination is for a similar purpose there is a greater capacity and interest for active forms of transportation no matter if the origin is in the communities or within the rural areas. Conversely, due to the time limited nature of utilitarian trips like school and work, if the destination is close enough (e.g. within 5-7km for cycling and within 1.5km for walking) there may be a potential to harness more active transportation trips; however, for trips beyond those distances it may be more of a challenge to convert or shift trips by providing more robust, safe, and comfortable infrastructure and amenities.

To help better understand what this “looks like” in the City of Kawartha Lakes the entire geographic area of the City was reviewed and major destinations that are appealing too / relevant too active transportation mode use was undertaken and presented. By understanding these destinations and the assessment around it; the foundation of expectations around where people need / want to travel and which of those destinations might be appropriate for active transportation travel. Similarly, the assessment allows for a greater understanding of areas and locations where AT enhancements could be prioritized because of appropriate trip distances / lengths.



Part 3.

Vision & Values

The purpose of a long-range strategic master plan such as the City of Kawartha Lakes Active Transportation Master Plan is to establish a guiding document that provides recommendations, strategies, policies, and programs that have been intentionally identified for the purpose of achieving the goals and ambitions of the municipality and its residents. As demonstrated in Section 1.0 and 2.0 of the ATMP, the City of Kawartha Lakes has established a strong foundation of support for and direction around major community priorities which include but are not limited to smart growth, environmental sustainability, servicing, and healthy community design. The ATMP aligns with these documents and their recommendations and aims to complement that work by providing actionable, feasible and policy driven solutions to achieve greater accessibility, mobility, and choice.

Through the ATMP process, the City and the consulting team ensured that public interest and opinion was considered at the forefront and used to determine the preferred outcomes of the process. The engagement was meaningful and demonstrates the City's commitment to working with local residents and stakeholders to drive future initiatives and priorities. Based on the consolidation of background information and the input received, and typical to a master plan process a vision and series of principles were prepared and adopted. Chapter 3.0 provides a summary of the engagement undertaken, input received and the confirmed vision and principles where serve as the foundation and guideposts for the ATMP.

The information contained within this chapter serve the City's commitment to residents, decision makers and stakeholders as to the ambition and the potential that can be realized related to active transportation. It marks a shift in thinking around accessibility and mobility and embraces the change that needs to occur in order for the City to evolve from a car dominant location to one that provides options for people of all ages and abilities to move in a way that is accessible, safe, comfortable, and enjoyable.

These ambitious represent what could be achieved in 20 years and beyond and does not represent the vision for the next year. It will take time, effort, a collaborative spirit, and champions but has the potentially to provide positive change for the City.

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

3.1 Needs & Input

The ATMP was developed based on an iterative and engagement-focused approach meaning that, where possible, engagement at major technical milestones was undertaken and used to inform and confirm project outcomes. As noted in Section 1.0, there were a number of touchpoints for members of the public, stakeholders, agency representatives, decision makers and members of the task force.

The following is a summary of the engagement program including intents, purposes, milestones which were used to inform the development of the ATMP. In addition to the formal engagement activities, the consultant team served as an ongoing advisor to the task force and City staff providing input and guidance on key issues as well as ongoing coordination of the project process.

A more detailed overview of the input received and how it was used is provided on the following pages.

Round	Overview	
Pre-Consultation / Round 1	<ul style="list-style-type: none"> > Public outreach through Jump In Page > Emails / Letters to agencies and stakeholders > Survey #1 > Public Input Session #1 > Task Force Meeting #1, #2 and #3 > Stakeholder Workshop #1 	<ul style="list-style-type: none"> > Address challenges and conflicts between users through design and management > The integration of ATMP with other existing policies and plans. > Need for education and promotion to drive a wider culture shift
Round 2	<ul style="list-style-type: none"> > Public outreach through Jump In Page > Survey #2 > Promotion and outreach throughout the community > Task Force Meeting #4 & #5 	<ul style="list-style-type: none"> > Confirmation of the proposed AT network. > Desire for greater coordination and integration of the TGPU and the ATMP. > Providing connections to off-road trails.
Round 3	<ul style="list-style-type: none"> > Public outreach through Jump in Page > Local events and activities through task force > Individual stakeholder interviews and meetings > Task Force Meeting #6 	<ul style="list-style-type: none"> > Consideration of new and upcoming developments in the ATMP. > Evaluation of different design interventions. > Exploring various alternatives for priority projects.

Table 8 . Summary of Engagement Milestones

3.1.1 Pre-Consultation and Round 1 Engagement

The purpose of pre-consultation and the first round of engagement was to work with community members and stakeholders to identify the opportunities, challenges, constraints and gaps in the existing active transportation system and municipal offerings. Once the input was received it was used to develop a series of assumptions regarding existing and future potential active transportation users. The first round of engagement was undertaken between August 2021 and August 2022, reflecting a series of pre-consultations, online engagement opportunities, promotion, outreach, and relationship building.

Key Words

Within the first round of engagement, three major themes arose related to AT within Kawartha Lakes including a lack of safety, user conflicts, and limited amenities for active transportation users. For many participants, investment to improve AT across these three themes was important for daily exercise, encouraging local business, adapting to an increased demand for AT following the COVID-19 pandemic, and supporting active transportation linkages between communities, particularly for those on bike, foot, or canoe/kayak. A brief summary of the major themes and how that input was applied to the ATMP are summarized below:



Lack of Safety

Keeping safety in mind is a key pillar of this ATM vision. This will include an approach that plans for connectivity between existing trail routes and on-road facilities, as well as the user experiences for on-road facilities

“In Fenelon Falls, I would have to tell them that the trail along the east Cameron lake corridor is not useable for safe active transportation”

How Input Was Used

- > Safety is a key pillar of the plan reflected in planning, design, and phasing
- > Where possible the AAA approach will be prioritized
- > Commitment to highest order of design where feasible



User Conflicts

On-road active transportation facilities both in urban and rural areas face the challenge of interactions with vehicular traffic. Building upon the guidance from OTM Book 18, properly planning for and mitigating unsafe on-road interactions between pedestrians, cyclists and motorists will be a priority of the ATMP.

“County Road 8 between Fenelon and Bobcaygeon has safety concerns (highway speeds, large trucks, narrow pavement)”

How Input was Used

- > Integration with the trails plan to prioritize user comfort
- > Identification of more detailed user profile considerations and engagement to refine in Kawartha context
- > Re-prioritization of space on municipal roads for vulnerable users



Amenities

The ATMP recognizes that the active transportation network does not end with just the routing. A fulsome network also addresses end-of-trail facilities (such as bike parking), amenities, and signage. Planning strategically for the entire cycling or walking journey will be incorporated into our network development.

“My wife, an older friend, and the teenager next door are all reluctant to bike around town because they don’t feel safe doing so... Nowhere in the downtown area are there spots to lock-up bicycles.”

How Input was Used

- > Identification of locations where amenities can be implemented
- > Prioritization of locations where highest need is resented
- > Range of amenities and information about location

Gaps & Missing Links

Approximately 530 km of cycling touring routes were reviewed through a desktop investigation to identify the length (Start and end points), sightlines, status, surface type, surrounding context, width / shoulder conditions, amenities, demand, user types, parking, connectivity, environmental features, ownership, and crossings. To identify these features, data was sourced from Google Earth/Streetview, the City GIS database, Ontario Provincial Parks, Kawartha Conservation Authority, Videos and photos by trail users, and Strava Heat Mapping.

The overarching purpose of the desktop review was to:

- Assess the need for improvements to existing trail routes
- Inform the selection of potential enhancements
- Provide the foundation for the asset management tool of existing and future network
- Identify additional information that should be gathered in the field.

Notably, the existing active transportation conditions in Kawartha are represented by three types of routes which represent different levels of political support, condition, design, and implementation.

Within the rural areas, existing conditions primarily pertain to the promoted touring routes and do not include specific AT routes beyond trails. The previously promoted routes include:

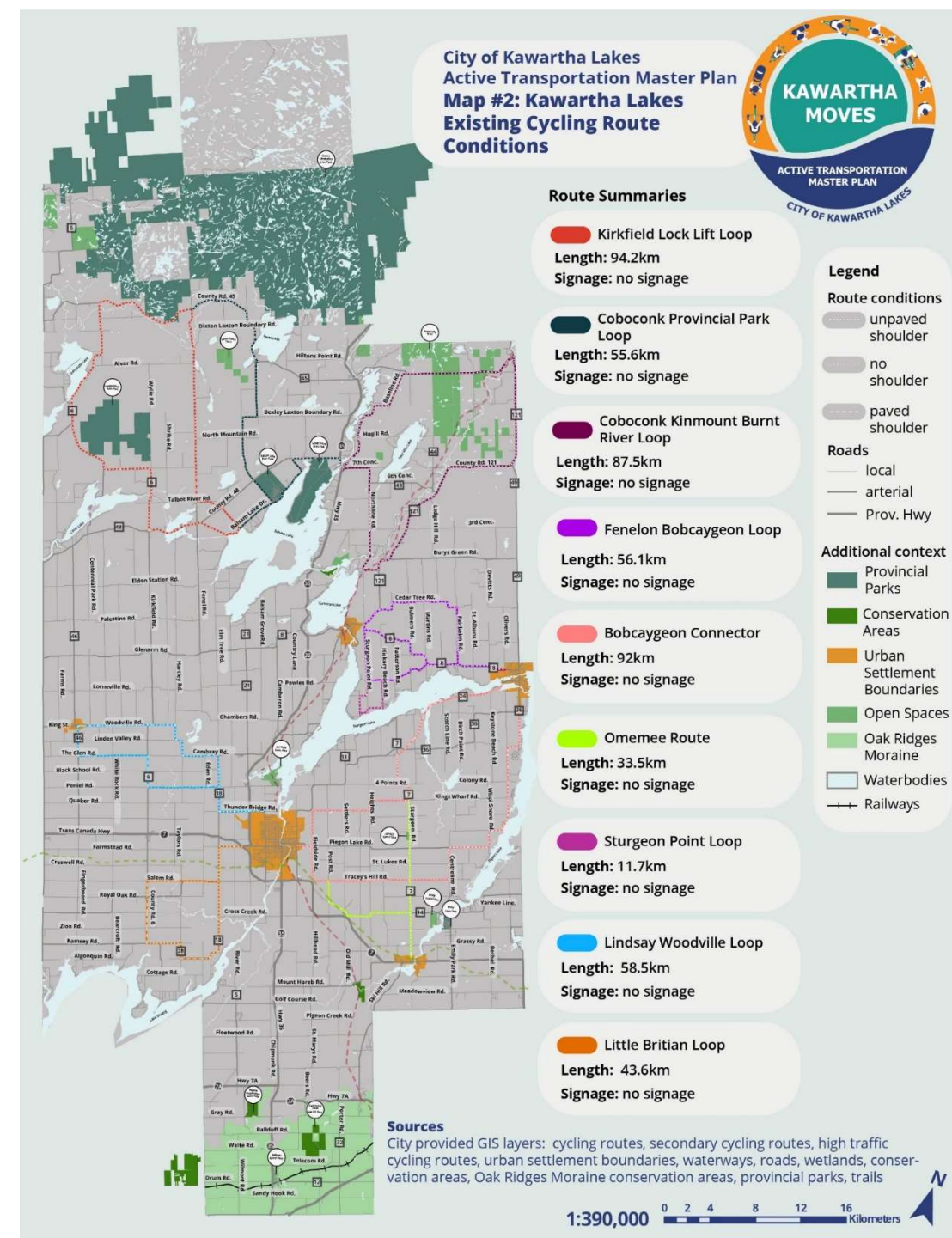
Cycling Touring Routes: These are routes that are promoted by Tourism Kawartha on their webpage and in a pdf map. They are also a layer in the GIS database. There are nine (9) separate loop/connector routes that typically connect urban settlement areas via rural roads.

Secondary Cycling Routes: These routes are identified in the GIS database. They reflect a series of alternative routes to the main Cycling Touring Routes.

High Traffic Cycling Routes: These routes are identified in the GIS data base. They reflect a series of shorter segments identified to have high traffic. These segments are generally also identified as a cycling touring route, or secondary cycling route.

Conditions by route...

- █ **Kirkfield Lock Lift Loop**, mostly unpaved shoulder, some sections with no shoulder
- █ **Coboconk Provincial Park Loop**, generally no shoulder
- █ **Coboconk Kinmount Burnt River Loop**, mix of unpaved shoulder or no shoulder
- █ **Fenelon Bobcaygeon Loop**, mostly unpaved shoulder, some sections with no shoulder
- █ **Bobcaygeon Connector**, , mostly unpaved shoulder, some sections with no shoulder
- █ **Omemee Connector**, unpaved shoulder
- █ **Sturgeon Point Loop**, generally no shoulder
- █ **Lindsay Woodville Loop**
- █ **Little Britian Loop**, generally paved shoulder



key takeaways of the existing conditions assessment were...



No signage
advertising the routes

Many routes had
minor road crossings



Mix of paved &
unpaved shoulders,
and no shoulders

User Profiles

User profiles were used to identify themes in terms of how and why people use active transportation in Kawartha Lakes in order to identify a series of “profiles” used to inform future design. It was recognized by the planning team that these user profiles do not reflect the unique experiences of racialized or indigenous populations, nor the impact of systemic racism and settler-colonialism can have on mode choice. At the time, we have not engaged with the appropriate populations to effectively speak to these user-profiles.

To help illustrate and provide a more holistic outlook on AT trip types and users, six preliminary AT user profiles were developed. These user profiles were developed through discussions and engagement with the community, in order to reflect and illustrate some of the challenges, opportunities, needs, and desires of the various demographics in Kawartha Lakes, and to personalize them. The user profiles do not reflect any particular individuals but are meant to represent and personalize groups of people of varying ages, abilities, needs and desires. During later stages, these user profiles were refined based on input to eventually establish a total of six user profiles.

This exercise reflected not only helped build a more in-depth and real-world representation of AT users, but also helped us to identify underlying issues related to AT travel in Kawartha lakes such as the interactions between modes, particularly between AT users and motorists. The user profiles are also meant to be used as a tool during implementation to ensure that AT projects and programs continue to be designed and managed in ways that reflect the lived experiences of a variety of people who walk and bicycle for a variety of reasons. The user profiles are also intended to be used as a tool to increase the effectiveness of programs and communication efforts by telling a compelling story about the many different people who make active trips for a variety of reasons and purposes, helping to demonstrate that active transportation serves more than just for a narrow demographic of fit and fearless people, but a wide cross-section of community members. This insight gained from the user profile activity has been used as the basis for developing the education and encouragement strategy.

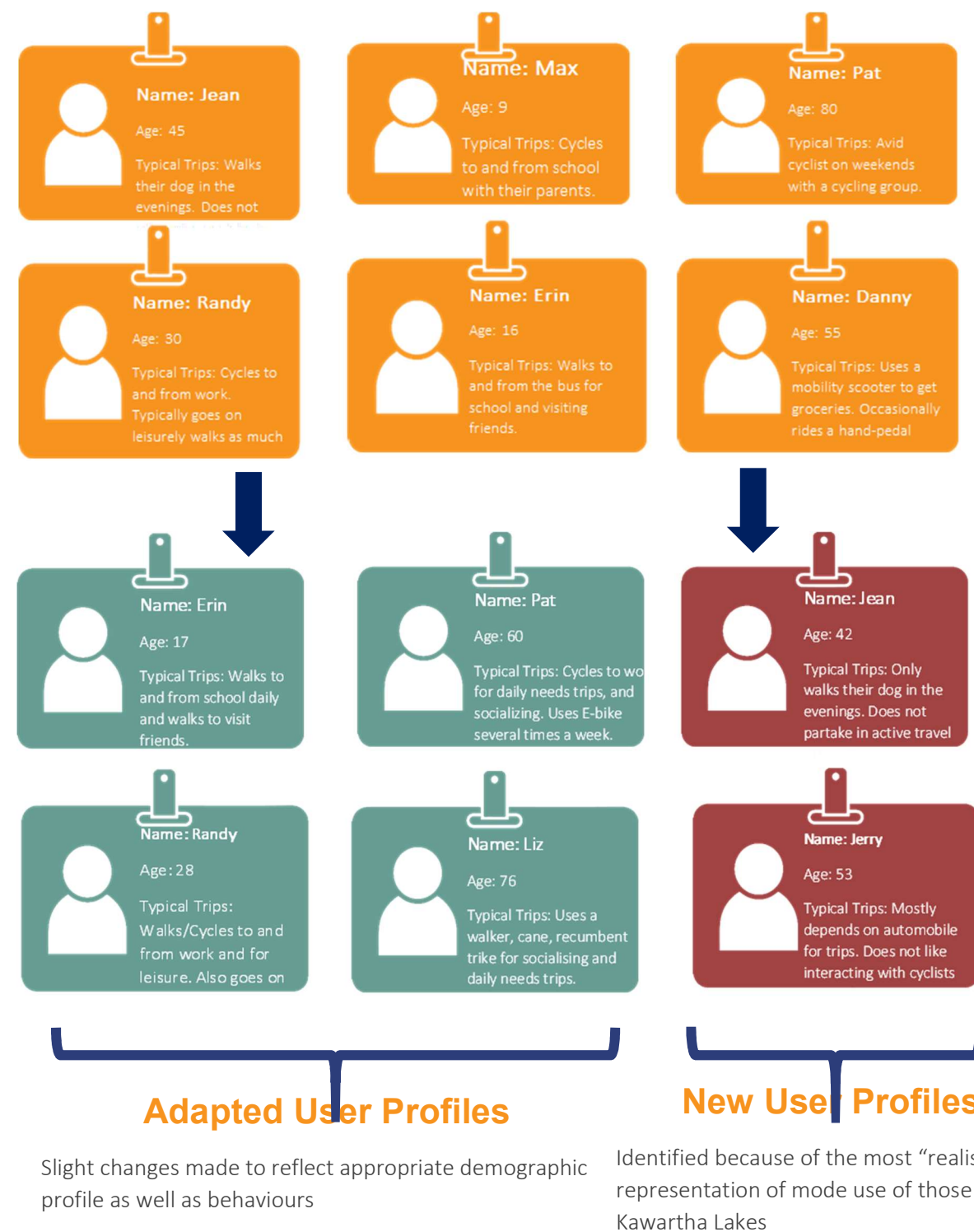
How Input was Used

- > From the survey responses, we were able to further refine and adapt the six preliminary AT users that was developed from the input from public survey #1. Profiles have been reviewed based on a thorough scan of age, gender among other demographic criteria. Additionally, two new user profiles have been added to reflect how AT hasn't been used

3 Ways the Profiles Can Be Used:

- > Option 1: Realize the Vision-profiles can be used to make generalized AT design user groups more related and articulate how the vision of the plan will be achieved and can impact people's lives following the implementation of the ATMP after 5,10, and 20 years.
- > Option 2: Full integration – using the profiles as the basis for all analysis completed i.e. evaluating and selecting alternatives by assessing and applying the level of comfort of routes and facilities and selecting priorities based on a balance of user needs.
- > Option 3: Hybrid-Integrating the profiles into select key elements and design as well as using it as the basis for developing the education and encouragement strategy

No matter the approach, this plan recommends that Municipal Staff Utilize the profiles as the basis for monitoring the success of the ATMP.



3.1.2 Round 2 Engagement

The purpose of the second round of engagement was to inform the review and selection of network links, confirm preferred facility design options, and identify phasing and priority preferences. The second round of engagement was undertaken between October 2022 and April 2023 reflecting a series of engagement opportunities, promotion, outreach, and relationship building.

Vision & Goals

During Taskforce Meeting #3 in October 2022, members were presented three vision statement options and asked to provide input on and confirm the preferred vision statement as the basis for the development of the ATMP. The options were as follows...

Option #1 Short and pointed

Active transportation for all, for our future and for fun

Option #2 Detailed

Active transportation in Kawartha Lakes is an accessible option for anyone and everyone who lives, works and plays within the City. Kawartha Lakes is committed to equitable and feasible solutions that accommodate and provide mobility for people of all ages and abilities

Option #3 Hybrid

Active Transportation in Kawartha Lakes is planned, designed, and implemented with equity, accessibility and feasibility in mind.

Members of the taskforce, did not confirm this vision statement, Rather, confirming an alternate hybrid option which provided more clarity regarding the City's priorities and principles. Building upon this input, a public survey was conducted which also presented the three vision options with the majority voting for the "Short and Pointed" which was integrated within the recommendation from the Task Force.

In addition to the vision statement eight (8) AT principles were identified for the ATMP and included as part of the task force and public consultation process. The principles are a series of commitments or objectives that are intended to be achieved through the implementation of the ATMP. The statements are consistent with those used for the TMPU and were presented more for information as opposed to consultation. Small changes were made to some of the wording but as a whole the eight principles were maintained and used to establish a set of four ambitious goals for the City.

How Input was used

- > Input helped revise the identified principles
- > Informed how the vision and principles could be achieved and measured
- > Emphasized how the vision and principles affect residents and their quality of life
- > Informed the development of the plans ambitious goals which highlight the City's vision for future success, aligns with its core values, provides multi-pronged commitments, and established the basis for all plan recommendations

Network Approach

When selecting a network approach, there are several considerations at play including user needs, conditions, opportunities, road type and input provided. For example, some of the considerations included building upon existing conditions, focusing on on-road linkages or better reflecting user needs relative to existing or planned routes.

Additionally, while active transportation typically refers to two primary users (or modes) of self-propelled transportation (Pedestrian or Cyclist), there are a number of other frequently used and emerging technologies that are used such as e-bikes, scooters in-line skaters, and cargo bikes that are important to consider when planning and designing active transportation. No matter the considerations, a network development approach should be an iterative one balancing feasibility with overall plan priorities and input received.

Three network approach options were identified and input from the task force and public was solicited. The benefits and drawbacks were noted for each option and a facilitated discussion and public input survey was used to confirm the preferred. The options were as follows:

Option #1 Major Area

Emphasis placed on identifying AT improvements within the built-up areas and communities of the City

Option #2 Connectivity

A fully continuous and connected system of AT routes will be identified

Option #3 Road Type & Condition

Routes and route design will be determined based on the type of road classification, design guidelines and standards with feasibility at the core

A hybrid option between #1 and #2 was selected based on the input received. The benefit is that wide spread connectivity will be achieved for different AT users; however, the cost of the network will be considerable and the implementation will be a challenge even within the timeframe identified.

How Input was Used

- > The input that was provided and the direction received regarding the network was foundational to the development of the ATMP network. With the confirmed direction, the consultant team was able to move forward with an iterative network development approach to confirm the proposed AT routes for the City.
- > Once the AT routes were confirmed, phasing, costing, prioritization and implementation considerations were developed based on the planning and design assumptions made.

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3.1.3 Round 3 Engagement

The purpose of the third round of engagement was to inform the confirmation of the proposed network – including proposed links and design solutions – which were used to identify network phasing and prioritization. In addition, the third round of engagement also focused on the development and confirmation of a series of master plan recommendations which will be used to provide direction on the City’s actions and next steps in support of AT. The third round of engagement was undertaken between April 2023-January 2024 reflecting a series of engagement opportunities, promotion, outreach, and relationship building.

Network Confirmation

At the 5th Task Force meeting, the consultant led task force members through a workshop activity to review and provide comments on the proposed network and design solutions. A comprehensive presentation was given highlighting the routing selected and the approach used to identify them. In addition, an educational session was provided on the types of design solutions that would be considered based on provincially accepted design guidelines and standards. Large scale maps were placed on the walls and task force members were encouraged to provide comments to revise or enhance the recommendations.

How input was used

- > Routes were refined including the removal of some routes that had been implemented and some additional routes were considered
- > Routes were prioritized based on community needs (comfort and safety) to identify a priority AT network for the City
- > Network was confirmed, phased and costed

Recommendations

There are several reasons for providing a set of recommendations for a functional master plan including the provision of guidance to turn the plans vision and goals into specific actions, the development of new or modify existing policies, establish targets for annual decision-making, funding, and phasing, and sets out processes and practices for internal and external coordination.

Guidelines

Establishing consistent direction on how to design AT infrastructure, amenities and supportive features

A total of 15 guideline recommendations were confirmed

Policy

Embed AT-supportive directions within existing policy documents and establish new policies to enhance AT planning practice

A total of 7 policy recommendation were confirmed

Implementation

Processes and practices that integrate AT decision making into day-to-day practices for municipal staff as well as future partnerships

A total of 13 implementation recommendation were confirmed

Program

Initiatives that aim to influence and adapt the behaviours of individuals to generate a greater interest in, and use of, active modes

A total of 10 programming recommendations were confirmed

Monitor

Mechanisms to determine the effectiveness of the ATMP’s implementation and opportunities for adaptation and update

A total of 10 monitoring recommendation were confirmed

A series of preliminary recommendations were presented to the task force as well as to key stakeholders and agency representatives. Through the task force meeting (#6) as well as one on one stakeholder meetings / input via email the recommendations were refined and confirmed. Similar to the proposed network, the recommendations were also prioritized to identify the key initiatives that would be required to achieve success. As part of the process it was determined that an additional category would be needed – “Network” – which will focus on providing direction on when and how the network is to be implemented as part of the ATMP. New recommendations were not developed but some of the previous recommendations were reorganized into the “network” category.

How it was used

- > Recommendations were reviewed and refined
- > Recommendations were reviewed and re-organized to highlight the network category of recommendations
- > Recommendations were prioritized to highlight the top recommendations for success of the ATMP



3.2 Master Plan Foundations

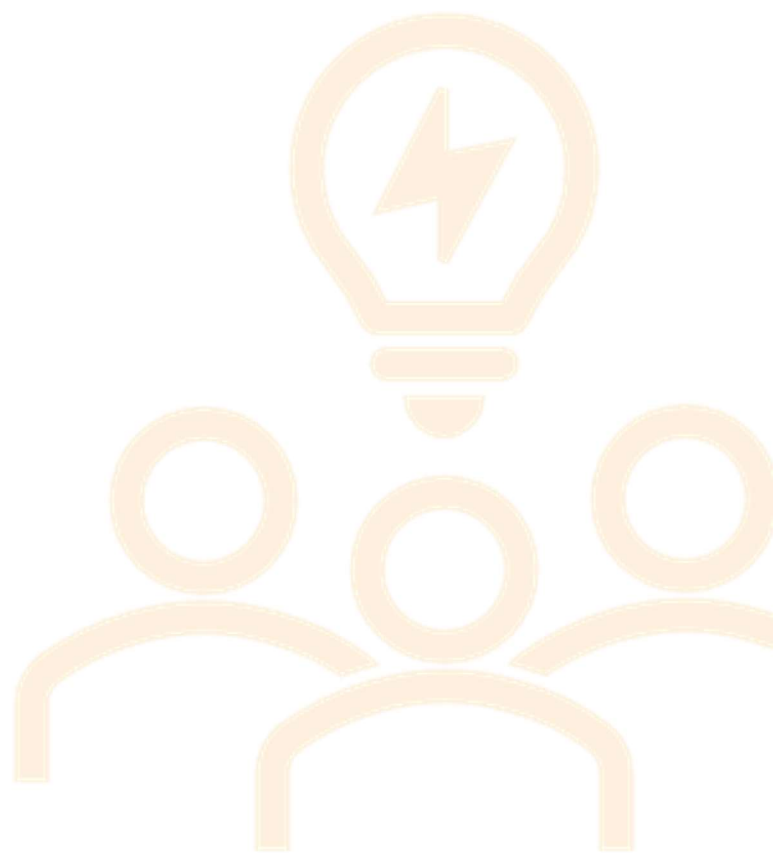
The foundation of the City of Kawartha Lakes ATMP are a series of commitments and statements that articulate the long-term aspirations and goals that are set to be achieved through the implementation of the plan recommendations. It is best practice for a vision statement and series of supporting details be established early in a master planning process. Once the statements have been confirmed they are used as the basis for developing, confirming, and prioritizing master plan recommendations. There are three (3) core “foundational statement” that have been developed as the basis for the Kawartha Lakes ATMP. They are as follows.

Vision

A vision is a clear and articulate statement that identifies the aspirations and desired outcomes specific to the master plan topic. In the context of this plan the vision articulates the desired future for the expansion and enhancement of active transportation throughout the entire City of Kawartha Lakes.

The Kawartha Lakes ATMP vision statement was developed based on a considerable amount of input from the City’s ATMP Task Force. Three (3) alternatives were presented for the Task Force’s review and consideration. Based on comments, questions and edits provided the following statement was selected as the preferred and confirmed as the City of Kawartha Lakes ATMP vision for the future.

*Active Transportation
in Kawartha Lakes is
planned, designed,
and implemented
with equity,
sustainability
accessibility and
feasibility in mind.*



Ambitious Goals

The vision statement sets the stage for what the City is aiming to achieve through its future active transportation efforts. The statement is ambitious and far reaching but does not have specific actions or targets that have been set to guide future work. The City of Kawartha Lakes ATMP is intended to be an action oriented, foundational, policy informing document which establishes and acts upon Municipal priorities related to sustainable and active transportation.

As such, a series of ambitious goals were identified. The ambitious goals were developed and defined based on a considerable amount of input from the Task Force and as a means of ensuring that there is clarity and communication around what the City wishes to achieve. More specifically the ambitious goals provide more details on the vision for future success and align with and support the City's core values as the basis for the development and prioritization of plan recommendations.

Five (5) ambitious goals were identified and confirmed including.

1. Access to active transportation is provided to all and is ensured no matter the location, trip type or trip purpose.
2. Urban and built-up areas throughout Kawartha Lakes are walkable places to live or visit.
3. Cycling is safe, comfortable, and connected throughout all areas of Kawartha Lakes.
4. Consistent and respectful understanding of how to safely use the road between all user groups is prioritized.
5. A feasible and evergreen master plan is achieved through partnerships, coordination, and internal management / collaboration.

Principles

The vision and ambitious goals set the targets for what the City would like to achieve. As part and in addition to those targets, it is also important to define the principles and the values that set the stage for how recommendations are selected and prioritized. Eight (8) principles were identified as the basis for recommendation selection and prioritization. These principles are the same for the ATMP and the City's Trails Master Plan. The same eight (8) principles are used to support the ATMP and the TMPU vision statements, however, the way in which they are defined is unique to each plan to ensure that:

- > The plans are synchronous and acknowledge they are both pieces of the overall enjoyment and comfort of using active travel in Kawartha Lakes.
- > The plans work together, rather than against each other, in implementation and phasing.
- > User-experience is at the centre of experience for both off-road and on-road facilities.

The principles for the City of Kawartha Lakes ATMP are as follows:

Design for User Comfort & Safety

By identifying routes and facilities that respond to the unique user needs based on the various mode types as well as user profiles / considerations

Provide Barrier Free Access

By providing solutions to both physical as well as nonphysical barrier to participation in active transportation activities

Connect Community Destinations

By identifying and prioritizing destinations throughout the City and recommending routes or signage linking those destinations in a way that reflects community needs and destination priorities

Identify Feasible Solutions

By considering the environmental, social, health and financial impact of different options to identify those that are the most realistic for the City.

Support Sustainable Implementation

By recommending strategies that address funding, maintenance, management and monitoring as well as achievable, phase-based targets.

Establish Clear Communication

By identifying unique region and community conditions and recommending actions to more clearly and effectively encourage AT use and participation.

Foster Stewardship

By addressing the issues of capacity both within and outside of the City and leveraging the involvement of community stakeholders through formal stewardship programs and supports

Establish Consistent Monitoring

By providing guidance on the targets, practices, and methods of monitoring as well as recommended supports to facilitate implementation





Part 4.

Connecting & Communicating

Connecting and communication refers to two of the major themes that emerged throughout the development of the City of Kawartha Lakes ATMP process. Through engagement, outreach and consultation, significant interest and support was provided for improving and enhancing the overall connectivity of the City for those who use active forms of transportation. In addition, a considerable number of opportunities were identified to improve overall communication, education and understanding around AT.

Three of the five ambitious goals of the City of Kawartha Lakes ATMP focus on the long-term goals and objectives which can be achieved through the implementation of a series of recommendations that target infrastructure, design, policies, and programs. The City of Kawartha Lakes Active Transportation Master Plan has been developed to provide City staff and decision makers with the necessary tools, strategies, recommendations, and resources to allow them to continue to plan, design and implement active transportation infrastructure, work with their partners to explore more ambitious projects and pursue additional community outreach and education. Recommendations have been identified in a series of categories (as noted in Section 1.0). Section 4.0 of the ATMP provides an overview of the approach used and outcomes generated in the development of four of the six recommendation categories.

The intent is for staff to work together to use the content in this section to:

- > Inform the identification of active transportation projects for implementation based on a proposed network of continuous and connected active transportation routes and facilities.
- > Identify preferred design solutions for recommended AT facilities and inform a consistent approach to the design of active transportation facilities and infrastructure based on provincially and nationally accepted guidelines and standards.
- > Inform future updates to municipal policies and plans to ensure that there is sufficient policy support and a framework in place to inform policy decision-making.
- > Identify options and opportunities for enhanced programming, communication and education related to active transportation within the city.

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4.1 Network

The content contained within this section of the report pertains to the development approach and outcomes used to identify the proposed active transportation network. A network is defined as a series of linkages that accommodate active forms of transportation, providing access to destinations within the City and to surrounding areas. There are three (3) recommendations that are the basis for supporting work on the ATMP network.

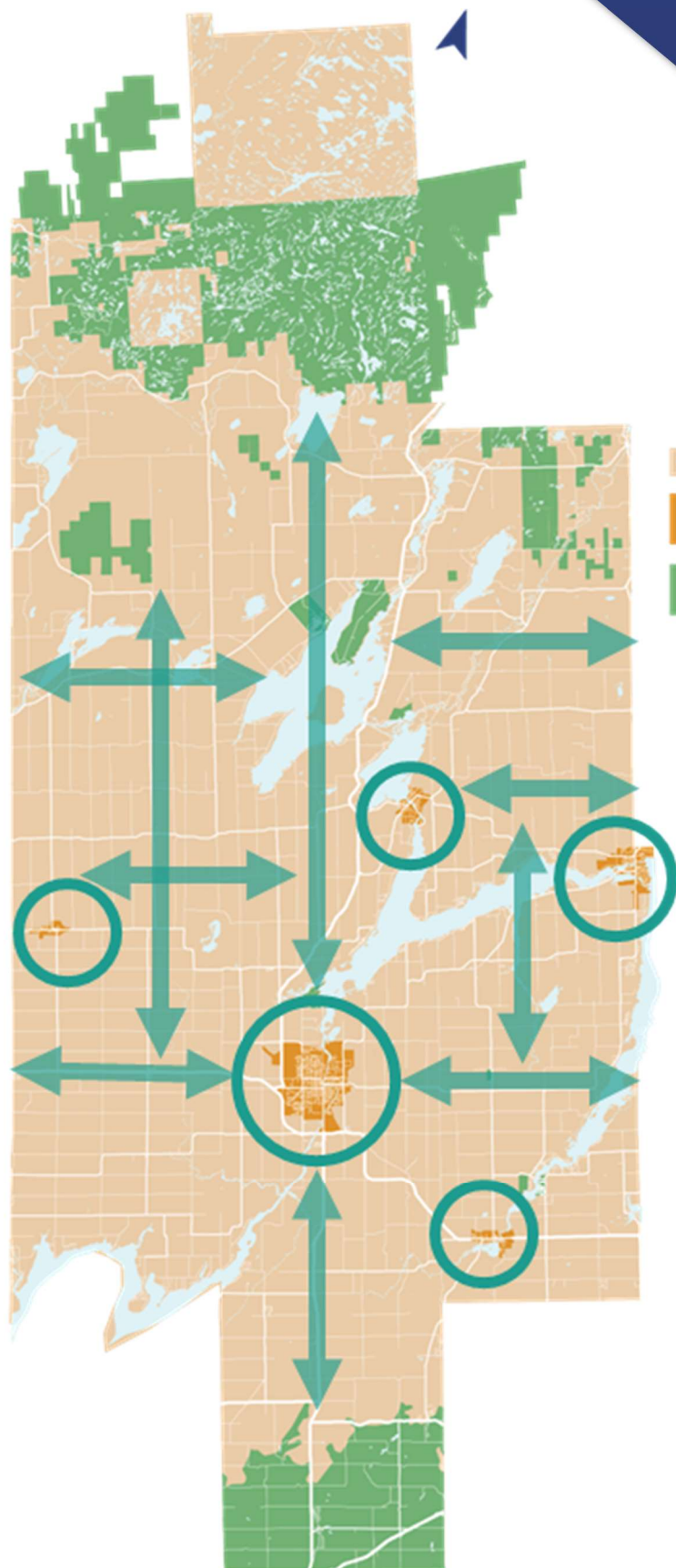
#	Recommendation	Priority	Timing
1	The active transportation network is to be used as the blueprint for the identification and design of on-road active transportation infrastructure, with a focus on safe and comfortable connectivity between and around communities.	Yes	
2	The active transportation network is to be integrated and coordinated with the proposed trail projects and focus areas as identified in the City's Trails Master Plan 2022 to achieve seamless network connectivity and design.	Yes	
3	An assessment of parking needs within the built-up area is to be undertaken and where demand is not demonstrated, consideration should be given to reallocating the space to accommodate active transportation infrastructure.	No	

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One of the core components of this ATMP is the planned active transportation network: a blueprint for a continuous, connected, comfortable and accessible active transportation system is achieved. An active transportation network is not a one size fits all approach and should be developed and tailored to the specific needs of Kawartha Lakes, while keeping the conditions, context, and people of Kawartha Lakes in mind. The City of Kawartha Lakes AT network has a considerable number of opportunities and challenges to address (as documented in Section 3.0), but ultimately has the potential to be a destination for both recreational and utilitarian active transportation purposes.

As noted in Section 3.0, one of the components of the ATMP that the Task Force was able to weigh-in on and confirm was the preferred approach for network development. Three alternatives were presented, with the preferred selection including a hybrid between major area improvements and connectivity – as per the image to the right.

This approach provides “access for all” to the proposed AT routes, considers both urban and rural areas, and responds to a wide range of user demands / interests. The drawback, however, is that the preferred option is the most expensive alternative due to the investment tradeoff required to fund the projects that are needed to achieve this Plans goals. However, the long-term benefit to community health, sustainability and the local economy far outweigh the cost of investment and can be phased over time (for more details refer to Section 5.0).



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With an understanding of the scope of the AT network, it was important to define the assumptions around how the network would be developed. Assumptions are “givens” that were developed based on the project scope and public input and are accepted as the basis for how routes will be identified, and facilities will be designed. Through the ATMP process...

We accept and assume that we are establishing a continuous and connected active transportation network throughout the City of Kawartha lakes by

1. *Focusing on walkability and bikeability improvements within built-up areas.*
2. *Improving select touring cycling routes in rural areas to align with guidelines and standards.*
3. *Building upon proposed projects recommended in the TMPU and leveraging existing and planned trails.*
4. *Leveraging opportunities from planned and future development as well as partnerships with groups and organizations.*
5. *Providing access, by AT mode, to major and minor destinations within built-up and rural areas.*
6. *Prioritizing comfort and safety by integrating user profiles that reflect a unique set of trip types, uses, demographics, and destination choices.*
7. *Designing feasible solutions that are appropriate for the existing and anticipated users and conditions.*

Furthermore, to scope the network approach and to ensure that the ATMP’s ambitious goals are being achieved, the following commitments were identified:

#1 . Access for All

- > In urban areas, residents should be able to access AT routes from major destinations within 100 m and access minor destinations within 500 m
- > Within rural areas, access to AT facilities should be within 5-10 km, with access to trail destinations prioritized
- > Access is further facilitated by providing amenities (e.g. bicycle parking, wayfinding, bike share, etc.) at major destinations and decision points
- > Utilize signage and wayfinding to improve access and awareness

#2 . Walkable Urban Areas

- > Minimal gaps in the sidewalk system
- > No dead-end sidewalks
- > Sidewalks are at a minimum 1.5 m in width with higher order walking facilities (i.e. wider multi-use pathways) along major corridors
- > Prioritize walkways, crosswalks, and other transitional interventions at major barriers i.e. provincial highways or waterways
- > Pedestrianize major corridors by including amenities that improve comfort
- > Reduce speeds in areas where there is a high potential for walking i.e. school zones

#3 . Safe Cycling

- > A spine/primary system of cycling facilities is prioritized on major corridors, and supplemented by secondary routes and trail linkages
- > Neighbourhood improvements focus on traffic calming as opportunities for improved bikeability
- > Facility design is guided by user comfort and safety, leveraging signage and wayfinding to enhance connectivity
- > Design rural connections for touring and long-distance cycling
- > Design transitions between facilities and over barriers to remove gaps

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With this basis in mind, the Kawartha Lakes active transportation network was developed using an iterative process that included four (4) steps – data collection, field investigation, analysis, and engagement - to identify, select, design, and phase and prioritize preferred routes.

An illustration of the process and an overview of the major steps and stages is presented in **Error! Reference source not found..**

- > D – Data Collection – Gathering information helped frame the existing and potential demand for active transportation routes and facilities.
- > I – Field Investigation –A desktop and field investigation helped identify the existing or potential route conditions and that of the surrounding context.
- > A – Analysis – A review of routes helped determine what could or will form part of the active transportation network.
- > E – Engagement – Gathering input from City staff, Task Force members, stakeholders, and members of the public helped inform the selection of preferred routes.

The review of existing and previously planned conditions is summarized previously within the ATMP. Details on the approach and outcomes of the remaining three steps is summarized below.

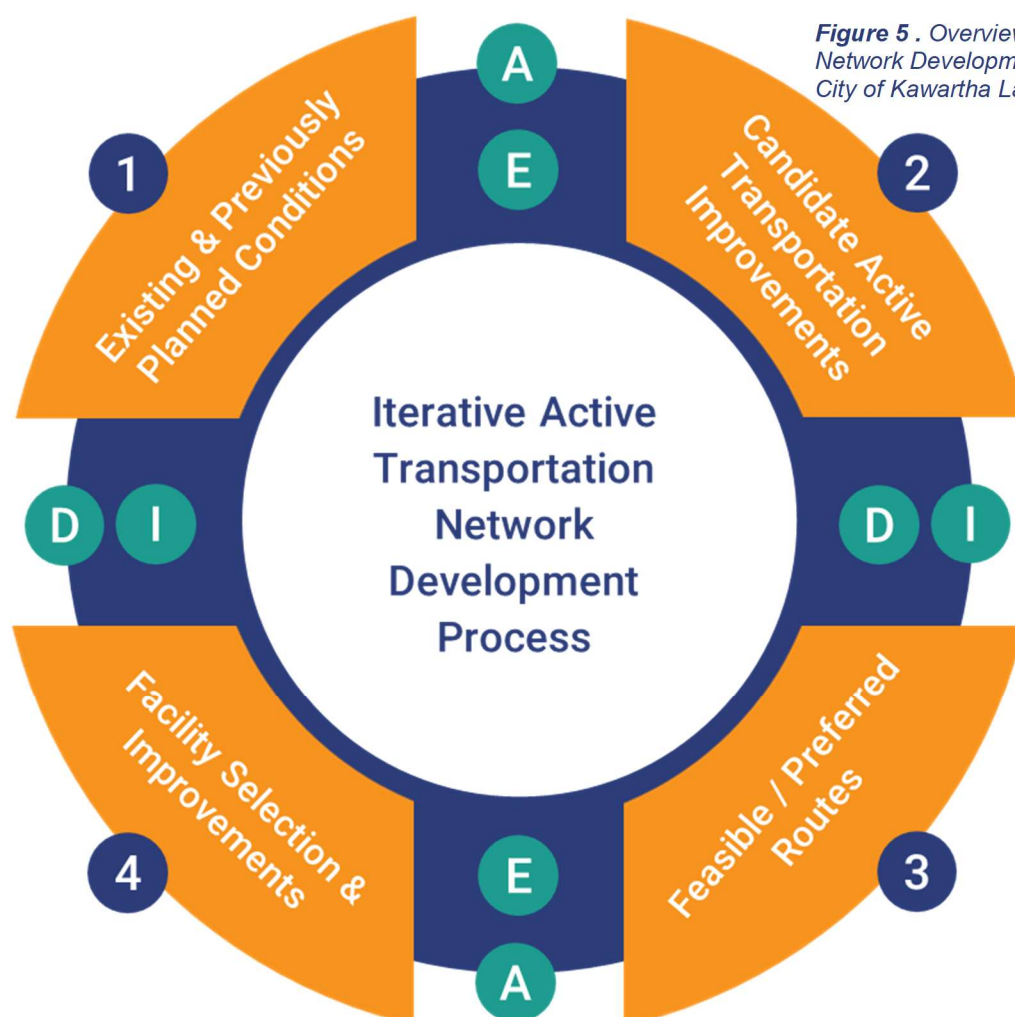


Figure 5 . Overview of the ATMP Network Development Process for the City of Kawartha Lakes

Step 2. Candidate AT Improvements

Candidate routes are potential new connections that could form part of the City's active transportation network. Candidate routes typically require additional investigation to confirm their appropriateness relative to the approach and commitments made to support the active transportation network. The identification of candidate routes assumes that the existing and previously planned linkages will continue to be in place but may require improvements and is intended to identify all potential linkages that could ultimately form part of the active transportation network.

The identification of the candidate route system was a two (2) stage approach that integrated the assumptions of the network development approach with the data collection and field investigation findings.

Part 1. Condition Improvements

As noted in the existing and previously planned condition review; not all routes and facilities are considered appropriate based on provincially accepted guidelines and standards. As part of the candidate stage, a review of the existing and previously planned facility conditions was undertaken. While all of the existing and previously planned routes will "exist", they may not be identified as part of the City's endorsed AT network due to their context, condition, and ability to meet the safety and comfort needs of users.

To examine compatibility, route alignment was considered relative to network commitments as well as the design guidance provided by the Ontario Traffic Manual (OTM) Book 18. Based on this, each route was assigned to one of three improvement priority categories – "proceed with minor improvements", "proceed with new facilities", or "does not proceed" (see the table below). To further illustrate the improvements priorities, route mapping was prepared. This information has been provided to City staff as part of the project record.

Proceeds – minor improvements	Proceeds – new facility needed	Does not proceed
Alignment is supported, and the facility likely feasible with minor improvements to the corridor that address current guidelines and standards (e.g., signage, traffic calming, etc.)	Alignment is supported, and new facilities or significant corridor upgrades are needed to address guidelines and standards	Feasibility is challenging and/or the route connectivity is limited in the overall network context. Alternate routes should be investigated.

The outcome of this review includes a preliminary set of routes and route improvements that act as the basis for the ATMP network. However, these routes do not achieve a continuous and connected system that reflects the commitments and assumptions outlined in the network development process. The next part of step 2 was to identify potential new routes which could form part of the ATMP network. The details of this approach are presented on the following page.

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Part 2. New Potential Routes

New potential routes or candidate routes are roadways or corridors that could potentially form part of the active transportation network for the City of Kawartha Lakes. Candidate routes were identified based on a number of different inputs including information gathered from the first online survey / interactive mapping tool, input from the task force on the current AT conditions, desktop field reviews of conditions, and information gathered through the development of the Trails Master Plan update.

Not all corridors share the same potential to act as an active transportation corridor or offer the same functionality. As such, three types of candidate routes were identified and are described in **Table 9**. A copy of the mapping that identifies the primary, secondary and tertiary routes was provided to City staff as part of the project record.

	Primary	Secondary	Tertiary
Intent	Routes that could form part of the “spine” system, providing direct north-south and east-west connections within built-up areas and surrounding communities	Routes that could provide connectivity to additional active transportation features such as off-road trails and minor community destinations	Additional routes that respond to a unique demand but have limited connectivity
Application	Greater number of primary routes in built-up areas, complemented by strategic improvements within rural areas	Primarily within built-up areas	Dependent on the route alignment and destination
Design	Commitment to a greater degree of separation with a minimum of a dedicated facility for cycling (e.g., bike lanes or multi-use pathway), as well as walkability improvements	Various facility types may be considered, including shared or designated cycling facilities, and pedestrian-supportive improvements such as sidewalks or traffic calming	Primarily signage or other minor improvements to facilitate access to select destinations

Table 9 . Overview of Candidate Route Options for Kawartha Lakes

At this stage, it is not the intent that all candidate routes will form part of the AT network due to the overall density and potential cost for such a significant amount of projects / improvements. The candidate routes were presented to the Task Force and a considerable amount of input was shared regarding the routes selected, the context-specific considerations, and the personal preferences and priorities of AT users. The information gathered was extremely helpful in the next stage of the network development process and has been included as part of the overall consultation record.

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Step 3. Feasible / Preferred Routes

As noted above, it is not the goal to accept and recommend all candidate or potential routes as part of the proposed AT network. As such, a thoughtful and diligent approach to the preferred route selection was used to determine which of the candidates would proceed as part of the proposed network. A series of criteria were identified and considered when reviewing the candidate options. The intent of the process was to move routes that were considered “high feasibility” under most criteria to the recommendation stage.

Criteria	High	Low
Connectivity	The route provides access to both existing and proposed on and off-road AT facilities	Route provides access to minimal to no AT facilities
Feasibility	The route can be designed in such a way that the appropriate design treatment can be accommodated without changes to the cross section	The desired facility is not achievable within the current context or can be achieved but requires significant economic or environmental impact
Degree of Support	There is both existing demand for the route and it has also been identified throughout the engagement process for improvement or as a preferred route	There is minimal demand, and it has not been identified throughout the engagement process
Economies of Scale	There are opportunities to have the project implemented as part of a planned project or capital project	There are no alignments with other planning or budgetary initiatives
Destination Access	The route provides access to major destinations within appropriate distances in urban and rural areas	There are few destinations along the corridor or in close proximity
Transition	The route has minimal to no transitions of facilities and limited major barrier crossings	The conditions require a number of facility transitions, and the route has a number of barriers along it

Table 10 . Criteria used to Determine Preferred AT Routes for Kawartha Lakes

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Once a route was moved into the recommendation stage, potential facility types and design enhancements were identified. As part of the refinement process, the project team also determined that it was not necessary to have all three (3) types of routes and selected to remove the tertiary connections and focus more on the primary and secondary linkages.

The next step of the process was the selection of design recommendations and facility types for the proposed routes. With the refinement of the candidate route types; the consultant team worked with staff and stakeholders to clearly define the expectations for the different route types as it relates to the facilities. A summary of these assumptions / expectations is provided in **Table 11** and were used to communicate how the process was informed and validate the outcomes of Step 4.

Linkage Type	Primary	Secondary
Cycling Improvements	<ul style="list-style-type: none"> > The spine system of direct north-south and east-west connections within the built-up areas and connecting built-up areas and surrounding municipalities > Greater degree of separation for users > Emphasis on direct access and connectivity to major destinations 	<ul style="list-style-type: none"> > Linkages that provide connectivity to additional AT features (e.g., trails) and minor community destinations > Localized design interventions
Walking Improvements	<ul style="list-style-type: none"> > Provide sidewalks on both sides of the roadway if feasible > Additional enhancements to walkability, e.g., lighting, amenities > Facility transitions facilitated by controlled crossings 	<ul style="list-style-type: none"> > Minimum sidewalk on one side of the roadway > Additional access to trail features as appropriate > Speed reduction / traffic calming measures to enhance conditions for pedestrians

Table 11 . Refined Candidate Route Design Assumptions to inform Step 4

It is important to note that these are aspirations and are intended to help provide guidance on the types of facilities that could be implemented along routes that are considered either a primary or secondary linkage. The information contained within **Table 10** is not meant to be prescriptive but act as the basis for future decision-making.

Step 4. Facility Selection & Improvement

Following the route confirmation (undertaken in Step 3), the study team identified the most appropriate facility and active transportation improvement types for each route. It was important to ensure that the design of facilities was not limited to cycling but also considered the needs of those most vulnerable, including pedestrians and individuals with disabilities.

Lastly, based on a considerable amount of input provided from the Task Force, it was clear that in addition to the routes themselves, the transitions of routes or major conflict points needed to be addressed. By identifying the route locations, the project team also identified potential conflict points that required enhanced to accommodate the safe and comfortable transition of active transportation users. The details of the approach for each component are provided below.

For cycling

improvements... facilities were selected using the three-step facility selection tool in OTM Book 18: Cycling Facilities. Of note, as per the most recent 2021 update of OTM Book 18, urban and rural contexts for cycling facilities are now assessed using different metrics that reflect the unique considerations for each of these areas. The approach takes into consideration the average annual daily traffic volumes (AADT) and the operating or posted speed on the roadways to identify an initial level of separation. This is then refined, and a more specific facility is identified based on context specific conditions and considerations for the corridor. The result of the review identifies a high-level facility type on a corridor-by-corridor basis which may change based on the roadway conditions and the feasibility of implementation.

For walking

improvements... a high-level assessment was undertaken and applied a broad selection of guidelines and best practices in pedestrian safety and walkability planning and design. Walking improvements considered the location of major and minor destinations, the overall experience of the corridor for walking, reducing the need for crossing as much as possible, existing cross-section of roadways, and the presence of on-street parking, utilities, and other constraints. It is important to note that walking improvements are only identified within the built-up / urban areas of the city, with the assumption that pedestrians and cyclists would use the same space within rural areas or opt for off-road trail destinations.

For transition point and conflict area

improvement... best and comparable practices as well as provincially accepted design guidelines were used in the context of the current conditions. It is important to note that the scope of the ATMP does not include recommendations regarding signalization or new controls at these locations. This work would be done through engineering and public works as part of technical transportation analysis. However, potential enhancements were identified based on the current conditions taking into consideration the new AT infrastructure that needs to be accommodated.

The recommended and confirmed improvements identified through this process are referred to as the City of Kawartha Lakes Active Transportation Network and are illustrated on Map 1 through Map 7.

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The maps are organized into two categories – cycling improvements and walking improvements / transitional design. The following is a summary of the recommended network components.

There are a total of **763 km of AT routes and facilities** proposed throughout the City of Kawartha Lakes.

Area	Cycling	Walking	Total
Bobcaygeon	21km	15km	36km
Lindsay	54km	51km	105km
Fenelon Falls	13km	8km	22km
City-wide	601km	N/A	601km
Total	689km	74km	763km

Table 12 . Overview of Proposed AT Network

Cycling Improvements Details

The goal was to provide cycling facilities that provide safe and comfortable spaces for people to ride no matter their ability and experience. Utilizing the facility selection tool in OTM Book 18 as well as the appropriate commitments and assumptions regarding design solutions, the following facility types were identified as part of the proposed network.

Urban Cycling Facility Summary

Facility Type	Kilometre Length
Multi-use path	27.3 km
Cycle Track	1.9 km
Separated Bike Lane	5.4 km
Bike Lane	5.4 km
Advisory Bike Lane	10 km
Neighbourhood Bikeway	28 km

Table 13 . Summary of Proposed Urban Cycling Facility Types

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Rural Cycling Facility Summary

Facility Type	Kilometre Length
Buffered Paved Shoulder	119.6 km
Paved Shoulder	213.7 km
Signed Bicycle Route	278.5 km

Table 14 . Summary of Proposed Rural Cycling Facility Types

Walking Improvement Details

Pedestrians can at times be an overlooked and underserved group when developing active transportation. Unlike cyclists who are using a vehicle to move, pedestrians only need their “feet” and are not restricted to a certain space or place to move. This sometimes leads to situations where pedestrians are not appropriately accommodated or are provided with sub-par facilities. The goal of the ATMP was to elevate the design opportunities for pedestrians and to think wholistically about how the built environment is designed to accommodate safe and comfortable travel by foot. In doing this, the City is also demonstrating a commitment to accessibility for people of all ages and abilities.

Facility Type	Kilometre Length
Sidewalks on one side	20.9 km
Sidewalks on both sides	0.2 km
Walkability Improvements	26.6 km
Traffic Calming Measures	31.5 km

Table 15 . Summary of Proposed Walking Improvements

In addition to the cycling and walking facility types noted above, there are a total of 164 facility transition improvements and 56 intersection improvements recommended as part of the overall ATMP network. These features support the safe and comfortable transition of users from one facility to another and across intersections. The design of these locations is to be consistent with provincially accepted design guidelines and standards and should be determined at the time that the project proceeds through to design and construction.

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Priority Projects

The sheer volume of routes and facilities that are identified as part of the Kawartha Lakes ATMP is significant and ambitious. The intent was for the Plan to be ambitious and to provide ambitious direction and recommendations including a dramatic shift away from focusing solely on motorized vehicles to sustainable modes of transportation.

That said, it is acknowledged that this change cannot happen overnight. Considering the impact of these recommendations and municipal capacity, it is likely that not all routes will be able to be implemented and that the City may need to focus on specific routes and corridors with the greatest impact.

As part of the development of the AT network, the consultant team identified priority projects. Priority projects are considered significant infrastructure projects – not specific to level of effort – but to the impact on the community which if impacted would have a significant influence on active transportation mobility and address major safety and comfort concerns that have long been addressed by decision makers and members of the community.

The priority projects form a minimum grid like system that provide connectivity and continuity throughout the city and its various communities but not at the total scale of the overall ATMP. It includes ambitious facility types and features which continue to maintain the planning and design principles and commitments set out in the ATMP. The priority projects are presented on Map 8 through 11 along with the proposed project phasing, with a summary of the total kilometres of projects by facility type presented in **Table 16**.

Area	Kilometres
Bobcaygeon	21km
Lindsay	54km
Fenelon Falls	13km
City-wide	601km
Total	689km

Table 16 . Summary of Proposed Priority Projects

All priority projects have been phased similar to the remainder of the network and are presented in Section 5.0 of the ATMP.

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4.2 Guidelines

Standards and guidelines provide targeted direction to turn the vision and goals for active transportation facility design into specific actions. The guideline recommendations in the following section were developed, keeping these key questions in mind:

- > What type of guidelines does the city currently have?
- > What are the intended outcomes from these guidelines?
- > How can these guidelines be adopted?

The recommendations that have been identified as part of the ATMP provide oversight direction as well as very specific actions which can be taken with the goal of integrating active transportation facility design into day-to-day decision-making. It is important to note that municipal standards and guidelines are not typically the responsibility of planning and development to adopt and implement. The majority of this guidance would be most appropriate for engineering and public works to lead as part of wider transportation infrastructure design efforts.

#	Recommendation	Priority	Timing
4	The design guidance provided in the ATMP as well as other provincially accepted design guidelines such as OTM Book 18 shall be used as the primary reference for all AT infrastructure including road retrofits and new developments.	No	
5	Development standards are to be amended to reflect acceptable active transportation facility design standards including the accommodation of both pedestrian and cycling infrastructure on all major arterials and collectors.	No	
6	Where the desired active transportation infrastructure cannot be accommodated along the proposed corridor, traffic calming treatments and speed reductions to a maximum of 40km/h are to be implemented to improve active transportation conditions.	No	
7	The proposed ATMP routing and design solutions including recommended speed reductions on select streets should be reviewed in collaboration with the City's Public Works department, with a focus on developing and implementing an urban area speed reduction campaign.	No	
8	Bicycle parking is to be implemented at all community destinations that encourage active transportation including libraries, schools, community centres, park spaces, downtown nodes, and bicycle hubs. Specific locations and parking alternatives are to be determined based on the guidelines provided in the ATMP.	No	

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#	Recommendation	Priority	Timing
9	The selection of preferred and appropriate bicycle parking solutions in locations throughout the City should be guided by the ATMP bicycle parking design guidance as well as best and comparable practices.	No	
10	On all rural roadways a min. 1.5 m asphalt shoulder should be provided as part of road rehabilitation and reconstruction projects with a paved shoulder by-law developed and adopted to prioritize future implementation.	No	
11	Within the urban areas of the City, active transportation facilities should be constructed with asphalt or comparable surface treatment at the appropriate minimum width as per OTM 18 guidance. Sidewalks are to be consistently constructed using a cement treatment at a minimum 1.5m in width.	No	
12	Bicycle repair stations are to be implemented at bicycle hub locations as well as strategic community locations such as schools, downtown nodes and major / minor trailheads as identified through the Trails Master Plan update.	No	
13	Allocate sufficient space to implement bike corral stations within the downtown areas of Lindsay, Bobcaygeon and Fenelon Falls with the opportunity to expand into other communities if demand warrants.	No	
14	When active transportation routes and facilities are being implemented or intersections are being reviewed by City staff, every effort should be made to implement crossing enhancements that accommodate pedestrians and cyclists in a safe and comfortable manner consistent with OTM guidance.	No	
15	When confirming the preferred design solution for active transportation projects along primary corridors, every effort should be made to design a fully separated facility as per the options and alternatives outlined in OTM Book 18, and considerate of the context specific conditions.	No	

4.2.1 Guideline References

Active transportation infrastructure should be designed and implemented based on national and provincial standards and guidelines, while keeping in mind the local context and community needs for a given project. Provincial guidelines and standards are the most applicable and should be the primary resource for any active transportation design and have been developed to take into consideration national and international guidelines and best practices.

For the purposes of the Kawartha Lakes ATMP, the scope of work requested the development of a set of design guidelines. As opposed to developing specific design guidelines for the City, the project team worked with staff to understand the existing guidelines and standards, their limitations, and the opportunities for enhancement relative to the planning and design recommendations found within the ATMP document. The following guidelines and standards were reviewed as part of the ATMP process:

Provincial

- > Accessibility for Ontarians with Disabilities (AODA) Design of Public Spaces in the Built Environment
- > Ontario Traffic Manual (OTM) Book 18: Cycling Facilities
- > OTM Book 15: Pedestrian Crossing Treatments
- > Ministry of Transportation Ontario (MTO) Bikeways Design Guidelines

National

- > Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads
- > TAC Bikeway Traffic Control Guideline for Canada

International

- > National Association of City Transportation Officials (NACTO) Urban Bikeways Design Guide and Urban Street Design Guide
- > American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design, and Operation of Pedestrian Facilities
- > AASHTO Guide for the Development of Bicycle Facilities

The information contained within this section of the ATMP is a consolidation of the most appropriate content from these resources, with an emphasis on the provincial guidelines. It extracts the information that would support decision-making, relative to the facility and feature design recommendations identified as part of the proposed AT network.

It is important to note that the information contained within the ATMP reflects the most recent versions of the various design guideline documents. As the City pursues the implementation of the ATMP, consideration should be given as to whether these guidelines have been amended or updated. City staff should strive to have a working knowledge and understanding of the guideline documents as well as the information contained within the ATMP.

When appropriate, the guideline information should be updated to ensure that it is consistent with any changes to the provincial, national, or international guidance or best design practices.

Table 17 provides a summary of the most relevant guideline documents and the sections that would need to be most frequently referenced as the City proceeds with implementation. The details of specific facility design considerations are on the following pages.

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Guideline	Cycling Facilities	Pedestrian Facilities	Intersections and Crossings
OTM Book 15: Pedestrian Crossing Treatments (2016)	N/A	N/A	<ul style="list-style-type: none"> > Section 4.1: Classification of Pedestrian Crossing Facilities > Section 6: Pedestrian Crossing Facility Design: Controlled Crossings > Section 6.2.1: Geometric Design Components) > Section 6.2.4: Pavement Markings > Section 7: Pedestrian Crossing Facility Design: Uncontrolled Crossings
OTM Book 18: Cycling Facilities (2021)	<ul style="list-style-type: none"> > Section 4.3: Physically Separated Bikeways > Section 4.4: Bicycle Lanes > Section 4.5: Shared Cycling Facilities 	N/A	<ul style="list-style-type: none"> > Section 6: Intersections and Crossings > Section 6.1: Intersection Design Principles > Section 6.3: Intersection Approaches and Crossings > Section 6.8: Road Crossing Treatments > Section 6.9: Roundabouts
AODA Built Environment Standards	N/A	<ul style="list-style-type: none"> > Section 2.1.1 (Sidewalks and Walkways) 	<ul style="list-style-type: none"> > S. 2.1.5: Curb Ramps) > S 2.1.6: Depressed Curbs) > S.2.1.7: Accessible Pedestrian Signals at Street Crossings

Table 17 . Summary of Relevant Design Guideline Content



4.2.2 Cycling Facility Overview

As with the facility selection process described in Section 4.1, design of the ATMP cycling network is primarily guided by OTM Book 18, which provides practical guidance for practitioners on the planning, design, and operation of on-road cycling facilities in Ontario. **Table 18** provides an overview of key design and contextual considerations for each facility type included in the City’s proposed cycling network.

Facility Type	Description	Speed	Volume	Width	Considerations
<div>Multi-use Pathway</div> <div></div>	A two-way path that is horizontally and vertically separated from the travelled portion of the roadway by a curb and buffer. Multi-use paths are shared by cyclists, pedestrians, and other active modes.	High > 50 km/h*	High > 6000 vpd*	3.5 m to 4.0 m recommended 3.0 m minimum Constrained sections can be reduced to 2.4 m	<ul style="list-style-type: none">> Appropriate for arterial and collector roads> Appropriate for locations with bus stops and frequent trucks/buses (30+ per hour)> Appropriate for locations where on-street parking is present> Best for locations with low to moderate pedestrian volumes> More appropriate when there are limited or low-volume intersections or driveways
<div>Cycle Track</div> <div></div>	In-boulevard bicycle-only facilities separated from roadway by a curb and buffer. Can be one-way (unidirectional) or two-way (bidirectional)	High > 50 km/h*	High > 6000 vpd*	2.0 m to 2.5 m (one-way) 3.5 m to 4.0 m (two-way) recommended 1.5 m (one-way) & 3.0 m (two-way) minimum	<ul style="list-style-type: none">> Appropriate where there are frequent high-volume driveways, and/or intersections, but may require some design adaptation in these locations
<div>Separated Bike Lane</div> <div></div>	An on-road facility designated for the exclusive use of cyclists, and which is separated from motor vehicle lanes by a horizontal buffer and vertical elements that restrict traffic.	High > 50 km/h*	High > 6000 vpd*	1.8 m + 1.0 m buffer recommended 1.5 m + 0.3 m buffer minimum	




Facility Type	Description	Speed	Volume	Width	Considerations
<div><div>Bicycle Lane (Conventional or Buffered)</div><div></div></div>	An on-road facility designated by pavement markings and signage for exclusive use by people riding bikes. Can be marked with a single line, or “buffered” pavement markings to create additional horizontal separation.	Moderate 40 to 50 km/h	Moderate 1,500 to 6,000 vpd*	1.8 m recommended 1.5 m minimum Optional marked buffer: 0.3 – 1.0 m	<ul style="list-style-type: none">> Appropriate for a range of road functions and classifications, including local, collector, and arterial roads> Avoid adjacent to on-street parking, but can be accommodated in low turnover locations with appropriate design (e.g., 1 m buffer between bike lane and parking area)> Most appropriate in locations with limited or low volume driveways or intersections> Design alternatives include conventional bike lanes, buffered bike lanes, or contraflow bike lanes
<div><div>Advisory Bike Lane</div><div></div></div>	A shared roadway facility that visually delineates space for cycling by dashed lane lines.	Low-Moderate 30 to 50 km/h	Low-Moderate 1,500 to 6,000 vpd*	1.8 m to 2.0 m recommended 1.5 m minimum Associated two-way travel lane: 3.0 – 4.0 m or 5.0 – 5.7 m	<ul style="list-style-type: none">> Most appropriate for local streets or minor collectors> Avoid in locations with on-street parking, but can be accommodated in low turnover locations with appropriate design> Not appropriate in locations with frequent trucks/buses (30+ per hour)
<div><div>Neighborhood Bikeway / Signed Bike Route</div><div></div></div>	Low-volume, low-speed streets that are appropriate for bicycle travel and shared use by cyclists and motorists.	Low Urban areas: < 40 km/h Rural areas: Varies, generally < 60 km/h	Low < 3,000 vpd	N/A	<ul style="list-style-type: none">> Most appropriate for local streets> Not appropriate in locations with many trucks/buses (30+ per hour)> If existing conditions do not allow for safe shared use by cyclists and motorists, enhance safety through:<ul style="list-style-type: none">> Traffic calming / speed management> Traffic reduction> Intersection treatments> Signs and pavement markings
<div><div>Paved Shoulder</div><div></div></div>	A portion of the roadway outside of the traffic lanes that accommodates cyclists, pedestrians, and stopped motor vehicles. Considered "bicycle accessible" if sufficient operating space and pavement markings are provided.	Moderate – High 50 - 80 km/h	Moderate - High > 1,500 vpd	1.5 m to 2.0 m typical 1.2 m minimum Optional marked buffer: 0.5 – 1.0 m	<ul style="list-style-type: none">> Most appropriate for rural roads with moderate to high volumes and speeds where shared use is not advisable> In locations with higher traffic speeds and volumes and/or frequent trucks, a buffer should be added to increase horizontal separation between cyclists and motor vehicles

Table 18 . Overview of Relevant Design Guidance for Proposed Cycling Facilities

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4.2.3 Walkability Improvements

Vibrant streetscapes, including green spaces, public art, and storefronts, create an engaging and enjoyable environment, encouraging more people to choose walking as their mode of transportation. Walkability features that prioritize the needs and preferences of pedestrians contribute to a community's livability, fostering a sense of community and promoting a healthier, more active lifestyle. Pedestrian features also help provide comfort and safety for people on foot, who are the most vulnerable users of local streets, especially if they are children or seniors.

Everyone is a pedestrian at some point in their journey, whether they are walking for the entirety of their trip, or just walking from where they parked their bicycle or car. Walking is the most inclusive form of travel, as it doesn't require buying a vehicle or any special skills or experience to participate. Highly walkable places are accessible to people of all ages and abilities, including people who use wheelchairs or other mobility devices.

Creating places that are enjoyable for walking need much more than sidewalks. For both sidewalk improvements and walkability improvement corridors, the full pedestrian environment should be considered as projects proceed to implementation, including the following areas:

- > Pedestrian Through zones / Clearway include the primary sidewalk or pathway that runs parallel to the street and is intended to be clear and navigable for pedestrian travel.
- > Frontage zones are located adjacent to property lines, and provide an offset from adjacent lands, as well as "clearance from building fronts, doors, utilities and architectural features" (TAC, 2017). The width of the frontage zone can vary highly and is influenced by the local conditions.
- > Furnishing zones are located between the roadside curb and the sidewalk (or pedestrian through zone) and provides a buffer between motor vehicle traffic and pedestrians, as well as space for elements such as signs, utility poles, landscaping, and street furniture. As with frontage zones, width can vary, but in the areas designated as "Improved Walkability Corridors" in the ATMP, approximately 3 m is a reasonable width to allow for a wide range of pedestrian amenities and furnishings. In locations where street parking is present, the furnishing zone can be extended for brief distances by extending the curb where parking is not permitted to define parking areas.

In addition to these aspects of the pedestrian environment, it is also important to consider intersections and other locations where pedestrians may wish to cross the road and there may be interaction with motor vehicles. Key intersections and other mid-block locations in the built-up areas of Kawartha Lakes, where cyclists and pedestrians are most prone to conflict, have been identified along with associated improvements to ensure a connected AT network.

The chosen pedestrian improvements in this ATMP encompass a range of options, such as sidewalks on one side, sidewalks on both sides, walkability improvements, traffic calming measures, mid-block enhancements, and intersection improvements.



Improvement

Description & Considerations

Examples

New
Sidewalks

Gaps in the existing sidewalk network that should be addressed through the provision of concrete paths for the use of pedestrians on one or both sides of the road.

- > New sidewalks should be built in accordance with relevant standards, e.g., TAC, AODA.
- > Sidewalks should have firm, stable, and slip resistant surfaces, and ensure sufficient horizontal and vertical operating space for able-bodied pedestrians of varying ages, as well as people with various disabilities (e.g., users of wheelchairs).
- > Sidewalks should consist of a pedestrian through zone, or clear width, of no less than 1.5 m, with no obstructions at any point, and wider (1.8 m +) where feasible, especially where higher numbers of pedestrians are anticipated.



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Improvement	Description & Considerations	Examples
Walkability Improvements	<p>Walkability improvements consist of enhanced design treatments to accommodate the safe and comfortable movement of pedestrians. These features may vary depending on the space that is available and the length of the corridor</p> <ul style="list-style-type: none"> > Walkability amenities and enhancements may include: > Street furniture, e.g, benches, waste bins, bike racks, planters, lighting, signage/ wayfinding, public art > Landscaping, e.g., trees, grass, other plantings > Increased separation between sidewalks and roads, wider sidewalks > Accessibility improvements 	
Traffic Calming	<p>Measures along roadways to manage and slow the speed of motor vehicles. Reduced traffic speeds increase safety for all road users, especially vulnerable pedestrians and cyclists, improving visibility, decreasing the likelihood of serious collisions and injuries, while also contributing to a more comfortable atmosphere for walking and cycling. Traffic calming measures may include:</p> <ul style="list-style-type: none"> > Speed humps/cushions/tables > Reduced speed limits, automated speed enforcement > Raised crossings / intersections > Curb extensions to narrow roadway or create chicanes > Traffic islands or circles > Pavement markings > Signage, e.g., dynamic speed signs 	
Mid-block and Intersection Crossing Improvements	<p>Improvements to facilitate crossings for pedestrians and cyclists. Measures may include:</p> <ul style="list-style-type: none"> > Mid-block pedestrian crossovers (PXO) – type A, B, C or D (as per OTM Book 15) > Enhanced pavement markings, e.g., ladder crosswalks > Intersection cycling treatments, e.g., crossrides, bicycle signals, conflict zone markings, bike boxes > Tighter turning radii at corners, curb extensions > Pedestrian refuges / centre medians / median extensions > Accessibility features, e.g., tactile surfaces, audible pedestrian signals, curb cuts/ramps, signal timing adjustments > Identified locations should also be studied for other controlled crossing improvements, based on traffic and other multi-modal needs, and implemented as appropriate based on these broader transportation goals. 	

Table 19 . Overview of Design Considerations for Walkability Improvements

4.2.4 Other Design Considerations

There are numerous other features and design elements that will need to be considered at the time a proposed route or facility is implemented. A wholistic look at how the facility interacts with other modes of transportation or built environment features is necessary to design, build and maintain a safe and comfortable mobility corridor for people of all ages and abilities. When the City proceeds with the design and implementation of active transportation facilities consideration should be given to:

- > Enhancing the overall accessibility of the corridor to establish a built environment that takes into consideration the unique and individual needs of people with disabilities
- > Creating safe and secure locations for people to leave their bicycles during a trip
- > Establishing a clear understanding of where and how to use facilities through the design and implementation of signage and wayfinding

The following sections provide an overview of key design considerations and guidance which are intended to be used in addition to the facility specific design guidance provided above.

Accessibility

The Accessibility for Ontarians with Disabilities Act (AODA) promotes inclusivity and equal access for individuals with disabilities. The Act establishes accessibility standards across key areas of customer service, employment, information and communication, transportation, and the built environment. The Act requires organizations to comply with these standards in order to foster a more accessible and inclusive environment for all Ontarians, ensuring that people with disabilities have the same opportunities as everyone else.

The Act and the associated Design of Public Spaces Standard directs municipalities and transportation authorities to consider the unique needs of pedestrians and cyclists with disabilities when planning and designing public spaces. This involves addressing issues such as curb cuts, accessible crossings, and ensuring that cycling infrastructure is designed to be inclusive. By incorporating accessibility standards, the AODA strives to create an environment where pedestrians and cyclists of all abilities can navigate public spaces safely and independently, contributing to a more inclusive and equitable transportation system in Ontario.

Ontario Regulation 413/12 (O.Reg 413/12) is the built environment standard which is considered the most applicable series of accessible guidelines and criteria which apply to new construction and extensive renovation of exterior paths of travel. O.Reg 413/12 groups outdoor pedestrian routes into one of three categories as follows:

- > Paths of Exterior Travel: which includes sidewalks and exterior walkways that connect to buildings and facilities.
- > Beach Access Routes: which are defined as the main connecting walkway(s) and beaches intended for public use.
- > Recreational Trails: which encompass a range of facility types ranging from hard surface multi-use trails in major urban parks to natural surface walking trails in more remote areas.

The most relevant of these categories to the ATMP are Paths of Exterior Travel. While the pedestrian and cycling design guidelines follow AODA standards broadly, it is important during implementation that all aspects of detailed facility design continue to comply with these standards. It is also important to ensure regular monitoring and maintenance of facilities to promote long-term management of accessibility barriers.

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Bicycle Parking

Bicycle parking plays a pivotal role in promoting cycling by offering individuals a sense of security at the conclusion of their journey and enabling stops during their trip. A lack of secure bicycle parking, whether in terms of supply or type, can discourage many from considering cycling for regular trips. Appropriate bicycle parking also contributes to a more orderly Recognizing the significance of bicycle parking in fostering an active community, OTM Book 18, the Association of Pedestrians and Bicycle Professionals (APBP) Bike Parking Guidelines emphasize planning and design considerations including:

- > **Location of Bicycle Parking:** Ensuring visibility and security are paramount for creating a safe environment that encourages individuals to choose cycling. Bicycle parking should be located in areas that are well-lit, have significant foot traffic, and in close proximity to destination entrances.
- > **Types of Bicycle Parking:** To support bicycle storage and a variety of trip purposes, both short-term and long-term bicycle parking is required. Short-term options, such as bicycle racks, prioritize convenience for people visiting residences, businesses, or other destinations for brief periods. Long-term bicycle parking, including bicycle lockers and enclosed parking areas, serve employees and residents who need a higher degree of security and weather protection.
- > **Design of Bicycle Racks and Parking Facilities:** Bike racks should be designed to support bicycles upright in at least two places without putting stress on the wheels, accommodate a variety of bicycles and attachments, allow locking of frame and at least one wheel, and be intuitive to use. This is generally best accommodated by “Inverted-U” or “Post and Ring” style racks, although other styles may be appropriate depending on context. Some common styles of bike rack, such as wave, spiral, or wheelwell racks should be avoided.
- > **Dimensions and Clearance Conditions:** Consideration should be given to the dimensions (height and width) of bicycle parking racks to ensure the racks are functional and secure. Adequate spacing between individual racks is essential to facilitate easy maneuvering and ensure that cyclists can securely lock their bikes. Clearance should also be provided around each bike rack of at least the footprint of a typical bicycle (1.8 x 0.6 m) to allow space for different bicycle types, sizes, and accessories, including recumbent bikes, tricycles, bike trailers, and bike baskets, enhancing the inclusivity and practicality of the parking facilities. When locating bike racks near sidewalks or other pedestrian paths, care should be taken that neither the bike rack nor an attached bicycle impede on the pedestrian clearway space or cause any other accessibility issues.
- > **Materials, Finish, and Installation:** Bike racks and other bicycle parking facilities should be built using steel or other high-quality materials, and include weather and corrosion-resistant coatings or treatments to enhance their longevity. Racks should be installed on a hard surface and be held firmly in place.
- > **Other end-of-trip facilities:** In addition to bicycle parking, a variety of other end-of-trip amenities can be offered to facilitate trips by bicycle. Repair stations that include tools, an air pump, and a place to hang a . bicycle help people do basic maintenance and repair to their bicycles. Rest areas that consist of a variety of amenities such as seating, tables, water fountains, or other features, can provide a stopping point for cyclists as well as pedestrians. Showers and change rooms at destinations can be an incentive for bicycle use, especially for people who commute or travel longer distances.

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Signage and Wayfinding

Wayfinding and signage have been identified key design considerations when implementing an active transportation network. For both the existing as well as any routes that are implemented in the future as part of the AT system, directional and route signage should be enhanced for better promotion, education, and awareness of routes and key destinations. At a minimum the City should implement the requisite regulatory signage as opposed to utilizing branded wayfinding and signage in order to ensure that there is clarity regarding which routes are endorsed by the City, how to use infrastructure and how users should interact with each other safely and appropriately.

Wayfinding signage helps guide individuals through unfamiliar environments, providing clear and concise information to help them navigate and reach their destinations efficiently. In urban spaces, well-designed wayfinding signage not only enhances the overall experience of pedestrians and cyclists, but also promotes safety and can also help highlight key local attractions and destinations. These signs offer a sense of orientation, reducing the likelihood of getting lost and encouraging people to explore and utilize alternative modes of transportation.

Additionally, in complex or densely populated areas, effective wayfinding signage contributes to the vitality of public spaces by facilitating seamless movement and promoting accessibility. By establishing a user-friendly navigation system, wayfinding signage plays a pivotal role in fostering a positive and inclusive environment for all individuals, enhancing the overall functionality and appeal of an active transportation network. Wayfinding is especially useful in a municipality such as Kawartha Lakes that has a large number of visitors who may not be as familiar with how to get around in the area.

For the routes that are being promoted by Kawartha Tourism, some informal wayfinding and signage has been implemented identifying specific routes; however, a more cohesive approach is recommended to be utilized going forward. Where possible every effort should be made to avoid sign pollution which is the overuse of duplication of signage which can cause greater confusion than benefit.

To start, the City should use the existing database of AT routes to determine where there is missing regulatory signage along a route where the AT network has been identified. In these locations the City is recommended to implement the green bicycle route sign and where appropriate a share the road sign i.e. in locations where the conditions of the roadway and surrounding context change significantly which would impact the roadway users and create unintended conflict for AT users. Where appropriate, as the City implements other types of AT infrastructure i.e. multi-use pathways or bike lanes, the appropriate regulatory signage should be implemented at the time the facility is constructed. The regulatory signage should be the primary sign with any additional branded or tourism related signage implemented as supplementary.



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The City's Trails Master Plan Update has extensive guidance regarding trail signage and wayfinding, including a high-level signage strategy. This guidance should be adopted in a modified manner to assist navigation for active transportation users along City roadways and in urban locations, while maintaining a unified set of design and graphic elements and materials.

The ATMP further supports the development of a branded concept for trail and active transportation signage and wayfinding reflecting the look and feel of municipal branding but with a nod to AT and sustainable transportation. The logo prepared for the ATMP could be a source of inspiration for this concept (see below to the right).

When developing effective wayfinding and signage the following should be considered when the City proceeds with next steps and should ensure that the following is being considered:

- > Clear and concise messaging which communicates information clearly
- > Consistent branding and maintaining consistency in design elements
- > Strategic placement to ensure that the wayfinding is strategically positioned at major decision points
- > Clear information hierarchy by prioritizing information based on relevance
- > Consideration for the Environment by tailoring the design of the signage to match municipal aesthetics or to reflect the uniqueness of the City.

All of this should be pursued as a collaborative program between various municipal departments who have a role in the design, placement and maintenance of signage related to on and off-road recreational and utilitarian travel. The following are some of the key steps and stages of a signage and wayfinding program:

1. **Planning** – reviewing and identifying aspects of the community to understand the AT network specific to the overall user experience – this can be done in the field as well as through google and supplemented by findings from the ATMP.
2. **Design** – which prioritizes and considers the end user and how they experience the community / how the signage and wayfinding is intended to benefit their day to day trip.
3. **Collaboration** – including both internal as well as external stakeholders to support buy-in for those responsible for implementation and maintenance as well as use.
4. **Maintenance** – ensuring that any signage that is implemented is monitored and maintained to ensure its effectiveness based on multi-season weather conditions.



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4.3 Policies

The way in which a community grows and changes over time, including its land use, built form, and use of resources, is driven by planning policy direction adopted and implemented by various levels of government, with municipalities having extensive responsibilities in this area. As noted in Section 2.1, every effort was made to ensure the ATMP was driven by policy, including having AT planning, design, implementation, and maintenance embedded into policies as much as possible and applicable, to ensure the greatest degree of influence and support for AT across the City. The importance of establishing strong policy support is demonstrated through the number of policy recommendations that are included within the ATMP. They are as follows.

#	Recommendation	Priority	Timing
16	A traffic calming policy is to be developed for both the urban and rural areas of the City and adopted through the City's transportation master plan to complement the ATMP network.	No	
17	The active transportation network as adopted in the 2024 Active Transportation Master Plan is to be incorporated as a schedule as part of the City's Official Plan along with the necessary policy supports to ensure that the ATMP recommendations are reflected in higher level policy	No	
18	The active transportation network as adopted in the 2024 Active Transportation Master Plan shall be acknowledged and incorporated into the City's Transportation Master Plan with consistent recommendations or additional information to support and facilitate the implementation of traffic calming and similar road conditions features.	No	
19	Where possible, site plan requirements should include the consideration of and design for active transportation users with a focus on strategic place making within parking lots and in between buildings	No	
20	Applicable municipal guidelines, standards, and bylaws are to be reviewed and amended / updated to reflect the policy framework and suggested revisions as identified within the Active Transportation Master Plan	No	
21	Develop and adopt a Complete Streets policy or guide as the City reviews and adapts road classifications to reflect changes in land use patterns and growth.	No	

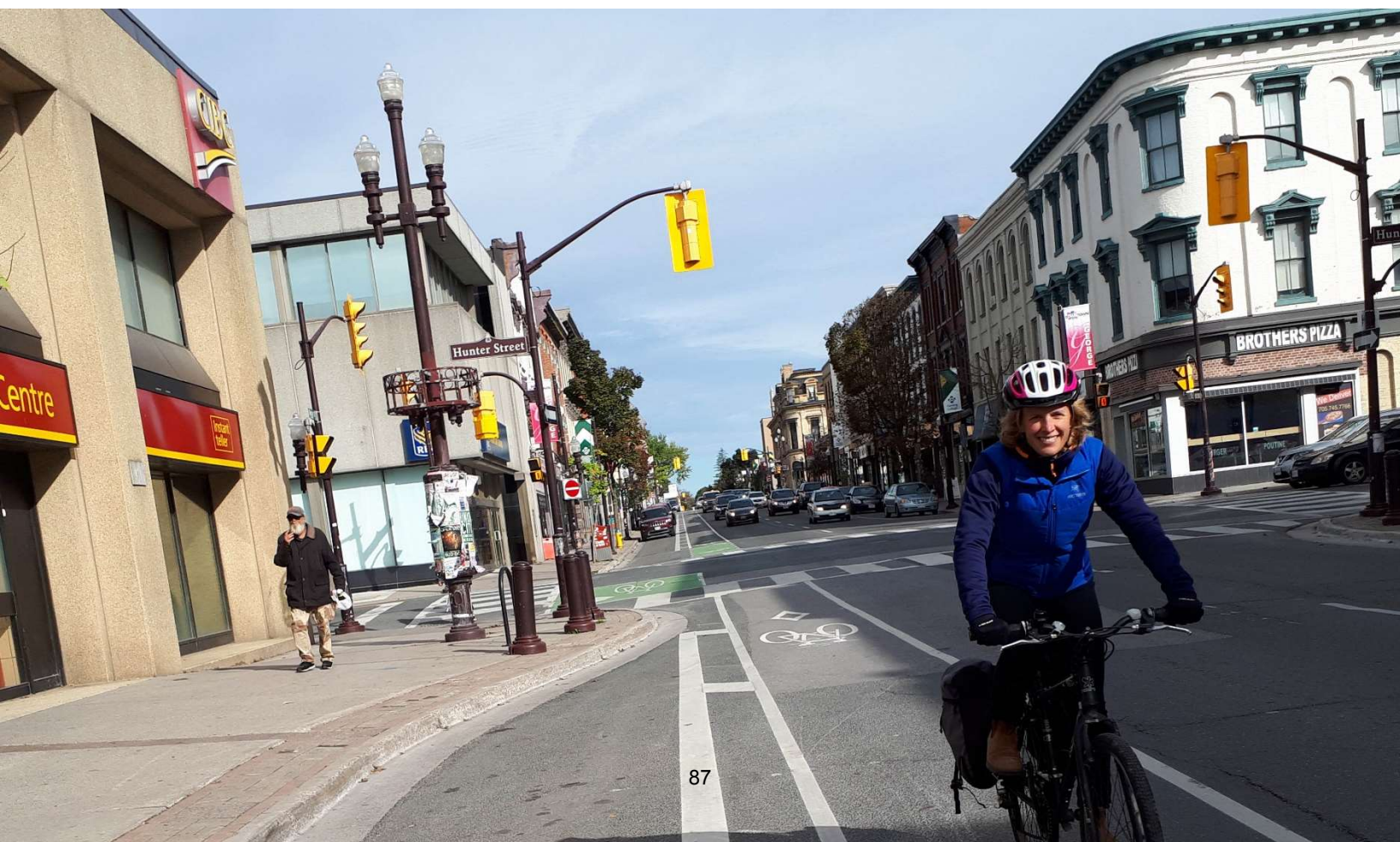
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#	Recommendation	Priority	Timing
22	Emerging and complex policy topics such as e-mobility should continued to be monitored and discussed by the City and its partners to continually adapt and address policy concerns and opportunities.	No	

4.3.1 Policy Revisions

As per the policy review there is already a solid level of support for active transportation in City policies, plans, guidelines, standards, and by-laws related to growth management, housing, community facilities, parks, and open spaces, and as an integrated part of land use and infrastructure provision. However, the degree of detail and type of support provided proves to be inconsistent. Considering the degree of support for AT and the strong interest in enhancement, there are some significant gaps and opportunities which if adopted and implemented would ensure more effective and comprehensive policy support to encourage and foster a wide variety of active trips.

There are a considerable number of possible enhancements, amendments and additions that could be made to existing policies and plans to leverage their role in the existing planning decision making hierarchy relative to future AT needs. A comprehensive policy memo was prepared for City staff detailing the recommended revisions, enhancement, and amendments on a policy-by-policy basis. This memo has been provided to City staff and is to be used as the basis for future work done by the planning and development department as a policy / plan is to be updated or if the amendment or revision is considered important enough to proceed.



4.3.2 Emerging Policy Considerations

There are other emerging trends and policy topics related to AT which should continue to be monitored and reflected in City policy when appropriate. These emerging topics are reflective of major issues that are experienced within the City of Kawartha Lakes and beyond and create challenges and concerns between users as well as by those responsible for facility planning, design and implementation. The City should continue to monitor these topics and determine how best to ensure that they are reflected in municipal policies and plans and to reflect the unique context, conditions, and considerations of the City.

E-bikes & Micromobility

Micromobility refers to the growing trend of using small, lightweight, and often electric-powered modes of transportation for short-distance travel within urban areas. Common examples include electric scooters, bicycles, and electric skateboards. These modes can blur the lines between traditional bicycles and motorized bikes. Some provincial rules are in place to differentiate between different types but deciding where they are appropriate and enforcing rules can be a challenge.

- > Monitor evolving best practices (as per ATMP Recommendation #22)
- > Consider modifications to municipal policies and by-laws to clarify permissions and restrictions of different types of e-bikes / micromobility
- > Consider how e-bikes / micromobility can be accommodated in the design of AT and road infrastructure
- > Engage in targeted education campaigns to explain rules and etiquette related to use of e-bikes and micromobility
- > Consider adding e-bikes or e-scooters to expand local bike share services

Liability

If cycling or pedestrian facilities are improperly designed, constructed, or maintained, the City may be exposed to some level of liability. Many aspects of the ATMP are meant to mitigate liability, including design and maintenance recommendations – highlighting the importance of implementing projects in ways that are consistent with the plan and relevant guidelines.

- > Ensure provincial/national design guidelines are followed for the design of AT facilities, especially as they evolve in the future.
- > Monitor AT facilities through regular patrols and document conditions.
- > Increase public awareness of user rights and obligations.
- > Maintain proper insurance coverage.

Complete Streets

Complete Streets are based on the principle that streets are meant to be designed for everyone, to allow safe access by all potential users including pedestrians, cyclists, motorists, and transit users of various ages and abilities. Not all Complete Streets look the same, as their design should vary depending on the context and function of the street, while also recognizing the role of streets as public spaces and destinations rather than just transportation corridors.

- > Adopt a Complete Streets policy and/or guidelines to guide multi-modal transportation decision-making
- > Ensure that AT improvements are designed with a comprehensive consideration of all road users, the street context, and the role of streets as public spaces.
- > In future City policies and road design guidelines and practices, include references to Complete Streets and related concepts that consider multiple modes and recognize the needs of different users, including all ages and abilities

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4.4 Programs

To encourage greater walking, cycling, and other forms of active transportation, building infrastructure and ensuring supportive policies are only part of the overall picture. It is also important to encourage and educate about safe and appropriate use of AT facilities, and influence the behaviour of those who live, work, and play within the City of Kawartha Lakes so that more active trips are made for a variety of purposes.

The following are a series of recommendations that pertain to opportunities for enhanced AT programming for the City of Kawartha Lakes. These recommendations are very much dependent on a strong commitment to coordination and collaboration between municipal staff internally and external stakeholders. It provides a multi-faceted approach with options and alternatives that could be explored depending on the community interests, educational needs, and funding opportunities available.

#	Recommendation	Priority	Timing
22	Provide additional support and maintenance of the existing bike share program within the City's urban and built-up areas in partnership with the community groups and external organizations that are responsible for implementation and management.	No	
23	The Planning and Development division will support the implementation and coordination of AT education and outreach programs based on the recommended educational strategy outline within the ATMP	No	
24	Programming will be developed and implemented based on a series of target audiences, including a focus on youth and seniors to support a greater degree of culture shift towards active modes.	No	
25	Active Transportation promotional materials including hard copy mapping are to be updated on an annual or bi-annual basis to accurately reflect existing active transportation facilities, including coordination with the Parks and Recreation department to ensure both on and off-road opportunities are reflected	No	
26	The interactive online mapping system should be updated to reflect the existing active transportation and trails network and should continually be monitored and updated as projects are implemented or conditions change to ensure accuracy of information.	No	

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#	Recommendation	Priority	Timing
27	A comprehensive wayfinding and signage strategy - integrated with the Trails Master Plan Update - should be undertaken by the City based on the loop routes identified by Kawartha Tourism and routing confirmed through the ATMP with a focus on the built-up areas	Yes	
28	An expansion to the Bicycle Friendly Businesses Program should be explored in partnership with Ontario by Bike and local businesses	No	
29	Explore acquiring a Bicycle Friendly Community designation in partnership with Share the Road Cycling Coalition and other applicable organizations	Yes	
30	Support the development of active and safe routes to school programs based on the framework provided in the ATMP with the intent of having one pilot program launched within the first year of ATMP implementation.	No	
31	The programs and outreach strategies as identified in the ATMP are to be reviewed and prioritized by Planning and Development in partnership with Parks and Recreation with a minimum of one initiative being undertaken each year in collaboration with local agencies, stakeholders, and other groups.	No	

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4.4.1 Programming Approach

To comprehensively accelerate adoption of AT, ensure that the network that gets built gets used, and overcome ingrained societal norms that assume automotive travel as the default way of making regular trips, it is necessary to change behaviour through targeted programming. Many plans limit programming and education to simply providing information or traditional mass marketing and communications campaigns. However, evidence shows that behaviour change is more effective with a community-based social marketing approach that emphasizes direct, personal contact among community members, engages them directly in the desired behaviours (rather than just providing information), and focuses on identifying and removing barriers people face to engaging in the desired behaviour.

While the AT infrastructure network seeks to overcome physical barriers, programming should look to overcome non-physical barriers – such as not having safe bike parking at a destination, not wearing proper clothing for the weather, lack of access to a working bicycle, or perceiving trips on foot or on bike as more time consuming or difficult than they really are. When considering the implementation of education and encouragement programs, the City should tailor its programs to specific audiences and associated barriers unique to Kawartha Lakes. When implementing these program recommendations, the City should prioritize programming based on the audiences that have the greatest potential for active transportation uptake, and based on the locations where new walking and cycling improvements are made. In the context of the City of Kawartha Lakes, it is recommended that the focus should be placed on youth and seniors within the built-up areas as well as seasonal visitors City-wide.

An emerging practice but one that has proven to influence behaviours and achieve cultural change is that of Community Based Social Marketing (CBSM). CBSM is a “tool of change” which uses a deeper understanding of barriers to a behaviour and actively identifies programs and initiatives to help influence or change those behaviours. The City of Kawartha Lakes is encouraged to use a CBSM type approach when developing and implementing AT and sustainable transportation supportive programming.

A community based social marketing approach typically includes seven (7) stages. The typical CBSM programming process is outlined and recommended for implementation on page 88 of the City of Kawartha Lakes Trails Master Plan Update. A graphic of the various steps is presented in **Figure 6**. This process is recommended to be used for both the Trails Master Plan update as well as the ATMP with every effort being made to coordinate programming initiatives between planning and development and community services with collaboration and coordination with external stakeholders.



Figure 6 . Seven Step Community Based Social Marketing Approach

4.4.2 Preliminary Programming Alternatives

Similar to the Trails Master Plan update the intent is to provide the City of Kawartha Lakes with the process to design, implement and monitor AT supportive programming along with a series of suggested programs for future consideration. The programming alternatives outlined within the ATMP build upon those identified within the TMPU which include:

- > Maintaining Trail Information
- > Kawartha Lakes Trail Days
- > Community Rides & Trail Experiences
- > Trail Kiosks
- > Trail Clean-up Day
- > Rental Offerings

The information contained within the ATMP is intended to provide more AT specific programming options which complement the TMPU initiatives with a focus on the challenges and non-physical barriers that are experienced throughout the City. The alternatives are not intended to be a fulsome prescriptive list of options but the basis upon which discussions can occur regarding what programs the City may wish to explore in their CBSM efforts.

The information contained within this section build upon the programming recommendations and are intended to provide additional support to be used by staff in the initial stages of program planning and design – should they wish to proceed with implementation.

Bike Share System

The Kawartha Lakes bike share program offered in Bobcaygeon, Fenelon Falls, and most recently Lindsay is leading the way and showing that a bike share service can work in smaller communities, and not just big cities.

Since launching a few years ago, the local bike share program has offered an important service to provide residents a practical, flexible, and economical travel option, allowing people to ride a bike without worrying about up-front costs, maintenance, or long-term storage, and also providing an attractive tourist amenity.

To ensure that the service remains viable long-term, it will be necessary to maintain support for the service and ensure that bicycles are maintained and replaced as needed and be expanded through additional bikes and locations to make the program as useful as possible for various trips. In addition, enhanced efforts could be made to promote the use of the Bike Share program beyond localized effort. Promotional information and a campaign targeted at seasonal uptake may lead to greater tourism potential. In addition, local off-season rides could be promoted to encourage those who do not have a bike to participate. These types of effort could be explored in partnership with Kawartha Tourism with input from local clubs and interest groups to determine ride routes and destinations.

The program may also continue expanding the bike share system to include different types of bicycles that people can try, such as e-assist or adaptive bikes that allow people with varying abilities and levels of fitness to cycle, or cargo bikes that allow people to carry large items.

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Education & Outreach Programs

Education and outreach programs are an important aspect of the ATMP, as these programs are a cost-effective way to get people to engage in AT and address non-physical barriers. These types of programs are often most effective when targeted to specific demographics, such as youth, seniors, women, low-income people, or other groups. Below are some programs that have proven effective at municipalities at building a culture shift toward active modes.

AT Incentive Programs

When encouraging behaviour change, sometimes small incentives can make a big difference to reinforce people's decision to walk or bike and help them to establish AT as a more regular habit.

Incentives could involve partnerships with local business, to encourage employees or customers to bike or walk and give them a small token of appreciation, such as a discount, a free coffee, or other item.

Giveaways can also reinforce education and encouragement messaging – instead of just telling people to be visible and heard on trails and paths, it can be more effective to purchase and give out bike bells, bike lights, or reflective items.

Incentive items can include City branding and web addresses or QR codes that link to relevant online information or be given along with printed maps or literature to help make this information more attractive for people to take and read. These promotional items can be leveraged can cross-promoted with other City initiatives.

Community Events, Pop-ups, and Bike Valet

Once the City starts to produce print information, maps, and incentives the information needs to find a way to be distributed effectiveness.

Where possible information and incentive materials should be distributed at events with staff who can answer questions about walking and cycling and tell people about upcoming active transportation projects. A good place to start is to put together a “booth” that can be deployed either at one of the numerous community events that regularly happen across Kawartha Lakes, or that “pops-up” at busy trail locations at key times. A booth doesn't have to be a large-scale physical structure, it can include a table, tent, and promotional information and giveaways, and can be enhanced with things like a bike pump to give cyclists air, or a water jug to fill people's bottles.

At large community events, consideration should be given to enhancing municipal presence with a bike valet service – giving people a safe, supervised place to leave their bike when local racks may be full, and to help encourage people to leave their car at home when car parking may be scarce. These types of offerings have in the past been coordinated with local interest groups with support from the Municipal whereby the City would provide the “infrastructure” and the space for the valet with the volunteers providing in-kind support in the form of time and effort.

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Cycling Skills Workshops

Many people have a bike sitting in their garage that they may use occasionally, but a major barrier that prevents people from cycling more often is the lack of knowledge about cycling, whether that be riding skills, knowledge of safe and legal cycling practices, or repair and maintenance skills to keep their bike functional and enjoyable to ride over time.

There are a variety of ways to implement skills workshops. Local library or recreation programming can be leveraged by adding specialized active transportation workshops, kids' camps, bike rodeos, or fitness classes, or by including cycling or hiking as a theme or aspect of a broader program.

A local businesses or other organization could also be contracted to deliver skills workshops – the BIKE organization in Peterborough offers mobile workshops and could bring this service to Kawartha Lakes. Workshops can be done on a variety of topics and be done in varying lengths and for people of varying skill levels and demographics. The format of these workshops can be flexible and coordinated. An example if leveraging farmers markets to provide repair offerings on behalf of the City.

More formal and privatized programming can be explored by the City if there is interest including bringing a CANBike program to one of the local schools or community centres. These programs can sometimes be cost prohibitive. The City is encouraged to find more accessible and equitable alternatives for individuals within the community.

Community rides & walks

A simple and effective way to encourage AT is by organizing local walks, hikes, and bike rides. These experiences can leverage other interests among members of the community, such as natural, historical, or cultural features while providing the social / human connection that people are seeking.

Walks and rides can be focused on various demographics, such as families, seniors, tourists, or other groups. While there are already some local bike rides organized by the Kawartha Cycling Club, these are generally longer-distance rides that attract experienced touring cyclists. There is interest and room for the City to support shorter, family-friendly rides aimed at the “interested but concerned” group of potential cyclists.

These types of experiences provide people with an opportunity to engage in an enjoyable, social activity that helps build an active transportation culture within a community. Once a series of walking and cycling routes have been developed through organized events, these can be used and promoted through wayfinding and online mapping tools to give people a resource to draw on for their own self-guided trips.

The AT network should be the guidepost for determining which routes would be most appropriate in addition to leveraging off-road trail linkages for AT use. Rides can explore ‘old favourites’ or be used to highlight new facility types and educate people as to how to navigate or use different types of cycling or walking infrastructure.

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Update Promotional Materials & Mapping

The City of Kawartha Lakes currently has a variety of online information about active transportation and trails, including pages on the main municipal site Kawarthalakes.ca, and on the City's tourism page at explorekawarthalakes.com.

The City's tourism department also produces a Cycling Routes Map which focuses on rural touring bike routes and highlights key destinations for touring cyclists. These resources provide a strong base for the City to build upon, and to remain relevant they should be regularly promoted, maintained, with content updated on a regular basis; at least annually, and more often as appropriate.

Every effort should be made to ensure that the information presented in print or online promotional formats is up to date and reflective of the appropriate routing, facility and use information.

As the ATMP network is implemented, and growth occurs in the municipality, there will be opportunity to update existing maps and resources with new facilities as they are improved, and to provide more resources for localized, utilitarian cycling, such as through the development of a Lindsay cycling map. New and updated mapping and resources should be coordinated between the Planning and Development and the Parks and Recreation departments to ensure they reflect both on and off-road facilities, and for multiple trip purposes, including recreational as well as utilitarian and commuting trips.

Wayfinding & Signage Strategy

Wayfinding signage and other tools that provide information for people to get around via active modes can have multiple benefits for a community such as Kawartha Lakes. The first is providing practical information to help people get around – which is especially important for tourists, newcomers, or when facilities are newly built. While basic wayfinding signage is provided for major communities or destinations, this signage is often focused on drivers. People on foot or on bike often cannot easily see such auto-oriented signage, and the information is often not tailored to them.

Smaller signage that is at eye level for pedestrians and cyclists and that include walkable or bikeable distances, or even walking or biking times, are more useful. In addition, signs also eliminate the need to consult an electronic device or paper map to get around. The existing promoted touring cycling routes are an ideal place to consider the implementation of initial signage and wayfinding.

In addition to the practical benefits of helping people navigate their communities on foot or bike more easily and confidently, wayfinding signage can also serve as an effective tool for marketing walking and cycling. Similar to posters, billboards, or print media, wayfinding signs are a useful nudge that reminds people that walking or biking is an option to access destinations and helps communicate the importance of active transportation to the City.

Lastly, showing the distances and times to travel on foot or by bike, wayfinding signage can help change those perceptions and encourage new travel patterns. The principles and approaches to developing unique and tailored signage and wayfinding is identified in Section 4.3 and should be considered along with a robust promotion and communication campaign once implemented.

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Bicycle Friendly Business program

The Bicycle Friendly Business program is a province-wide initiative as part of the Ontario By Bike Network which offers information on cycling in Ontario.

To join the program, a business has to meet certain certification criteria, such as providing secure bike parking, local cycling information, water, rest areas, and/or other amenities.

Kawartha Lakes currently has a number of local businesses that are part of the program, befitting its status as a major cycling and tourism destination. However, this also points to potential for additional expansion of the program.

The City is encouraged to follow the lead of other municipalities by helping to promote the program, facilitate the application process for businesses, and offering incentives such as promotional materials, bike racks, bike repair kits or stations to businesses who join.

They are also encouraged to leverage this program recognition as part of wider promotional initiatives related to cycling tourism throughout the City. The opportunities for increased economic investment are significant with seasonal tourism increasing at such high numbers during the summer months.

Bicycle Firendly Community Designation

The Bicycle Friendly Communities program encourages municipalities improve and evaluate their progress in engineering, education, encouragement, evaluation and planning to foster cycling by awarding various levels of certification: bronze, silver, gold, platinum, and diamond.

The program is led by the Share the Road Cycling Coalition, which provides municipalities with resources and guidance to work towards and apply for certification. Kawartha Lakes will be well positioned to join the over 50 communities across the country that have achieved Bicycle Friendly Community designation once it begins to implement the recommendations in the ATMP.

Unlike the Bicycle Friendly Business program which specifically acknowledges business within the City, the Community Designation is a more ambitious recognition that could help City staff to determine the degree to which their investment and commitment to AT is being recognized.

As part of the program feedback is provided on potential improvements or areas of focus which the City could use to help prioritize the ATMP recommendations further. Typically, Share the Road Cycling Coalition looks to internal municipal commitment including but not limited to the adoption of a master plan to demonstrate commitment. This combined with investment in education, encouragement, enforcement and evaluation can help contribute to achieving a specific designation.

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Safe Routes to School Programs

The benefits of kids walking and biking to school are well-documented, including improved physical and mental health outcomes, better academic performance, safer local streets, and reduced pollution and traffic, to name a few.

Safe Routes to School programs help create lifelong habits of safe walking and cycling among youth, and to be effective should also involve parents as they are usually the decision makers for family trips.

The City can leverage local schools and boards, a range of partners such as the HKPR District Health Unit, as well as provincial and national resources and programming, such as Ontario Active School Travel and EcoSchools Canada.

Schools can start to get involved by participating in national and provincial promotional events, such as Walk to School Month, Winter Walk Day, or Bike to School Week, and with greater commitment and support, schools can launch a more comprehensive School Travel Planning program – a community-based model that addresses barriers to walking and wheeling to school through a school-focused action plan.

All of the potential programs identified as part of the Kawartha Lakes ATMP will take considerable coordination and collaboration to achieve. Municipal departments are encouraged to work together to ensure that programming efforts are maximized and not duplicated. Partnerships will be key to future success. Details regarding potential partnership opportunities are provided in Chapter 5.0 of the ATMP.





Part 5.

Action & Adaptation

The City of Kawartha Lakes ATMP is a long-range strategic master plan provides direction on how to plan, design and ultimately implement active transportation infrastructure, programming, and policies over the next 20+ years.

The plan aims to be realistic, adaptable, and appropriate for existing local conditions and community needs, while reflecting current processes and practices, and also considering future trends, growth, and technological advances to achieve long-term City priorities and goals. Taking a high-level master plan from planning to action can be a challenge. Clarity, consistency, and communication will be key to the success of the plan in addition to actionable change.

The active transportation master plan is unique in that it requires buy-in and investment from a range of municipal departments. Though developed through the planning and development department, the majority of the recommendations found within the ATMP have an impact or are intended to be led by staff in other municipal departments and ongoing coordination by all. Unlike the Trails Master Plan which focused on off-road trail linkages primarily found on municipal lands – which are the responsibility of Community Services – the recommended AT projects, programs and policies will require input from engineering, public works, community services and other City staff.

Considering the amount of growth that the City of Kawartha Lakes is currently experiencing and anticipating, there are a significant number of opportunities to take action. Considering the socio-economic and climate related challenges that the City, the Province, the Country and the World are experiencing there are a significant number of opportunities to take action. The City is recommended to take action in a number of ways focusing on implementation of the ATMP over the next 20 years. That said, there will need to be ongoing efforts to consider how best to improve and enhance the processes and practices related to active transportation throughout the City. Chapter 5.0 provides recommended guidance on how to consider future action through implementation.

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5.1 Implementation

Implementation refers to the process of putting a decision or plan into effect through action or execution. The Active Transportation Master Plan for the City of Kawartha Lakes was developed with the purpose of providing City staff with guidance as to how to proceed with implementation. The recommendations found within the ATMP include new policies, protocols and practices which will require a collaborative and coordinated approach to implementation and strategic change management. A series of implementation related recommendations are included within the plan along with supporting information to help guide the City's next steps and actions related to active transportation.

#	Recommendation	Priority	Timing
32	Implementation of the AT network is to be monitored and updated relative to new development opportunities to ensure that the development approvals and site plan approval process incorporate active transportation features to the fullest extent possible.	No	
33	Planning and development should be responsible for the coordination of the active transportation master plan and will meet annually with representatives from the community services department and public works to ensure that there is sufficient coordination between the functional transportation plans adopted by the City.	No	
34	On an annual basis, seek the input of ATMP partners - as outlined in the partnership strategy - to discuss active transportation infrastructure, programming, and maintenance priorities.	Yes	
35	Active transportation priorities will be reviewed on an annual basis to determine which projects and programs are to proceed to implementation. Status updates and project recommendations will be summarized in an annual report to Council which will go forward at the same time as the report prepared for the trails master plan.	No	
36	A dedicated staff person should be identified to support and coordinated the implementation of the ATMP starting with an existing staff member and expanding to 1.0 additional FTE in year two. Depending on the level of effort required to implement the plan this may increase to 1.5-2.0 FTE based on future assessment of need.	No	
37	A partnership strategy will be implemented to support and facility the implementation of the ATMP based on the guidance provided within the ATMP document related to appropriate roles and responsibilities	No	

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#	Recommendation	Priority	Timing
38	Partnerships with key stakeholders and organizations that are in alignment with, or support of active transportation should continue to be supported as part of enhanced community outreach.	No	
39	Within the Engineering capital budget a line item of \$500,000 be identified for the implementation of active transportation projects in addition to exploring external funding opportunities as provided within the ATMP.	Yes	
40	Within the Public Works division operations budget, the line item for maintenance will be increased to \$200,000 with appropriate increases to the budget per annum based on km implemented.	Yes	
41	Within the Planning and Development Division capital budget a line item of \$50,000 be identified for the implementation AT related education and encouragement strategies with the potential to increase to \$100,000	Yes	
42	Municipal staff should annually explore external funding options and alternatives at the federal and provincial level to determine if there are opportunities to secure monies to support the implementation of the ATMP beyond municipal monies.	No	
43	Donations to support the implementation of the ATMP should be encouraged from community groups and members with the potential for a dedicated account to monitor and track annual donations aligned with municipal planning and budget decision making	No	
44	The proposed phasing strategy as identified in the ATMP is to be used as the primary reference by City staff to determine annual active transportation projects and priorities and is to be reviewed and updated every 5 years.	No	

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5.1.1 Project Phasing

The City of Kawartha AT network is intended to be implemented over a 20+ year period of time with opportunities for review, revision and adaptation depending on municipal priorities. Within a master plan project phasing is typically included which is the identification of a potential suggested horizon for project implementation. The implementation of the AT network is assumed to be initiated in 2025 and align with the following horizons:

- > The first 10 years (short-term) – 2025 – 2035
- > 11 – 20 year horizon (medium-term) – 2036 – 2046
- > 20+ year horizon (long-term) – 2047 and beyond

The routes and projects that make-up the AT network have a specific horizon identified. Phasing was identified using a two (2) stage approach. The first included a review of each project based on a phasing framework which considers community need and project complexity. A similar approach was used for the trails master plan update proposed projects. The following table presents the framework and considerations.

Community Need*	Complexity		
	High	Moderate	Low
* determined by the input received from public, stakeholder, and staff engagement	Considerable work needed to address physical concerns or issues	Projects may require confirmation of some contextual details prior to design	Can proceed immediately to design and construction
High Community Need			
Moderate Community Need			
Low Community Need			

Table 20 . Preliminary Phasing Considerations

While the phasing horizons are slightly different, coordination and continuity between the two plans has also been a key consideration in the phasing and prioritization process. Furthermore, the initial assessment and recommended phase was further refined based on other influencing factors and consideration including but not limited to:

- > The status and outcomes of previously completed or in development environmental assessment projects
- > Planning and adoption of existing capital projects as per municipal budgeting processes
- > Growth related impacts including plans for future development and growth / expansion of communities
- > Municipal priorities in terms of high needs areas or major gaps / improvements that would significantly impact individual and community mobility
- > Public and stakeholder input as gathered throughout the project process

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The phasing plan does not identify a specific year that a project is recommended to be implemented. It is intended to provide a range within which the project is intended to be initiated but not necessarily completed considering the level of complexity and required next steps (see section 5.1.3. for details about the process and section 5.2.3 regarding approval requirements).

Annual priorities should be determined on an annual basis as part of the capital planning process undertaken by the City and with considerable coordination between the various municipal departments to align priorities and leverage opportunities for multi-modal implementation efforts.

The phasing plan is not intended to be a prescriptive series of recommendations on project timing. The information contained within the ATMP and provided to the City is meant to be used as a resource and start point from which day to day and annual decisions regarding active transportation routing and infrastructure can be made.

As the City proceeds with implementation of the AT network, it is possible that priorities may change, or additional funding may become available, which can change the status of the project or the phase in which it is being implemented. The City is encouraged to undertake ongoing monitoring (see section 5.3 for more details) of implementation and funding opportunities to ensure that the timing for implementation adapted as needed.

The following is a summary of the proposed projects by phase for the entire AT network for the City of Kawartha Lakes. The route phasing results are presented on Maps X through X.

Area	Short	Medium	Long
Bobcaygeon	17 km	15 km	4 km
Lindsay	38 km	50 km	16 km
Fenelon Falls	13 km	7 km	2 km
City-wide	349 km	201 km	51 km
Total	417 km	273 km	73 km

Table 21 . Summary of Proposed ATMP Projects by Phase by Kilometre

5.1.2 Costing & Funding

As noted in chapter 4.0 the AT network represents a very ambitious target for route planning and facility design. As part of the development of the ATMP, master plan level costing has been prepared based on a series of assumptions determined at the time of development.

The estimated costing is intended to be reviewed and refined at the time the City decides to proceed with implementation. Considering the scale of improvements identified within the ATMP, the anticipated cost and need for investment will require multiple avenues and options for funding. Both the costing details and funding alternatives are presented in the following sections.

Costing Overview

Costing information has been organized into two categories – capital costs and operating costs.

Capital costing represent investments in the design and construction of AT infrastructure. Capital costs could be identified for either stand along AT projects or AT could be integrated into larger scale capital infrastructure projects. Both options are identified on a department-by-department basis depending on the scope or impact of the project. Capital project funding allocation is set out in the City's Long-Term Financial Plan, the most recent of which covers the years 2022 – 2031.

Operational costing represents day to day running of the municipal business including staff time and sometimes programming. Considering the multi-departmental impact of the ATMP there will likely be capital and operational costs that are identified for a number of City departments – as reflected in the implementation recommendations.

Capital costing has been prepared for the proposed pedestrian and cycling infrastructure projects. Capital costs are fixed expenses incurred to purchase or build assets such as infrastructure. The following are the costing assumptions that informed the development of the capital cost estimates for the ATMP:

- > Costing was developed using unit prices identified based on best and comparable practice.
- > These costs should be the foundation for annual budgetary discussions and decisions made by City staff and be revised as needed.
- > The costs are not meant to be prescriptive, but to provide a preliminary estimate of potential capital cost.
- > All costing included within the ATMP are intended to be reviewed and refined at the time the City proceeds with next steps.

Based on these assumptions, the capital cost for the implementation of 763 kms of AT network could cost around \$88 million which represents an investment of \$33 million in built-up (urban) areas, and \$57 million for the City-wide (rural) network. Considering the network is intended to be implemented over a 30-year timeline (approximately); the annual investment in AT infrastructure projects could be around \$3 million.

As previously presented, the priority network is significantly less investment but still would achieve a considerable amount of connectivity, continuity, and user-friendly facilities. The City may wish to select on the implementation of the priority network as opposed to the full AT network. This represents 424 kms of AT infrastructure at a cost of \$63 million which represents an investment of \$22 million in built-up (urban) areas and \$41 million for the City-wide (rural) network. Over a 30-year timeline this could represent an annual investment of \$2.1million in AT infrastructure projects. Details are provided below.

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Area	Short	Medium	Long	Total
Bobcaygeon	\$2,841,759	\$3,376,634	\$2,925,907	\$7,019,956
Lindsay	\$6,719,560	\$10,903,520	\$2,925,907	\$20,548,988
Fenelon Falls	\$1,893,699	\$953,946	\$680,545	\$3,528,191
City-wide	\$25,648,930	\$21,713,805	\$9,497,794	\$56,860,530
Total	\$37,103,949	36,947,906	\$13,905,809	87,957,664

Table 22 . Overview of Proposed Master Plan Costing for ATMP Network

Area	Short	Medium	Long	Total
Bobcaygeon				
Lindsay				
Fenelon Falls				
City-wide				
Total				

Table 23. Overview of Proposed Master Plan Costing for ATMP Network Priority Projects

The costs included within the ATMP reflect unit costs based on 2023 / 2024 values and monetary assumptions. They are master plan level costing which means that additional costs beyond construction will need to be reflected in the budgets that the City identifies as well as economic influences such as inflation. When the City proceeds with the implementation of a proposed project or identifies funding for projects within a capital budget the following budget adaptations should be considered.

Inflation	Permits & Approvals	Additional Studies	Design
3-4%	5%	\$50k	20%

It is important to note that this information is provided to the City of Kawartha Lakes for transparency and information. The value is not meant to intimidate but show what could be built / achieved with long-term investment in sustainable transportation infrastructure, safety and comfort among those most vulnerable road users and community / mobility accessibility.

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Operating costs are associated with the maintenance and administration of a business on a day-to-day basis. For the purposes of the ATMP, it has been assumed that operating costs include maintenance, evaluation and enforcement associated with the existing and recommended projects. The following are some of the cost considerations for operating costs that should be reflected by the City:

- > Maintenance will be dependent on the type of infrastructure and the expected seasonal use. At a minimum, the following maintenance practices have been assumed for active transportation facilities to be undertaken on a quarterly or bi-annual basis to reflect the changes in season:
 - Removing encroaching vegetation
 - Mowing
 - Map/signage updates
 - Trash removal/litter clean-up
 - Flood or rain damage repair: silt clean up, culvert clean out, etc.
 - Patching, minor re-grading, or concrete panel replacement
 - Amenity repair or replacement
- > Costs associated with the maintenance of physical infrastructure will vary depending on staff availability as well as weather conditions. Costing does not provide recommendations on the types of maintenance vehicles or tools that would be needed to facilitate seasonal maintenance.
- > Maintenance activities may or may not be required if there are environmental compliance requirements but should be reviewed by resource and environmental compliance staff to determine if maintenance would have an impact on resource protection.
- > For winter maintenance, preliminary costs should only pertain to operational/staffing efforts and not the acquisition of necessary equipment. Should the City consider the purchase of a vehicle to support adapted

maintenance practices, research shows that this cost could be upwards of \$250,000 which includes the purchase of vehicle, insurance, fuel, and storage.

- > Enforcement is undertaken by staff as part of the Municipality's By-law Enforcement. The level of effort may increase because of the recommendations related to the data collection and evaluation and the increased use of active transportation corridors. Additional staffing or budgetary allocations may be required to accommodate these changes.

Both the ATMP and the trails master plan update provide guidance on potential maintenance practices. The intent is for there to be a coordinated effort between Community Services, Planning, and development as well as by-law enforcement to determine the appropriate capacity and level of maintenance service that can be provided. Consideration should be given to identifying potential AT routes as well as trails which could be maintenance year-round as part of a winter maintained AT system for recreational and utilitarian seasonal travel.

It is important to ensure that there is continuous coordination, collaboration and communication regarding trail and AT maintenance efforts to ensure that there is a seamless user experience no matter the season or the location of the route / facility.

In addition to the traditional operations costs identified as part of the ATMP, costs for the implementation of policies and programs are assumed to be captured as part of annual operational costs along with some external funding. The assumption is that by implementing some of the recommendations related to staffing (recommendation #33) as well as partnerships (recommendation #34) there will be increased capacity to support these operational needs.

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Funding Sources

Municipal investments are challenging navigating competing interests and trade-offs in the public interest. The City of Kawartha Lakes – in the past – has not specifically funded or prioritized investments in sustainable transportation infrastructure beyond trails or as part of wider transportation infrastructure capital projects. As such, it is understandable that costing and request for funding within the ATMP represent the need for a significant shift in municipal funding priorities and a multi-faceted approach.

It is appropriate to assume that it may not be possible for the City to achieve full implementation of the proposed network even with a 20-year horizon. To provide the City with a greater degree of flexibility in their implementation approach, it may be decided that implementation should focus on the priority routes. Once the priority routes have been implemented the City may wish to revisit the AT network or continue investing in expanding the system to include additional route opportunities.

Funding strategies to support implementation must consider a range of options and alternatives to off-set or address funding challenges. It is also helpful to identify flexible options beyond the full network or proposed phasing which allows the municipality to adapt to changes in funding opportunities. The following is an overview of potential funding opportunities – both internal and external to the City – which the City of Kawartha Lakes is encouraged to explore.

Staff are encouraged to continually assess, monitor, and adapt their approach to AT investment and coordinate with community services, public works, and engineering to find multiple avenues for financial support but to avoid duplication of efforts.

Internal Funding Opportunities

Internal funding includes monies that are committed by Municipal council and leadership to address the implementation of the ATMP. The funding model is an integrated and collaborative approach. There is an expectation and understanding that different elements and aspects of the ATMP will be the responsibility of different municipal departments as outlined in the ATMP implementation recommendations.

As per the recommendations noted above the Planning & Development Department has been identified as the lead coordinator of the ATMP. As the Department that developed the master plan report staff have an understanding of the content and the way in which it is intended to be implemented. As a policy-driven master planning approach, there is a considerable amount of effort that will need to go into reviewing and updating municipal policies, plans and planning implementation tools which the Planning & Development Department are well positioned to lead as part of day-to-day work.

That said, these efforts and efforts associated with day-to-day coordination will likely be beyond the typical efforts of current staff. Roles and responsibilities will be discussed below but staff time and effort to lead the ATMP implementation will likely include but not be limited to the following:

- > Staff leadership related to the prioritization and coordination of ATMP recommendation implementation
- > Coordination and management of GIS data as part of a wider asset management tool
- > Annual reporting and budget integration of AT initiatives
- > Development and release of promotional materials
- > Updates and information shared through social media

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- > Coordination with external partners to pursue programming.
- > Identification of external funding sources
- > Policy reviews and updates
- > Ongoing education regarding emerging areas of AT
- > Data collection and monitoring of facility use and public input on AT opportunities and issues

An annual budget of \$50,000 has been identified for Planning & Development which would primarily address the implementation of programming and outreach initiatives; however, there is an expectation that these monies will be supplemented with external funding opportunities (see below) as well as in-kind support from other organizations and stakeholders.

These efforts will likely require at least 1 FTE position beyond what the City had on staff. The City is encouraged to incorporate these tasks into the job descriptions of existing staff but with a goal of finding a dedicated staff person to implement the ATMP and other related master plans / municipal initiatives. Though this isn't a specific dollar value, there will be budget expectations for this role that will need to be determined once the role has been defined.

The design and construction of AT infrastructure will be the responsibility of the Engineering Department with an annual budget of \$500,000 to start initiating stand-alone AT projects from the AT network. In addition to this budget, the Engineering Department is encouraged to find opportunities to implement AT infrastructure as part of large-scale infrastructure project e.g. road rehabilitation or new roadways.

The maintenance of AT infrastructure will be the responsibility of the Public Works Department with

an annual budget of \$200,000 to start. Discussions will be required to confirm if this budget solely covers on-road AT infrastructure or if it also includes off-road AT infrastructure i.e. trails dedicated to active use.

As noted above and in the maintenance section below the costs associated with maintenance vary significantly depending on the type of facility and timing of the maintenance. Consideration should be given to pursuing summer maintenance for on-road AT infrastructure to start with the potential to expand to winter maintenance based on interest expressed by stakeholders and members of the public.

The ATMP assumes that capital and operating costs associated with off-road AT infrastructure i.e. trails will be the responsibility of Community Services with opportunities to explore growth related funding opportunities to address trails in new development areas.

As noted in recommendation 29, an interesting avenue of potential funding support is development. The City of Kawartha Lakes continues to experience a considerable amount of growth especially within the community of Lindsay and communities to the south. Opportunities will continue to arise – depending on provincial direction – to leverage this growth to fund the implementation of AT projects or to incorporate AT into the planning and design of new development area. Planning and Development should continue to prioritize finding opportunities (where appropriate) for development charges to be used to fund active transportation infrastructure.

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External Funding Opportunities

Even with dedicated internal funding, the anticipated cost implement the ATMP will require additional, external funding sources. As per recommendation 39, external funding opportunities should be explored regularly and pursued, whenever feasible, to offset the cost of ATMP implementation.

The following are a series of external funding opportunities which could be considered. The requirements and criteria for these funding opportunities will likely change from time to time and new opportunities will arise.

It is important to undertake a review of opportunities on an annual basis. It is important to note that not all external funding opportunities may result in monies being provided to the City. “In-kind” support that can be provided, including but not limited to volunteer trail stewards, maintenance, data collection, promotion, and event outreach, etc. also provide a significant amount of value when implementing programs or initiatives that are not the construction of infrastructure. These opportunities have also been identified as part of the external funding options outlined.

The information contained within the ATMP is intended to be used to support future funding / grant applications with the intent of securing external funding sources.

Government of Canada

- > Investing in Canada Program
- > Healthy Communities Canada Funding Initiative
- > Green Municipal Fund
- > Federal Gas Tax
- > Federal Active Transportation Fund
- > Province of Ontario
- > Ontario Municipal Commuter Cycling Fund
- > Province-wide Cycling Network Funding
- > Provincial Gas Tax

- > Ontario Trillium Foundation Community Building Fund
- > Ontario Rural Economic Development Fund
- > Tourism Development Fund
- > Ontario Community Infrastructure Fund

The formal funding opportunities noted above will require a grant or application to be submitted and will have specific requirements. The requirements are typically more stringent and the monies that are provided will need to be used in a specific timeline. That said, depending on the opportunity the values can be significant.

For the remaining options, the intent is for the to be used to generate funds for the City which may not be specifically tied to a project or initiative. Should additional funds be generated; the ATMP recommends that the City establish a “bank account” or dedicated holding fund for AT. This “fund” would be used strategically by staff with input from stakeholders as to which projects or priorities would be covered by the monies. This would apply most directly to private citizen donations but may be applicable to others where a specific project isn’t identified or requested.

Organizational Support

Organizational support refers to investments made by local clubs and interest groups who are organized but are not formally affiliated with any government organization or private entity. They could include local agency support (in-kind) or service Club or Local Club Funding from groups that align with active transportation priorities.

Public-Private Partnership

There may be local business or industry who have an alignment with the AT focus of the City who may wish to provide corporate funding in support of implementation. The City should explore opportunities for corporate Environmental Funds with local industry to leverage and encourage local investment in community services.

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Private Citizen Donation

Donations can be accepted at any time; however, the City may wish to target a dedicated fund-raising month whereby opportunities are provided to “name a route”, or “design a sign” which are used to specifically generate monies for implementation.

Events & Tourism

With a considerable number of areas of natural, cultural, recreational, and seasonal significance the City of Kawartha lake is a tourism destination year-round. The City should explore opportunities to leverage existing tourism events to generate monies in support of trails. In addition, there may be other opportunities that highlight opportunities to use active transportation routes e.g. coordinated rides or hikes along AT routes (either on or off-road).

For events, there are different scales that can be explored where-by the route could either be part of the overall event or it is the event. Exploring opportunities to activate the space (i.e., art installations, historic tours, etc.) would be encouraged for stand-alone events.

This opportunity is one that has multiple benefits including AT encouragement and education – as per the program recommendations. For the greatest potential benefit to the City Planning and Development are encouraged to work directly with partners specifically the Community Services department as well as external stakeholders who are committed to both trails and AT. Success for trails is a success for AT and programming / events should find opportunities to highlight the benefits to both where possible.



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5.1.3 Process

After the ATMP has been adopted and the City moves forward with implementation there will be steps towards construction and implementation that will need to be completed. These steps are referred to as implementation facilitation processes. There are different steps and processes to be undertaken depending on the type of project or initiative. The ATMP includes AT network infrastructure projects, as well as education and outreach programs. The following is an overview of two implementation facilitation processes – for infrastructure projects and programs. Not all projects or programs are the same; however, the processes help to define the typical steps that need to be completed which can be adapted – as needed – to reflect the unique conditions or considerations that may arise.

AT Infrastructure Projects

The projects that make up the proposed AT network include different facility types, alignments and contexts which leads to wide range of project types. In the context of the City of Kawartha Lakes an AT infrastructure project refers to any of the proposed cycling improvements, walking improvements, along with additional improvements that aim to create a safer and more comfortable environment for all vulnerable and active road users. Table 24 is a typical implementation facilitation process that has been developed based on the guidance provided in Ontario Traffic Manual Book 18.

The process is to be used differently depending on the type of project that is being implemented. There are three general types of AT projects – depending on the level of effort and approval that will be required. A description of the project and their impact on the process is provided below.

Capital Projects

Capital projects typically involve significant capital costs and can include reconstruction or resurfacing of roads, improvements to bridges and culverts, streetlights and traffic signals, and other new and improved infrastructure built within road rights-of-way. Capital projects would typically include the design and implementation of AT infrastructure as part of a wider municipal project. Typically, these have a relatively high cost which could trigger an individual EA under the MCEA – pending changes to the Act and other legislative documents. The process noted below could be used for capital projects which integrate AT infrastructure but would align with the typical EA and design steps as outlined in the MCEA Act and User Guide.

Projects within Planned Development Areas

The City can leverage new development proposals and associated projects as opportunities to ensure they include key links for active transportation, as well as supportive amenities, design features, and built form, and road infrastructure that prioritizes safety and sustainability. This would be done as a developer secures the necessary approvals to proceed with a Draft Plan of Subdivision or Condominium, followed by site plan approval. This involves preparing documents that detail the location and width of streets, and the identification of pedestrian and cycling facilities within road rights-of-way, and other public facilities and amenities. Draft Plans of Subdivision include details at a high level, while site plans provide additional levels of design detail related to AT elements. In these cases it is the Planning Act and site plan requirements which dictate the process to implementation; however, the steps to determine and confirm routing, design solutions and details are consistent with the process noted below.

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Stand-alone AT Projects

For AT projects that do not require an EA, are not associated with any planned development, it may be appropriate to pursue the project as a “stand-alone” or “infill project.” Such projects are likely to be simpler projects that do not require significant changes to the roadway, and may only include pavement markings, signage, or other simple infrastructure that could be accommodated by existing road operations activity, and existing municipal contracts. Some of these projects may include neighbourhood bikeways, advisory bike lanes, conventional bike lanes, simple traffic calming projects, PXOs or new amenities and crossing improvements. For these projects, the steps noted below would all apply but would depend on the local context, conditions and considerations that would impact implementation.

Step	Description	Application
Step 1. Planning	<ul style="list-style-type: none"> > Review ATMP projects based on planned capital projects > Determine if the project can be coordinated with other planned multi-modal road improvements > Determine if an Environmental Assessment is required* > Determine if the project could be coordinated with planned development* > Prepare report to Council for information and/or endorsement 	All projects
Step 2. Site Review	<ul style="list-style-type: none"> > Undertake an additional review of site conditions > Collect site specific condition information and prepare functional design 	All projects
Step 3. Preliminary Design	<ul style="list-style-type: none"> > Prepare a preliminary design concept based on ATMP recommendations and while considering applicable design and engineering guidelines 	All projects
Step 4. Consultation	<ul style="list-style-type: none"> > Present preliminary design concept to residents and other relevant stakeholders to gather input > Engagement to be undertaken with residents adjacent to the project location and other primary stakeholders > Public meeting not necessary, communication and information gathering only 	Optional
Step 5. Detailed Design	<ul style="list-style-type: none"> > Refine and prepare detailed design concept of preferred solution, reflecting any input from consultation activities 	Optional – level of design detail will vary
Step 6. Schedule	<ul style="list-style-type: none"> > Identify the preferred schedule for construction to occur > Identify funding sources and allocate budget > Undertake additional consultation as needed to update residents in nearby area 	All projects
Step 7. Tender	<ul style="list-style-type: none"> > Prepare and release public tender, if appropriate > Determine and award to preferred candidate 	Optional – as needed
Step 8 Construction	<ul style="list-style-type: none"> > Construction administration and site inspection throughout the completion of the project 	All projects

Table 24 . AT Infrastructure Project Implementation Facilitation Process

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AT Programs

In section 4.5, a series of education and outreach programs are identified for consideration by the City. These potential programs are intended to be pursued by the City and its partners through a collaborative approach that prioritizes programs which complement existing initiatives and address specific behaviour changes. The process to facilitate the implementation of AT supportive programming is one that has been developed based on the processes of community based social marketing – an approach that focuses on how to adapt individual and community behaviour change through targeted education, encouragement, and outreach. Note that this process is the same as that identified in the City's TMPU, and programs should be implemented with a holistic consideration of both trails and active transportation needs across Kawartha Lakes.

Step	Description
Step 1. Behaviour	<ul style="list-style-type: none"> > Identify the behaviour that needs to be influenced and desired outcome of the program, building on ATMP priorities and objectives
Step 2. Audience	<ul style="list-style-type: none"> > Identify the preferred audience(s) to be targeted, including consideration of socio-demographics and AT user groups > Confirm audiences based on groups identified as part of the ATMP
Step 3. Barriers	<ul style="list-style-type: none"> > Identify potential limitations or barriers people face in adopting the desired behaviour, and position solutions relative to the program goals and objectives
Step 4. Placement	<ul style="list-style-type: none"> > Determine a potential pilot location / approach for implementation and initial distribution of materials / information / activities
Step 5. Work Plan	<ul style="list-style-type: none"> > Prepare a work plan for the design of the program, including needed capacity among City staff and external partners, materials, media, and communication, required equipment, and evaluation metrics > Identify the preferred program schedule / timeline > Identify funding sources and allocate budget
Step 6. Implementation	<ul style="list-style-type: none"> > Implement the program
Step 7. Evaluation	<ul style="list-style-type: none"> > Review and analyse previously established quantitative and qualitative metrics to evaluate the success of the program > Undertake engagement with select stakeholders to gather input > Identify lessons learned and improvements > Modify implementation approach based on input

Table 25 . AT Program Implementation Facilitation Process

Approvals

Depending on the specific location of a given project, and the land uses, land contexts, land ownership and conditions, additional approvals or permits may need to be prepared and submitted prior to or as part of the facilitation implementation process noted above for proposed AT infrastructure. Based on the jurisdiction and context within the City of Kawartha Lakes, there are three (3) potential approvals that may be needed when a project moves through to detailed design and implementation. The intent is for the City to refer to this information and review / confirm the necessary approvals prior to initiating next steps.

Municipal Class Environmental Assessment

Under the existing Municipal Class Environmental Assessment Act, there are specific projects which require an Environmental Assessment to be undertaken. The rationale as to whether an EA would be required is typically determined based on cost thresholds, with EA's generally being conducted for larger scale infrastructure project. The City is encouraged to use the master plan level costing included within the ATMP to determine which projects may be appropriate for an EA project, assuming that they would be completed as a stand-alone capital project and not a part of a larger Municipal infrastructure project. It should be noted that projects that include an AT component have been streamlined and exempted under the Municipal Class Environmental Assessment (MCEA) process, and thus are classified as "A" or "A+" projects, which are considered "pre-approved". Only basic public consultation and notification is required. Further streamlining of the MCEA has recently been proposed by the province which would further reduce the requirements for EA. The City should continue to monitor these requirements relative to the project type and cost to determine the appropriate next steps.

Environmental Impact Study or Report

If there is a proposed project within or adjacent to a significant natural area or natural feature within the Municipality which could have a potential adverse affect on those natural areas, an environmental impact study (EIS) may be required to be completed. Should it be determined that an EIS is required for a specific project, information should be provided in such a study, including but not limited to methodology, policy framework, field inventory, existing conditions, significant and sensitivity of natural features, impact analysis and summary of recommendations or defer to an alternate template / approach as identified by the City. Similarly, depending on the location and anticipated impact, a similar EIS may be required to be submitted to the Ministry of the Environment, Conservation and Parks. The content of this study would be developed based on the requirements set out by the Ministry and would be subject to approval by Ministry staff. Depending on the context and conditions an Environmental Monitoring Plan may also be required.

Other Agencies

There are several other agencies that have jurisdiction over various areas in the City of Kawartha Lakes. For the ATMP it is likely that Kawartha Conservation would be an approval agency. Any work being done by the City within and around Kawartha Conservation lands must be in alignment with the policies outlines in the Conservation Authority Act, and the processes and protocols outlined in Ontario Regulation 163/06. Oversight and input may also be provided by Kawartha Conservation staff for development applications within or adjacent to natural areas. Other agencies may also need to be consulted and provide approvals for projects, depending on the project location or other project details, including but not limited to the MTO, Ontario Parks, and Fleming College.

5.2 Management Strategy

The successful and ongoing implementation of the ATMP will require a considerable amount of oversight and management from internal and external partners. The development of the ATMP involved extensive coordination and consultation with these groups, which served as an opportunity to strengthen partnerships and set the stage for implementation and management.

Effective management practices should take into consideration and establish approaches which guide day-to-day action. A management strategy has been prepared for the City of Kawartha Lakes to support the Implementation of the ATMP. There are three components to the management strategy which provide guidance on day-to-day coordination, partnerships, and communication – all key aspects to facilitate management of implementation. A similar approach and content was developed for the TMPU. Both documents should be referenced when the City proceeds with implementation and will help to streamline coordination.

When implementing the management strategy, the City is encouraged to review the effectiveness of the strategies – every other year – to determine if there are any challenges or lessons learned which could require an amendment or adaptation of an approach.

5.2.1 Coordination Strategy

City staff will be the leaders responsible for the day-to-day implementation and ongoing monitoring and management of the ATMP. As noted throughout the ATMP thus far; there are a number of municipal departments which will be involved in various aspects of the plan's implementation. The success of the ATMP will hinge on defining clear roles and responsibilities among municipal staff, while also ensuring the City dedicates staffing resources and capacity to the appropriate departments in coordinating the implementation of the ATMP.

The following table provides an overview of the anticipated roles and responsibilities that are recommended for the various departments in the City of Kawartha Lakes related to implementing the ATMP's recommendations.

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Department	Role
Chief Administrative Office (CAO)	<ul style="list-style-type: none"> > Municipal enforcement as per the updated bylaws/regulations as well as frequency of practice to be undertaken by the Provincial Offences division
Development Services	<ul style="list-style-type: none"> > The Planning division will lead the implementation of the ATMP, as per recommendation #24. > A dedicated staff person should be identified within Development Services to support and coordinate the implementation of the ATMP, starting with an existing staff member and expanding in future years, as per recommendation #27. > Review development applications to encourage the provision of AT infrastructure, amenities, and supportive built form, and ensure designs are consistent with ATMP guidance > Provide land use and development information needed for AT infrastructure projects > Kawartha Tourism (part of Economic Development) will support updating of online AT and trail information, including as appropriate at explorekawarthalakes.ca, and support education and outreach programs as appropriate
Community Services	<ul style="list-style-type: none"> > The Parks and Recreation division leads the implementation of the TMPU, and will ensure its implementation is done in coordination with ATMP recommendations > Will meet no less than once per year with staff from Development Services and Public Works to ensure sufficient coordination between the City's transportation plans, as per recommendation #24.
Corporate Services	<ul style="list-style-type: none"> > Provide guidance on municipally consistent communications and marketing for any AT-related promotional materials > Provide IT support for the integration of the AT network database into wider municipal asset management and data coordination.
Public Works	<ul style="list-style-type: none"> > Implement the recommended AT infrastructure network projects > Will meet no less than once per year with staff from Development Services and Community Services to ensure sufficient coordination between the City's transportation plans, as per recommendation #24. > Provide information and guidance regarding road operations and water/wastewater utility infrastructure to support AT infrastructure projects > Support Education and Outreach programs, as appropriate

Table 26 . ATMP Proposed Roles & Responsibilities for City Staff

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5.2.2 Partnership Strategy

In order to foster increased active travel and mobility comprehensively and effectively in Kawartha Lakes, it will take a considerable amount of coordination and collaboration with key external stakeholders and technical agencies. Many of these groups have supported AT in Kawartha Lakes in the past and were involved in the development of the ATMP. The intent is to formalize, maintain and strengthen these relationships, while monitoring and identifying opportunities for new partnerships. A partnership strategy is developed to not only identify the potential partners but highlight their potential roles, responsibilities and the frequency of engagement and outreach as part of the implementation of the ATMP. A similar approach was used in the development of the TMPU. The intent is not for there to be separate or additional efforts with regard to partnership support. The intent is to work with similar agencies and stakeholders to coordinate both active transportation and trail initiatives. Table 27 provides an overview of the key partners and their suggested roles as part of the implementation of the ATMP.

Partner	Role	Outreach
Haliburton, Kawartha, Pine Ridge (HKPR) District Health Unit	<ul style="list-style-type: none"> > Coordination and support for education and outreach initiatives > Review of policies and plans 	Annually
Ontario Ministry of Transportation	<ul style="list-style-type: none"> > Addressing issues where AT facilities meet roads/highways under provincial jurisdiction 	Dependent on project
Ontario Provincial Police	<ul style="list-style-type: none"> > Enforcement of traffic laws > Coordination and support for education and outreach initiatives > Collection of relevant data 	Once or twice per year
Local School Boards	<ul style="list-style-type: none"> > Coordination and support for education and outreach initiatives > Focus on active and safe routes to school initiatives 	Annually
Kawartha Conservation	<ul style="list-style-type: none"> > Resources and coordination to support education and outreach initiatives > Implementation of staging areas and connection points to on-road linkages 	Annually
Adjacent Municipalities	<ul style="list-style-type: none"> > Coordination of AT connections at cross-boundary locations 	Annually, or dependent on project
Environmental Action Bobcaygeon	<ul style="list-style-type: none"> > Resources and coordination to support education and outreach programs > Engagement on local AT projects > Local advocacy and Strategic involvement by the City in annual prioritization 	Annually
Local Business Associations	<ul style="list-style-type: none"> > Resources and coordination to support education and outreach programs > Engagement on local AT projects 	At least once per year

Table 27 . Summary of Partnership Roles & Responsibilities

5.2.3 Communication Strategy

Communication – similar to education and outreach – is vital to increased awareness and up-take of AT. Beyond the potential proposed programs that have been identified for the City’s consideration, there are ongoing communication tactics which should be used to generate a greater degree of awareness. Tourism Kawartha Lakes has established a strong set of communication collateral which speaks to trails and primarily cycling. However, the information is at times disconnected with the information and conditions on-the-ground; or adopted through master and strategic plans.

The intent of the communication strategy is to further enhance and improve the communication efforts of the City regarding walking and cycling and to find new opportunities for enhanced communication tactics. These alternatives are also intended to be reviewed by City staff across all departments in partnership with Tourism Kawartha on an annual basis to determine potential work as well as document successes and lessons learned.

Online Resources & Tools

The information that currently comes up when searching for cycling or walking in Kawartha Lakes brings users to the City of Kawartha Lakes Tourism website – explore Kawartha Lakes. It includes the 2017 Kawartha Lakes Cycling Routes which are recommended / promoted routes that were identified by stakeholders prior to the development of the ATMP as well as a “Cycling and Biking” landing page with information regarding the touring cycling routes as well as educational information on safe cycling, bicycle friendly businesses as well as cycling friendly trail connections. The Kawartha Tourism website has seasonal updates which reflect the unique active transportation opportunities that change with the shifts in weather. The information regarding opportunities i.e. routing and facilities is

relatively similar. Currently, there is no information regarding active transportation, walking or cycling beyond municipal trails on the City’s municipal home page including a lack of information provided on the City’s maps and apps page (the GIS management and mapping tool coordinated by the City) which means there is significant potential for improvement.

Consistent and up to date information is critical for a municipality to communicate to its residents and visitors for both information and risk management and liability purposes. The City of Kawartha Lakes should use the information generated through the ATMP project to create a dedicated landing page on the Municipal webpage for active transportation and should consider accurate and timely updates to online information to ensure that there is appropriate awareness and documentation of what is available, maintained, and safe to use.

This will be especially important as the City proceeds with the implementation of the ATMP as well as the TMPU. To be useful, the page should be updated on a regular basis to ensure that all content is relevant, and to promote new projects and initiatives as they are implemented. Website content should be accompanied by complementary content and promoting the website through the City’s social media channels.

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Printed Materials

While most people look online for information regarding AT routes and opportunities, there is still a role for printed materials. Many people prefer print materials, and not everyone can equitably and reliably access the internet. Print materials can also be a useful way to get information directly into people's hands and in front of their eyes at in-person events or other outreach activities and can help promote more detailed information available online.

All online content should also be coordinated with printed materials, to ensure that all information, no matter its distribution channel is consistent. Providing maps that illustrate the existing AT linkages found within the City of Kawartha Lakes is a good starting point for printed information.

These hard copy maps should be updated every other year, at minimum, to reflect new projects shortly after they are built. These maps can include or be supplemented with separate flyers or brochures with information on topics such as safe trail practices, trail landmarks, local flora and fauna, ongoing programs, and upcoming events.

Tailored Messages

To successfully promote AT and encourage use, it is important to have a strategy to target audiences, and to tailor messages that will resonate and be effective. The programming process already reflect a community based social marketing approach for program development, a similar approach should be used for communication and messaging.

Messages should be developed for different demographic groups that are prevalent in the City of Kawartha Lakes as well as those the have been identified as high needs or an opportunity

for behaviour change. As part of the ATMP process a series of "user profiles" were developed which are intended to be used as the basis for identifying unique key messages that could help with behaviour change.

While it can be important and useful to include messages about safety, it is also important not to forget to tell people about the benefits of using AT as part of a wider climate change mitigation, healthy lifestyle, and how they provide a fun, environmentally friendly, affordable, flexible way to independently get around and explore the City.

Messages should not only be tailored to the audiences that they are intended to reach but should also be adapted based on the platform that they are released on. Depending on the social media platform or media outlet, different formats and message requirements should be closely considered.

New Development Welcome Packages

New residents are a key audience for active transportation promotion as they are most likely to benefit from and act on information about AT routes / opportunities in the area. The City of Kawartha Lakes is experiencing a considerable amount of growth with new residents coming from more urban areas as well as a continued increase in seasonal visitors.

Once mapping and other printed materials are developed, these can be included in welcome packages for new residents. Such a package can be incorporated into transportation demand management measures that the City can ask of developers through the development approval process. The information can be included along with information regarding other publicly available municipal services and can be combined with other incentives or promotion initiatives.

5.3 Monitoring

The monitoring, evaluation, and maintenance of existing and future active transportation infrastructure in Kawartha Lakes is critical for ensuring facilities are usable and welcoming throughout all seasons now, and well into the future. Effective monitoring ensures facility upkeep is done in a proactive and timely manner and supports a wider and more predictable infrastructure management and risk management approach, while also helping extend the service life of facilities.

It is acknowledged that strategic and focused efforts related to AT maintenance and management are not the current norm; however, in an effort to bring the City of Kawartha Lakes forward in their priorities and practices the ATMP provides guidance on how to embark on maintenance, evaluation and management of the AT network and AT related initiatives. The content of section 5.3 is a consolidation of relevant standards, guidelines and best / comparable practices for the City's review and consideration. It aims to provide the City with an adaptable approach which builds in management and knowledge resiliency which will help to support ongoing implementation of AT policies, programs and projects over the next 20 years.

#	Recommendation	Priority	Timing
45	The ATMP is to be revisited every five years, and a support generated on the status of implementation and priorities annually.	Yes	
46	The proposed active transportation network is to be reviewed on an annual basis to determine if there are any updates needed, such as additional connections or opportunities that are no longer considered feasible	Yes	
47	Undertake bi-annual walkability audits to inform sidewalk gap identification and the recommendation of amenities and enhancements to improve walkability based on the confirmed framework identified through the ATMP.	No	
48	Ensure that there is appropriate understanding of the current guidelines and practices relative to active transportation by having relevant City staff undertake annual or bi-annual training provided by Ontario Traffic Council or other relevant organizations.	No	
49	Utilize the minimum maintenance standards as the primary reference for the maintenance of active transportation facilities, with additional consideration for the seasonal maintenance practices outlined in the ATMP.	No	

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#	Recommendation	Priority	Timing
50	Review the online reporting tool to ensure that the City's maintenance issues portal can accommodate active transportation related issues or maintenance requests in a way that appropriately documents the issues.	No	
51	Improve and enhance the City's maintenance practices prioritizing the maintenance of sidewalks on primary corridors and connections to the trail system.	No	
52	Sidewalk maintenance should be a focus to improve and enhance the maintenance practices prioritizing the maintenance of sidewalks on primary corridors and connections to the trail system.	Yes	
53	Consider the primary routes identified as part of the ATMP network for enhanced winter maintenance based on the maintenance practices identified within the ATMP.	No	
54	Unsafe active transportation (walking and cycling) practices are to be monitored and managed through an integrated enforcement program led by the City in collaboration with OPP and appropriate community partners.	No	
55	The existing Kawartha Lakes touring cycling routes should continue to be monitored and when appropriate updated based on public and stakeholder input if they are not identified as part of the ATMP network.	No	

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5.3.1 Maintenance

There are several best practices that should be considered to ensure effective active transportation maintenance throughout all seasons. The current practice for these types of facilities is to adhere to the Minimum Maintenance Standards (MMS) for Municipal Highways (O. Reg. 239/02). The City is encouraged to continue the use of the MMS for purposes of facility maintenance; however, as new facilities are implemented every effort should be made to ensure that there is appropriate maintenance of those facilities to meet the additional guidance from MMS as well as additional guidance from Ontario Traffic Manual Book 18 (2021).

The following is a summary of the relevant standards from the appropriate documents pertaining to both existing as well as future planned on-road active transportation facilities.

Type	Service Level
Patrol and inspection	3 times every 7 days to one every 30 days (O. Reg 238/02 s. 3)
Sweeping (10.2.1)	Scheduled sweeping weekly to monthly; deploy resources outside of scheduled sweeping as soon as practicable after becoming aware of debris (O. Reg 239/02 s.9)
Surface discontinuities (10.2.21)	Greater than 5cm height within 2 to 21 days after acquiring knowledge (O. Reg 239/02 s.16)
Cracking (10.2.2.2)	Greater than 5cm wide and 5cm deep (O. Reg 239/02 s.8).
Surface Drop-off at Shoulders (10.2.2.4)	Deeper than 8 cm (O. Reg 239/02 s.7).
Vegetation management (10.2.2.3)	Routing mowing including daylight triangles at intersections, annual trimming of bike path trees.
Signage (10.2.5) and pavement markings (10.2.6)	Refreshed as needed

Table 28 . Summary of Relevant Minimum Maintenance Standards Guidance

To demonstrate an ongoing commitment to a comprehensive, equitable, and accessible AT network, it is essential to facilitate use of facilities year-round for various types of trips, especially for pedestrians. The maintenance of on-road active transportation facilities in winter should meet or exceed the minimum maintenance standards. In built-up areas of Kawartha Lakes, sidewalks and cycling facilities, should be maintained to an adequate level of snow removal, as well as ice prevention and treatment – as is the proposed approach for primary trails within the TMPU.

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

Winter maintenance in Kawartha Lakes is guided by the City's Winter Control Roadway Level of Service Policy (CP2021-045) and Sidewalk Level of Service Policy (CP2021-046). As per the ATMP recommendations, these policies and associated practices should be reviewed to improve and enhance sidewalk maintenance practices, prioritizing the maintenance of sidewalks on primary corridors and connections to the local trail system, and to consider the primary routes identified as part of the ATMP for enhanced winter maintenance.

The following is a summary of the recommended standards for on-road AT facilities outlined by the Provincial Minimum Maintenance standards that should be followed:

Type	On-road Bike Lanes	Sidewalk / Multi-use Path
Snow Clearing	When snow accumulation on bicycle lanes is greater than 2.5 to 10 cm, "deploy resources as soon as practicable to address the snow accumulation" and within 8 to 24 hours (O. Reg 366/18 s4.2)	Maintain to 8 cm within 48 hours, minimum width of 1 metre (O. Reg 366/18 s16.3)
Ice Prevention	Up to 24 hours preceding the likelihood of ice formation (O. Reg 366/18 s5)	"Treat... if practicable to prevent ice formation or improve traction within 48 hours if the municipality determines that there is a substantial probability of ice forming" (O. Reg 366/18 s15)
Ice Treatment	Treat ice within 3 to 16 hours after becoming aware of icy conditions (O. Reg 366/18 s5)	Under routine weather events, within 48 hours after becoming aware of icy conditions (O Reg 366/18 s15)

Table 29 . Overview of Winter Maintenance Practices for On-road AT Facilities

Kawartha Moves. City of Kawartha Lakes . Active Transportation Master Plan

5.3.2 Evaluation

Progress in support of AT within the City of Kawartha Lakes will be demonstrated by the changes or improvements that occur because of the implementation of the ATMP. It will be important for the City to evaluate the change in usage of existing and planned routes and facility experiences to determine how best to adapt or enhance the municipal offerings. To understand how implementation is progressing, it is critical to evaluate the successes, challenges, lessons learned and areas of improvement.

Establishing a set of consistent measures and processes to gather and evaluate those measures can help staff prioritize future projects, rationalize investments, and allocate resources. Effective evaluation strategies can help demonstrate the value of AT investments to decision-makers and the public, track the success of a program or project that has been implemented, inform investments through data-driven measures, comply with funding requirements, provide information to engage a broader range of stakeholders, and link to a more comprehensive set of multi-modal transportation data program.

The following are some of the suggested performance measures and evaluation practices that are tailored to the City of Kawartha Lakes to ensure that there is sufficient information gathering to inform ongoing implementation, management, and improvement of projects, programs, and initiatives associated with the ATMP. The information gathered should be used to update annual priorities and budgeting and the plan proceeds towards implementation.

Measure	Metric	Indicator
Public Health	Individual activity levels	#
	Time walking or biking per day	# (minutes)
	Air quality index	#
AT Facility Use	User counts	#
	Mode split	#
Projects	Number of new facilities added	#
	Length of new facilities added	# (km)
	Number of amenities implemented	#
Investment	External funding of operations	%
	External funding of trail projects	\$
	Number of cycle tourists	#
Economic Development	Number of trail tourists	#
	Customer by travel mode	%
	Revenue by travel mode	#
Education	Number of campaigns undertaken	#

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

Measure	Metric	Indicator
	Trail specific promotional materials i.e. maps	Y/N
	Dedicated trail webpage	Y/N
	Ticketing for trail restricted use	#
Enforcement	Citations for poor trail etiquette	#

Table 30 . Suggested Evaluation Criteria for ATMP Implementation

City staff should strive to either manually complete or purchase technology to support in the gathering of data/information and evaluation of conditions regarding AT use. This information will help to establish a better understanding of existing use and users with in-person information gathering, allowing for more detailed information regarding user perceptions from tactics like intercept surveys.

Information gathering – using the evaluation framework noted above - could occur concurrently with the maintenance reviews working with committee members and other stakeholders for the manual collection. For technology-based options, the following has been identified as alternatives:

- > Individual Smartphone Technology which is a self-drive/self-documented approach using a survey is provided via QR code at the beginning of a trail and trail users can log trips, provide commentary, identify seasonal operational issues, quality of trail experience, etc. This is a low-cost option whereby the City would need to prepare the survey and provide it for public access. The downside is that the information is not consistent and subjective.
- > Eco-counters which are point in place documentations of trail use which can be placed at strategic locations to understand the frequency and type of use by all trail users – active or motorized. The information is provided directly to the municipality through user friendly software. A cost for an eco-counter is around \$1,500 per counter. It provides a visual que which can serve as an additional promotional tactic and can also include branding consistent with other municipal concepts (i.e., trail signage).
- > Tube counter module and technologies are placed along a trail underneath the surface and provide a more permanent solution to gathering data on a day-to-day basis. MetroCount is one such example which also includes a counter box in proximity. They capture all trail use and typically cost around \$5,500 and may need to be replaced about every 5 years.
- > Cameras can be placed along the trail, mounted on lighting or utility poles 15 to 25 feet above the ground. Although typically used to monitor on-road traffic, these can also be used for trails and delineate between various users through the video technology and supporting algorithms. There can be issues associated with privacy, but the degree of detail typically addresses these concerns. Costing is dependent on the number of installations and the terms of data collection. This could be around \$2,000.

5.3.3 Management

Management refers to the oversight and day to day coordination of ATMP implementation. The roles and responsibilities of specific staff members and external stakeholders has been identified; however, there are additional management practices which will need to be considered and incorporated into existing processes and protocols. To ensure that the ATMP is considered applicable over the next 20 years, there are two types of management practices that are recommended to be adopted.

Management Tools

A master plan of this nature is wide reaching and can be complex to manage. To support the implementation strategy and the ATMP recommendations, management tools which help to inform future decision-making and communication would add considerable value to coordination and collaboration. There are two management tools that have been developed for the City of Kawartha Lakes to support ATMP implementation and internal coordination over the next 20 years.

Tool 01. GIS Database

All information pertaining to project recommendations for the Kawartha Lakes ATMP including project location / alignment, proposed design solutions, proposed phasing and priority project identification has been included as part of a Geographic Information System (GIS) database.

The database was developed based on the information provided by the City of Kawartha Lakes and acquired from other publicly available sources.

The GIS database has been provided to City staff and is intended as a tool to:

- > Monitor and manage the plan's implementation by updated relevant

information within the database to reflect changes in conditions or status of recommended projects.

- > Establish programming and outreach materials including City-specific tourism based mapping and online resources.
- > An internal asset management tool which can be used to communicate municipal priorities and integrated with wider municipal services.
- > A communication tool with external partners, including but not limited to surrounding municipalities and local developers.

Tool 02. Management Spreadsheet

While GIS can be an effective asset management tool, not all practitioners who will be involved in the implementation of the ATMP will have access to or experience with this technology.

The information contained within the database is considered a valuable resource in terms of project recommendation implementation. As such, a Microsoft Excel version has been developed and contains the same information but in a format that can be accessed by a wider range of City staff members.

The management spreadsheet tool is intended to be used to:

- > Facilitate a greater degree of coordination between a wide range of City staff members.
- > Be easily adaptable to track and monitor the implementation of recommended projects.

The intent is for these tools to be updated annually or when appropriate to ensure that there is accurate and up to date information. The intent is to start integrating AT into City-wide asset management to ensure that the routes and facilities are planned, constructed, and maintained appropriately.

Jump in Get Active. City of Kawartha Lakes . Active Transportation Master Plan

Input Management

Consultation and outreach will be critical in the management of the ATMP. With passionate and involved community of advocates and enthusiasts; the City of Kawartha Lakes should continue to establish relationships and trust with those who have been foundational to the plan's development as well as community members who will use the AT infrastructure in the future. Consultation and outreach – both formal and informal – will help to manage expectations regarding the implementation of the ATMP and to inform the future management of project and plan priorities. This consultation and outreach is considered beyond the internal coordination and management that is expected to occur annually as capital projects and priorities are determined.

Stakeholder Outreach

The stakeholders engaged as part of the ATMP and those identified in Section 5.2.2 should continue to be involved in the review and assessment of AT routes / facilities. It may be in the best interest of the City to re-visit and re-establish a group which can discuss opportunities for the following year in addition to strategic outreach as projects go forward to implementation.

As part of the development of the ATMP a task force was struck to inform the development of recommendations and strategies. The Task Force, though knowledgeable, did not have representation from agencies and interest groups with jurisdiction over decision making or specific initiatives. As such, the City is encouraged to establish an ATMP working group and / or a committee to Council made up of stakeholders from public health, school boards, ministries, local businesses, and interest groups who would meet annually.

This group may include representatives from the community, but the focus should be on facilitating annual conversations regarding work that is being done by agency representatives in the space of AT and trails, prioritizing projects and initiatives for the City to pursue, informing budget discussions and capital planning, and coordinating programming efforts. Members of the public may be invited to select meetings where it is deemed appropriate with the focus being on building a greater degree of trust between City staff and residents.

Community Engagement

City staff are encouraged to offer a survey every alternate year – following the summer and after the winter – to gather information on the experiences and perceptions regarding AT routes and facilities. This will help supplement the ongoing documentation of trail maintenance issues and will focus on evaluating successes and opportunities for improvement. The intent of this survey is to provide opportunities for community members to provide input on how the ATMP is being managed and to inform updates to municipal practices and priorities – where appropriate.

The survey could be coordinated through Tourism Kawartha Lakes and promoted through other agency or stakeholder avenues of networking. Any survey created should be centrally housed and promoted through a wide range of social and traditional media outlets.

5.4 Closing

The staff members and stakeholders that work for and within the City of Kawartha Lakes has been working diligently to create a more safe, comfortable, accessible, equitable and sustainable community for those who live, work, and play here.

The next 20 years have the potential to change the way people move and travel significantly. The recommendations found within the ATMP have been developed and designed to be ambitious as well as feasible. They respond to the unique context, conditions and interest of the community and demonstrate a commitment to continued evolution and evaluation.

As a City with significant anticipated growth there is both a risk and an opportunity. If the City and its communities continue to grow in a way that doesn't consider or prioritize those most vulnerable i.e. pedestrians, cyclists, and those with disabilities those individuals will continue to be left behind and a greater divide in equity will be experienced.

The ATMP sets out a policy driven approach to change which embeds active and sustainable transportation into municipal policies, design, and maintenance. It looks at the wholistic issue and considers the relationship between land use and transportation as part of a healthy community.

The plan provides options and alternatives which respond to current processes and practices while also aiming to mitigate some of the issues and challenges that have continued to persist.

The future of active transportation within the City of Kawartha Lakes is exciting and with a continued commitment to collaboration, coordination, and consideration of needs the ambitious goals and objectives as well as the long-range vision will be achieved.

Proposed Cycling Facilities - Bobcaygeon



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric
- Local Roads

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

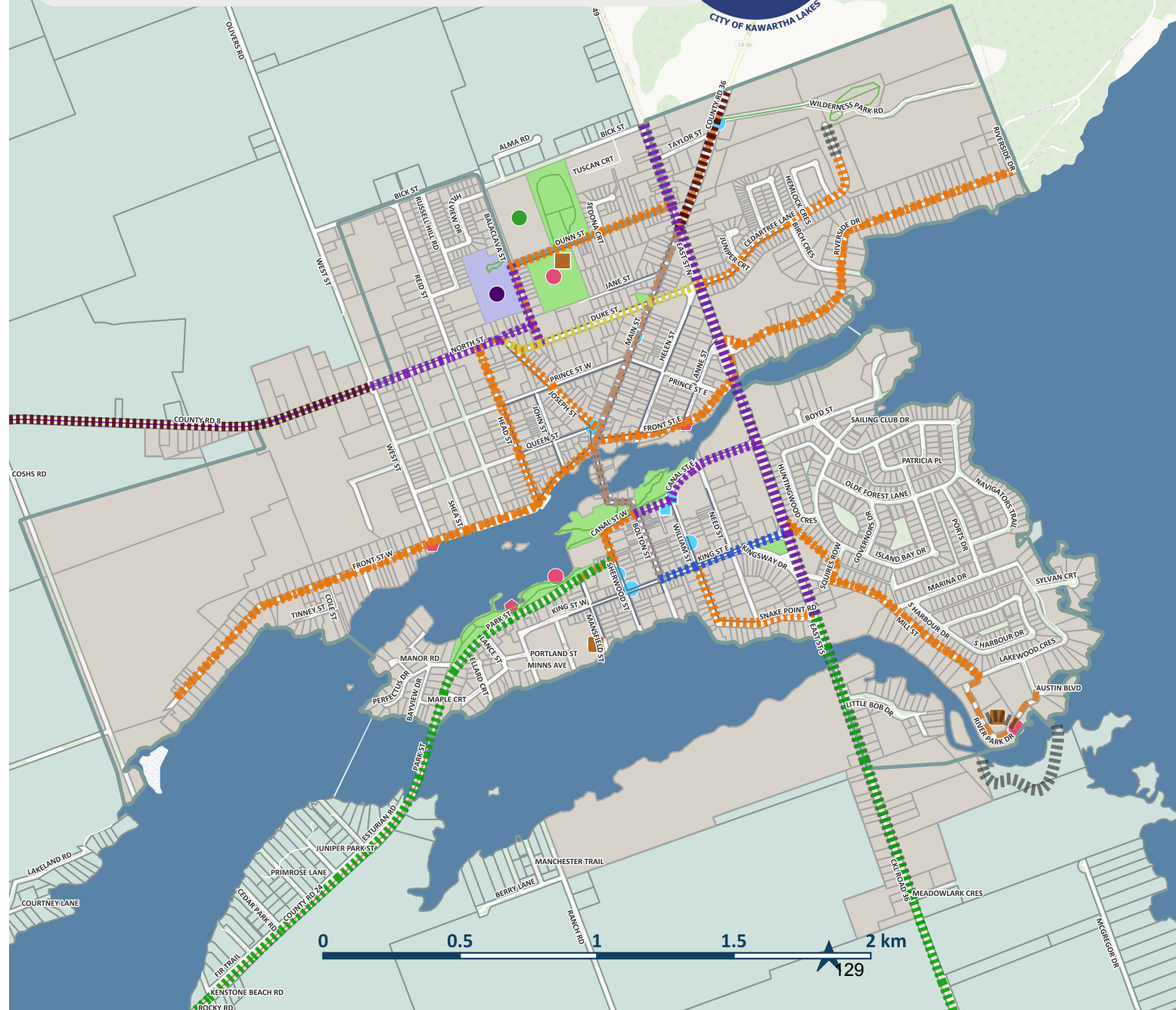
- Bobcaygeon Connector
- Fenelon Bobcaygeon Loop

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemetaries
- Boat Launches
- Arenas
- Beaches

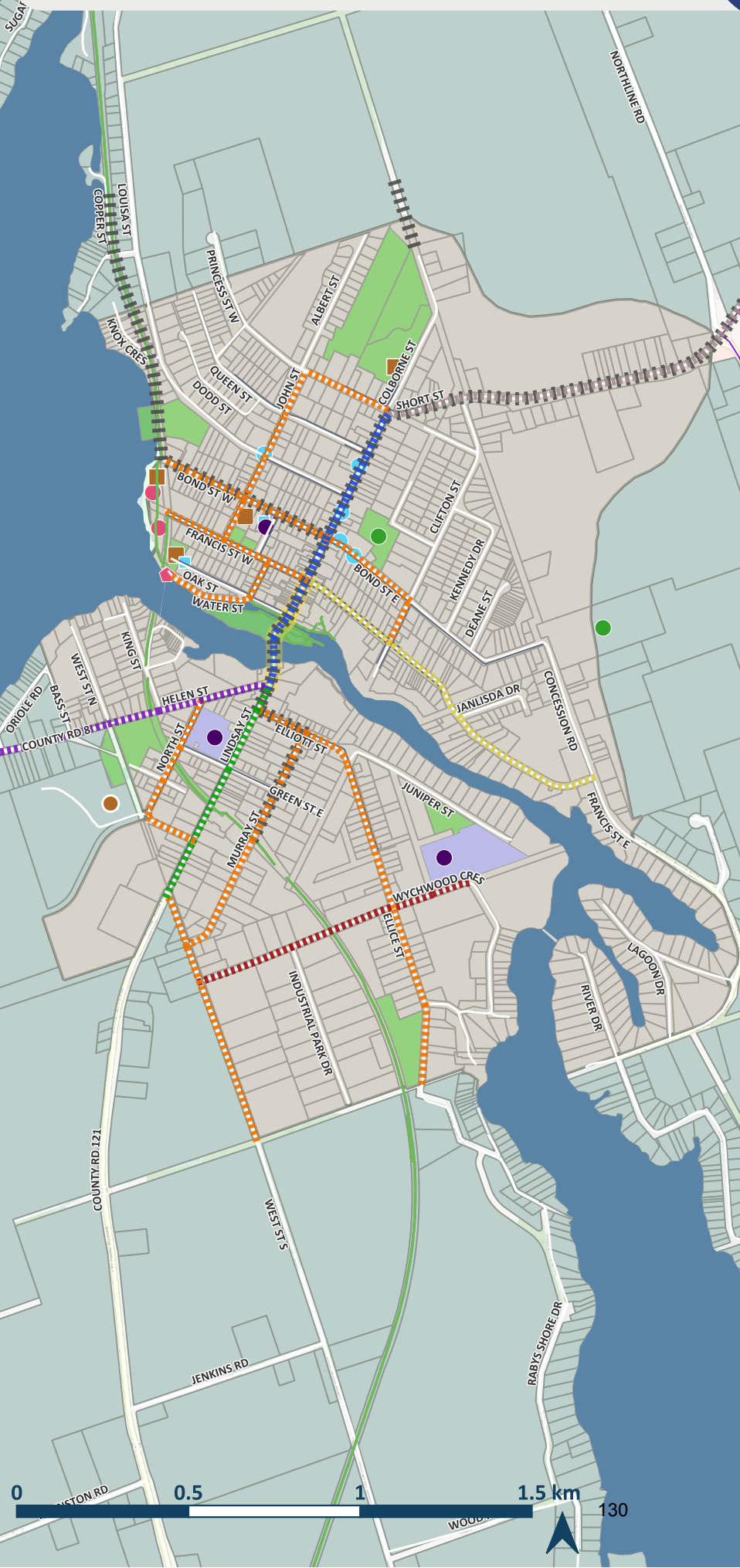
Proposed Cycling Improvement

- Multi-use Pathway
- Cycle Track
- Separated Bike Lane
- Bike Lane
- Neighbourhood Bikeway / Signed Bike Route
- Paved Shoulder
- Buffered Paved Shoulders
- Proposed Trails





Proposed Cycling Improvements - Fenelon Falls



LEGEND

Boundaries

- Property Fabric
- Urban Settlements
- Waterbodies
- Local Roads

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

- Fenelon Bobcaygeon Loop

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemeteries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks

Proposed Routes

- Proposed Trails

Proposed Cycling Improvements

- Multi-use Pathway
- Cycle Track
- Separated Bike Lane
- Bike Lane
- Neighbourhood Bikeway / Signed Bike Route
- Advisory Bike Lane
- Buffered Paved Shoulder



Proposed Cycling Improvements - City-Wide



LEGEND

On-Road Identified Cycling Routes

- Bobcaygeon Connector
- Coboconk Kinmount Burnt River Loop
- Coboconk Provincial Park Loop
- Fenelon Bobcaygeon Loop
- Kirkfield Lift Lock Loop
- Lindsay Woodville Loop
- Little Britian Loop
- Omemee Route
- Sturgeon Point Loop
- - - Secondary Cycling Routes
- High Traffic Cycling Routes

Off-Road Cycling Routes

- - - Kawartha Trans-Canada Trail
- - - Victoria Rail Trail

Roads

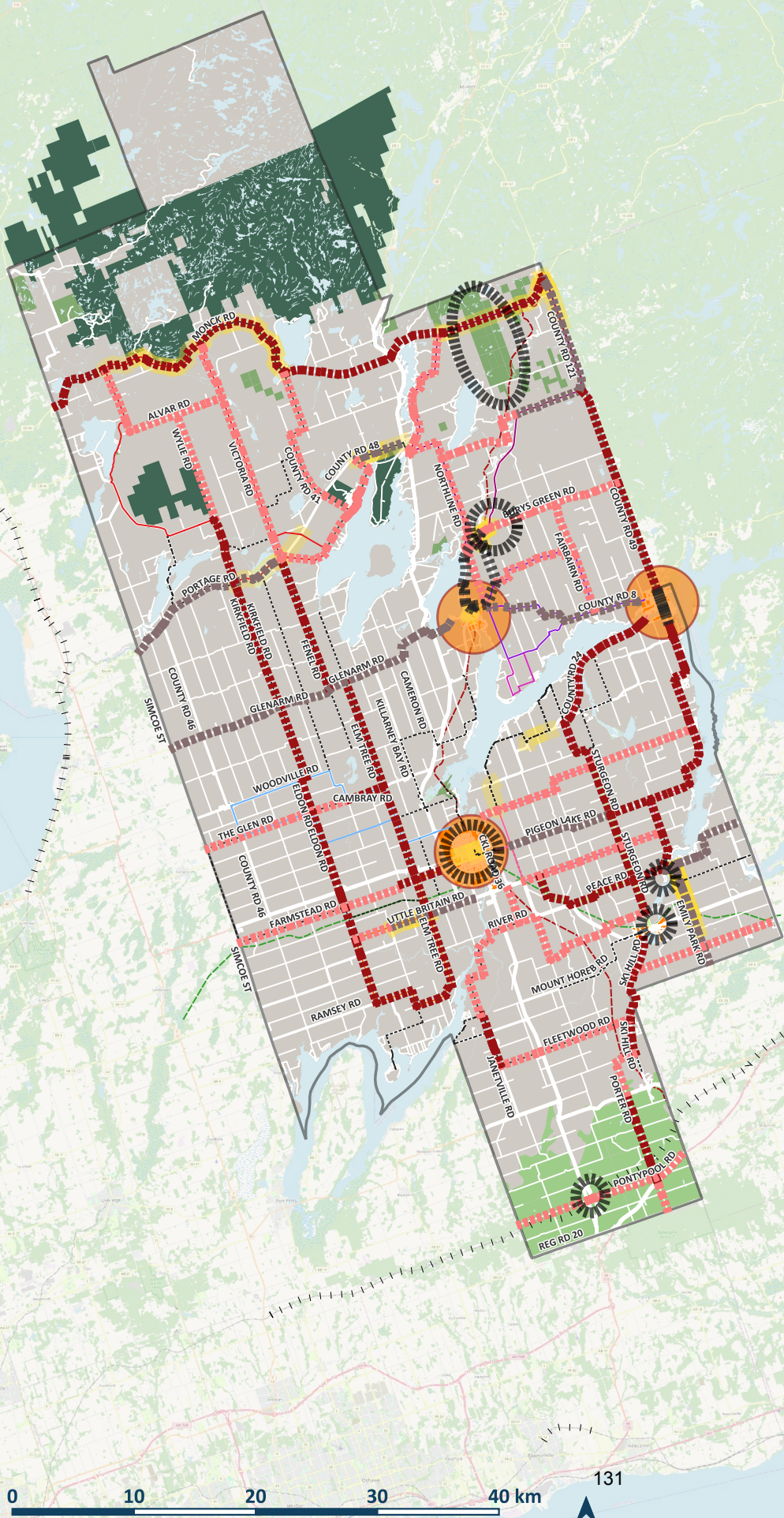
- Local Roads
- Arterial Roads
- Provincial Highways

Additional Context

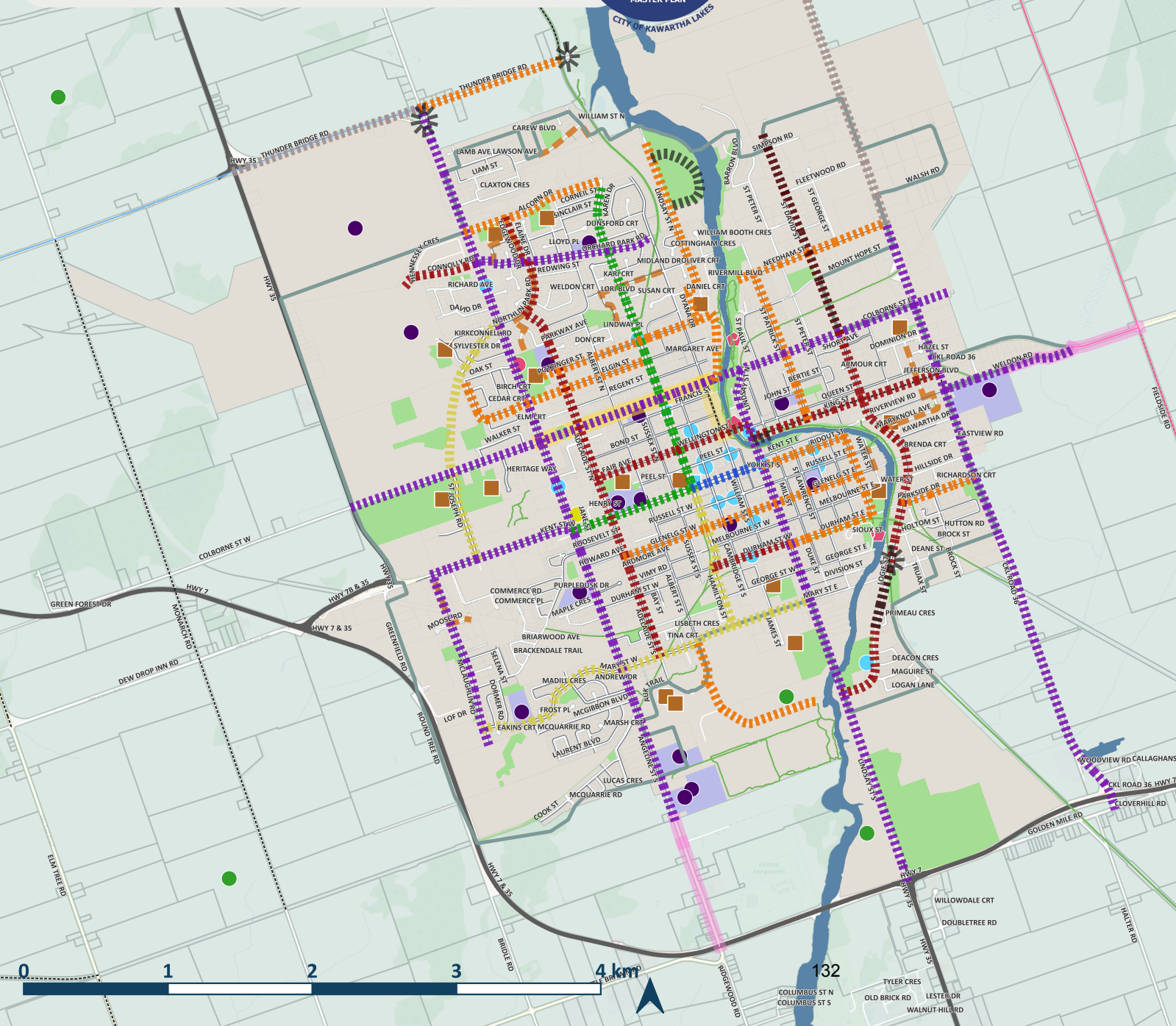
- Provincial Parks
- Open Spaces
- Oak Ridges Moraine
- Waterbodies
- Railways
- Urban_Settlements_Updated

Proposed Cycling Improvements

- - - - Signed Bike Route
- - - - Paved Shoulder
- - - - Buffered Paved Shoulder
- - - - TMPU Trail Project



Proposed Cycling Facilities - Lindsay



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemeteries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks

Roads

- Local Roads
- Highways

Cycling/Touring Routes

- Bobcaygeon Connector
- Lindsay Woodville Loop
- CyclingFacilities_Lindsay
- High Traffic Cycling_Routes
- Secondary Cycling Routes
- TMPU Trail Project

Proposed Cycling Improvement

- Multi-use Pathway
- Cycle Track
- Separated Bike Lane
- Bike Lane
- Neighbourhood Bikeway / Signed Bike Route
- Advisory Bike Lane
- Paved Shoulder
- Buffered Paved Shoulder
- Dependent on Development

Proposed Walking Improvements & Assets Bobcaygeon



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric

Roads

- Local Roads

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemetaries
- Boat Launches
- Arenas
- Beaches
- Hospitals

Cycling Touring Routes

- Bobcaygeon Connector
- Fenelon Bobcaygeon Loop
- Parks

Existing Active Transportation Routes

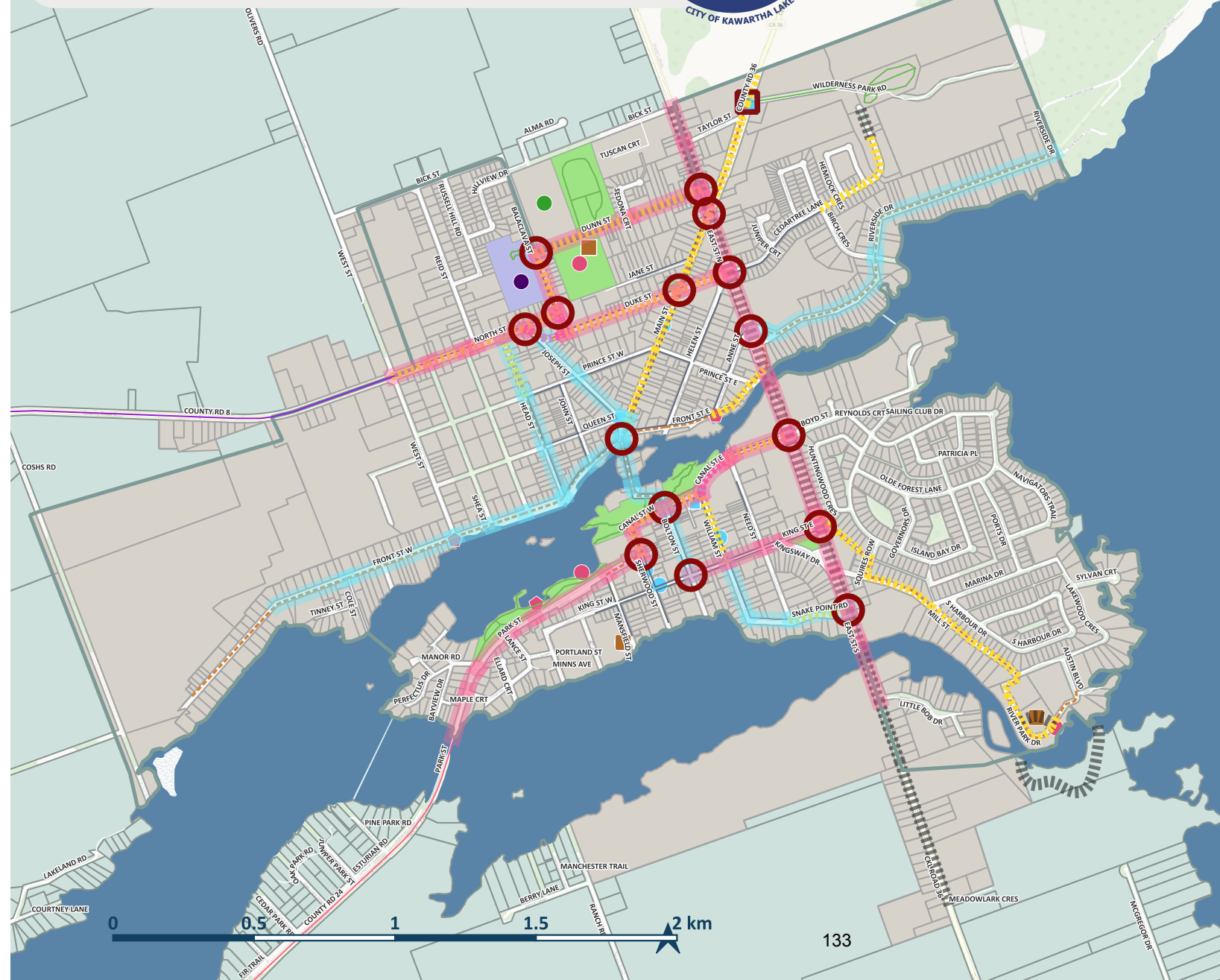
- Sidewalks
- Trails

Previously Proposed Routes

- Cycling Routes

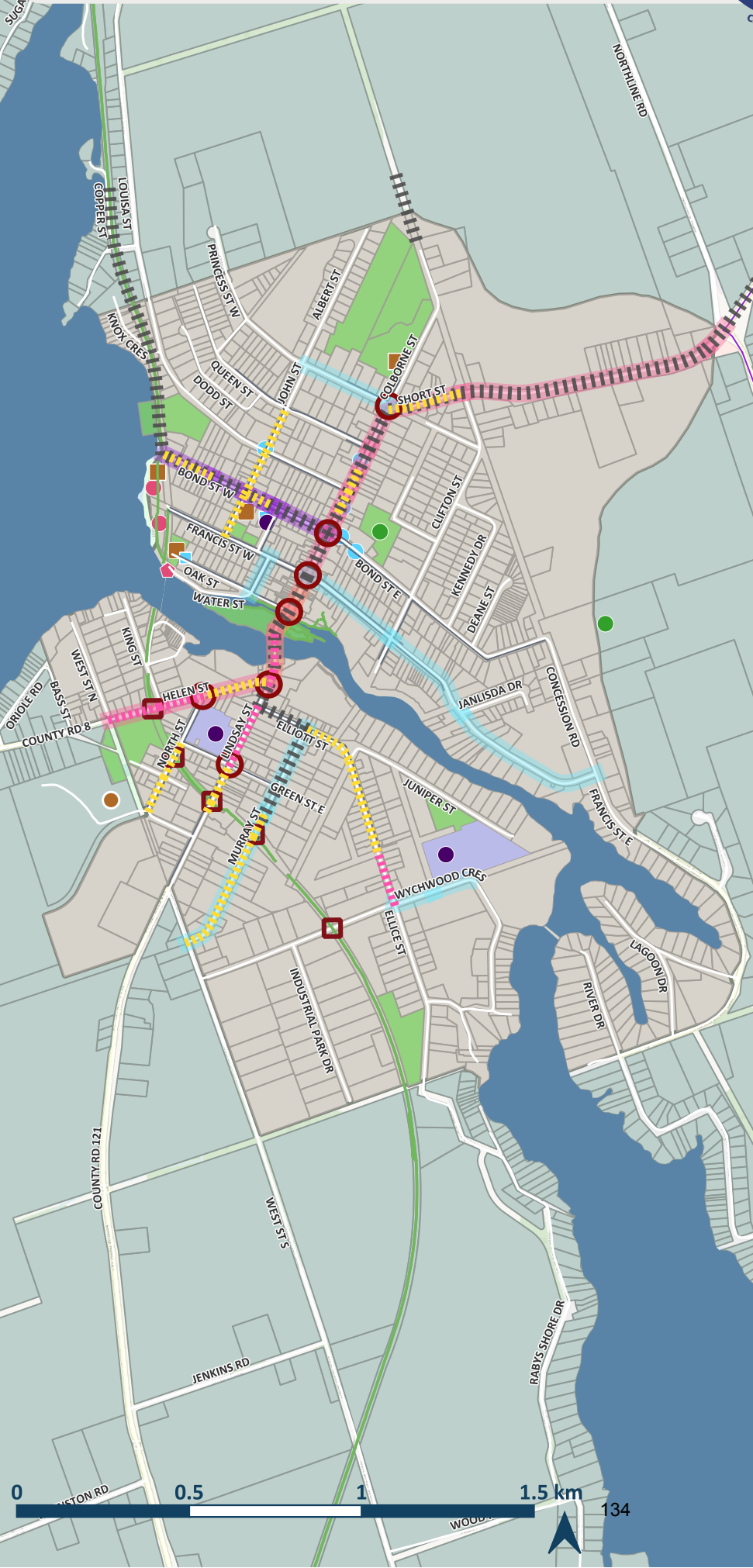
Proposed Facility Types

- Traffic Calming
- Walkability Improve
- Sidewalk (both sides)
- Sidewalk (one side)
- Intersection Improvement
- Mid block Improvement
- TMPU Proposed Trail Project





Proposed Walking Improvements - Fenelon Falls



LEGEND

Boundaries

- Urban Settlements
- Property Fabric
- Waterbodies

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

- Fenelon Bobcaygeon Loop

Roads

- Local Roads

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemeteries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks

Walkability Improvements

- Traffic Calming
- Walkability Improve
- Walkability Improve and Traffic Calming
- Sidewalk (both sides)
- Sidewalk (one side)
- Intersection Improvement
- Mid block Improvement

Proposed Routes

- Proposed Trails

City of Kawartha Lakes
Active Transportation Master Plan
Proposed Walking Facilities - Lindsay



LEGEND

Boundaries

- Population Centre Boundary
- Property Fabric
- Urban Settlement Boundary

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemetaries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks
- Natural Areas

Roads

- Local Roads
- Highways

Cycling

- Touring Routes
 - Bobcaygeon Connector
 - Lindsay Woodville Loop
- Facilities
 - CyclingFacilities_Lindsay
 - High Traffic Cycling_Routes
 - Secondary Cycling Routes
 - TMPU Trail Project

Proposed Walking Improvement

- Sidewalk (both sides)
- Sidewalk (one side)
- Traffic Calming
- Walkability Improve
- Walkability Improve and Traffic Calming
- Intersection Improvement
- Mid block Improvement

Proposed ATMP Phasing Bobcaygeon



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric
- Local Roads

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

- Bobcaygeon Connector
- Fenelon Bobcaygeon Loop

Proposed Routes

- Proposed Trails

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemetaries
- Boat Launches
- Arenas
- Beaches
- Parks

Priority

- Priority Projects

Phasing

- Long Term
- Medium Term
- Short Term





Proposed ATMP Phasing Fenelon Falls



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

- Fenelon Bobcaygeon Loop

Destinations

- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemeteries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks

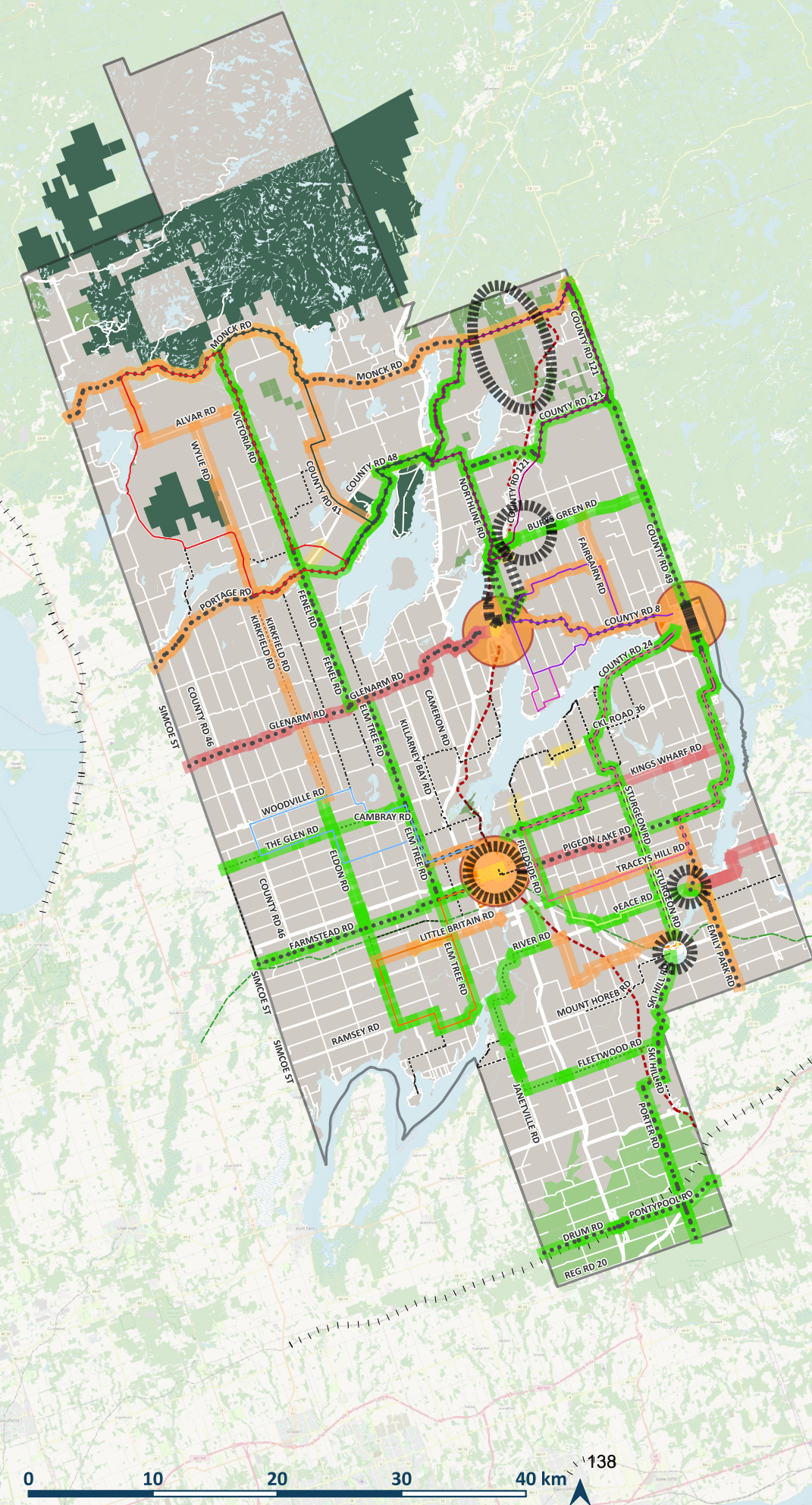
Priority

- Priority Projects

Phasing

- Long Term
- Medium Term
- Short Term
- Priority Projects
- Proposed Trails

Proposed ATMP Phasing City-wide



Off-Road Cycling Routes

- Kawartha Trans-Canada Trail
----- Victoria Rail Trail







ATMP Cycling Routes

- Bobcaygeon Connector
- Coboconk Kinmount Loop
- Coboconk Provincial Park Loop
- Fenelon Bobcaygeon Loop
- Kirkfield Lift Lock Loop
- Lindsay Woodville Loop
- Little Britian Loop
- Omemee Route
- Sturgeon Point Loop
- High Traffic Cycling Routes
- Secondary Cycling Routes





Roads

- Local Roads
- Arterial Roads
- Provincial Highways

Additional Context

-  Provincial Parks
-  Open Spaces
-  Oak Ridges Moraine
-  Waterbodies
-  Urban Settlements
-  Railways

Phasing

-  Long Term
 Medium Term
 Short Term
 Proposed Trails

Priority

- Priority Projects

Proposed ATMP Phasing Lindsay



LEGEND

Boundaries

- Population Centre Boundary
- Urban Settlements
- Property Fabric

Existing Active Transportation Routes

- Sidewalks
- Trails
- Cycling Facilities

Cycling Touring Routes

- Bobcaygeon Connector
- Lindsay Woodville Loop
- High Traffic Cycling Routes
- Secondary Cycling Routes

Destinations

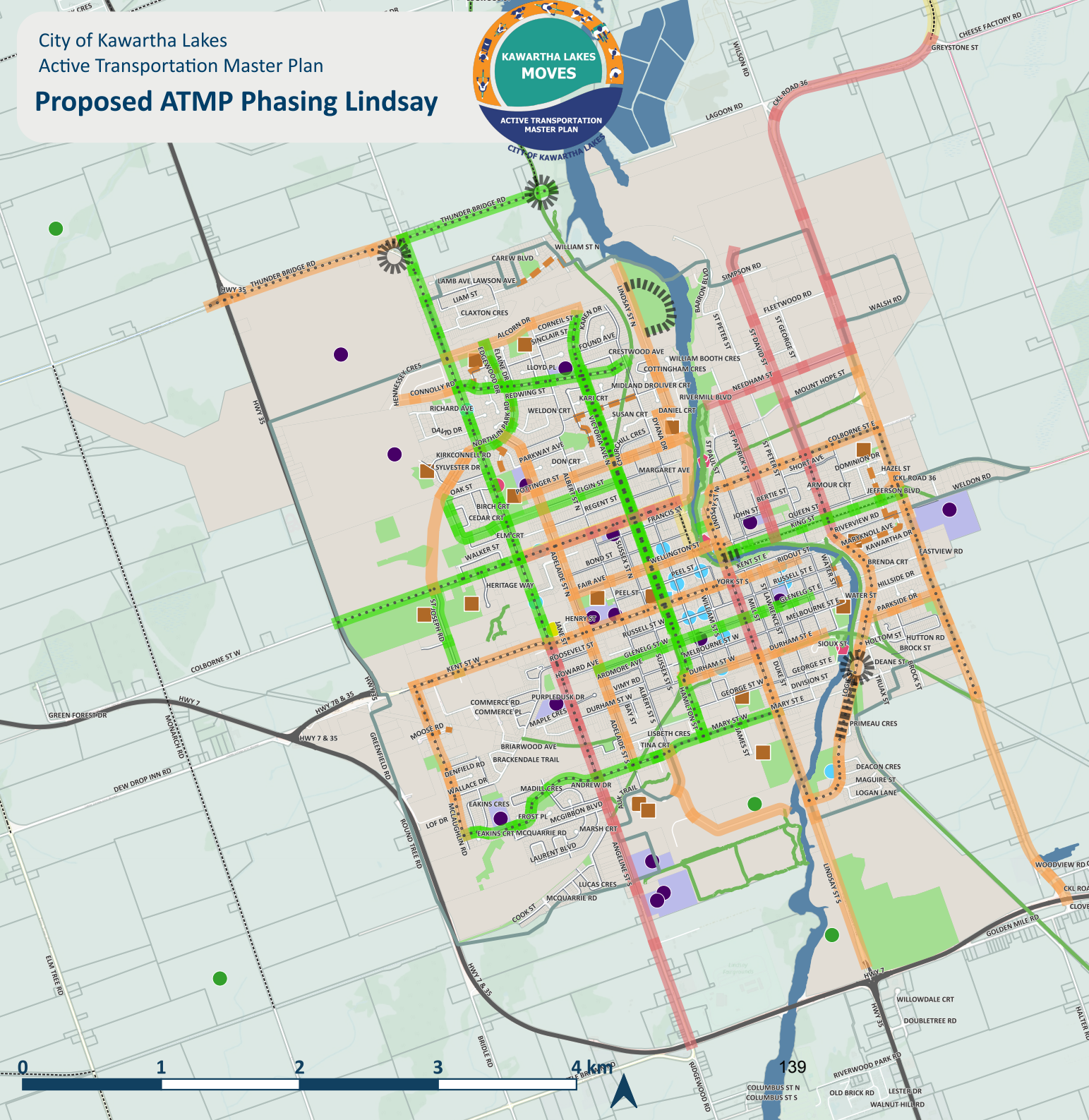
- Sport fields
- Schools
- Schools
- Religious Institutions
- Museums/libraries
- Community Centres
- Cemetaries
- Boat Launches
- Arenas
- Beaches
- Hospitals
- Parks

Roads

- Local Roads
- Highways

Phasing

- Long Term
- Medium Term
- Short Term
- Priority Projects
- Proposed Trails



140

11	Marsh Rd	YOUNG ST DAL		0.98	Local	2	HCB	12	7	B	80	1461	H	Yes	Primary/ Secondary	Provides E/W link in north Kawartha Lakes. Gravel shoulders. Fast arterial. Likely needs paved shoulders to sign.	H	Paved Shoulder	Y	N	Some Conflict	Paved shoulders	Moderate	High	No	Medium
		RUMOUR DR DAL	YOUNG ST DAL	0.18	Local	2	HCB	12	7	B	80	1461														
		BASE LINE RD SMV	WOODCOCK LI SMV	0.24	Local	2	HCB	11.8	7.5	B	80	1437														
		BULLER RD SMV	BASE LINE RD SMV	3.15	Local	2	HCB	11.9	7.2	B	70	1437														
		NEVISON DR SMV	BULLER RD SMV	1.66	Arterial	2	HCB	11.1	7	B	50	1437														
			NEVISON DR SMV	0.05	Arterial	2	HCB	10.5	6.8	B	50	1437														
				0.25	Arterial	3	HCB	8.8	8.8	CG	50	1437														
		CREGO LAKE RD SMV		2.95	Local	2	HCB	11.5	7.6	B	80	1437														
		WOODCOCK LI SMV	CREGO LAKE RD SMV	5.61	Local	2	HCB	11.7	7.2	B	80	1437														
				0.45	Arterial	2	HCB	12	7.2	B	50	1779														
			COCKBURN ST LDL	0.02	Arterial	3	HCB	10.7	10.7	CG	50	1779														
		COCKBURN ST LDL		0.14	Arterial	3	HCB	12.8	12.8	CG	50	1779														
		LAXTON TWP 8TH LI LDL	ALS AV LDL	2.71	Local	2	HCB	11.6	7.2	B	80	1779														
		DEER LAKE RD LDL	LAXTON TWP 8TH LI LDL	0.68	Local	2	HCB	12	7.2	B	80	1779														
		LAXTON TWP 6TH LI LDL	DEER LAKE RD LDL	2.32	Local	2	HCB	11.6	7.1	B	80	1779														
			LAXTON TWP 6TH LI LDL	0.94	Local	2	HCB	11.6	7.2	B	60	1779														
		CKL RD 41 LDL	LAXTON TWP 5TH LI LDL	1.12	Local	2	HCB	11.6	7.2	B	60	1779														
		LAXTON TWP 5TH LI LDL		0.58	Local	2	HCB	11.9	7.2	B	60	1779														
		LAXTON TWP 4TH LI LDL	CKL RD 41 LDL	0.37	Local	2	HCB	12.2	7.2	B	60	1484														
		LAXTON TWP 4TH LI LDL	LAXTON TWP 4TH LI LDL	0.71	Local	2	HCB	12.2	7.2	B	60	1484														
		SUTER DR LDL	LAXTON TWP 4TH LI LDL	1.25	Local	2	HCB	12.2	7.2	B	60	1484														
		DIGBY LAXTON BOUNDARY RD LDL	SUTER DR LDL	1.04	Local	2	HCB	12.2	7.2	B	80	1484														
		RIPLEYS WAY LDL	DIGBY LAXTON BOUNDARY RD LDL	1.54	Local	2	HCB	12.2	7.2	B	80	1484														
			RIPLEYS WAY LDL	2.37	Local	2	HCB	12.2	7.2	B	80	1484														
		VICTORIA RD CRD LDL		3.00	Local	2	HCB	12.2	7.2	B	80	1484														
		TURNER RD DAL	VICTORIA RD CRD LDL	3.05	Local	2	HCB	12.2	7.2	B	80	1484														
		TURNER RD DAL	TURNER RD DAL	1.08	Local	2	HCB	11.2	7.2	B	80	1461														
		MACKENZIE RD DAL	TURNER RD DAL	1.66	Local	2	HCB	11.2	7.2	B	80	1461														
			MACKENZIE RD DAL	1.78	Local	2	HCB	10.8	6.8	B	80	1461														
		LAKE DALRYMPLE RD DAL		1.90	Local	2	HCB	11	7	B	80	1461														
		WATT LN DAL	LAKE DALRYMPLE RD DAL	0.82	Local	2	HCB	11	7	B	80	1461														
		HILLS RD DAL	WATT LN DAL	1.22	Local	2	HCB	12	7	B	80	1461														
		TAYLOR RD DAL	RUMOUR DR DAL	1.63	Local	2	HCB	12	7	B	80	1461														
		KIRKFIELD RD CRD	TAYLOR RD DAL	0.81	Local	2	HCB	12	7	B	80	1461														
		CKL RD 121 SMV	BOBAYGEON RD SMV	0.17	Arterial	2	HCB	6.5	6.5	CG	50	1437														
		DICKSON ST SMV	CKL RD 121 SMV	0.08	Arterial	2	HCB	8.3	8.3	CG	50	1437														

18	Cheese Factory Rd	STURGEON RD EMI	CENTRALINE RD EMI	4.14	Local	2	LCB	14	8	W	280	No	Y	Primary	Local road. Likely low volume. Signed route likely possible. Provides E-W connection through central-east Kewartha Lakes near Lindsay. Is part of Bobcaygeon Connector route.	H	Shared Operating space	Y	N	No conflict	Shared roadway	Low	High	No		
		HEIGHTS RD OPS EMI	STURGEON RD EMI	3.46	Local	2	LCB	7	6	A	60															280
		FIELDSIDE RD OPS		0.66	Local	2	LCB	6	5	B	W															524
		POST RD OPS	POST RD OPS	0.70	Local	2	LCB	6	5	B	W															399
		SETTLERS RD OPS	HEIGHTS RD OPS EMI	2.23	Local	2	LCB	6	5	B	W															393
19	Ski Hill Rd	POST RD OPS	SETTLERS RD OPS	1.45	Local	2	LCB	6	5	B	W	483	No	N	Primary	N-S connection in southern Kewartha Lakes, linking Bethany and Onemee, running mostly parallel to VRT.	M	Paved Shoulder	Y	N	Some Conflict	Paved shoulders	Moderate	Moderate	Yes	
		CKL RD 36 OPS	FIELDSIDE RD OPS	0.12	Local	2	LCB	6.8	5.8	B	W	524														
		HAYES LI EMI		4.97	Local	2	HCB	13	6.7	B	80	1371														
		LUFFORD RD MAN	BETHANY HILLS RD MAN	1.48	Local	2	HCB	13.3	6.7	B	80	1711														
		FLEETWOOD RD MAN	HOGSBACK RD OPS EMI	2.21	Local	2	HCB	13.3	6.8	B	80	1711														
		HOGSBACK RD OPS EMI	HAYES LI EMI	1.31	Local	2	HCB	12.9	6.8	B	80	1371														
		JAKEMAN RD MAN		0.18	Arterial	2	HCB	6.6	6.6	cg	50	1711														
		WOODLAND TL MAN	LUFFORD RD MAN	1.92	Local	2	HCB	12.8	6.6	B	80	1711														
		BETHANY HILLS RD MAN	FLEETWOOD RD MAN	1.43	Local	2	HCB	13.3	6.8	B	80	1711														
				0.21	Local	2	HCB	13.8	6.7	B	50	1371														
20	Burge Green Rd		JAKEMAN RD MAN	0.13	Arterial	2	HCB	6.7	6.7	cg	50	1711	No	N	Secondary	E-W Connection in east Kewartha Lakes. Not viewable in Google Streetview, so limited condition review possible.	M	Shared Operating space	Y	N	Some Conflict	Shared roadway	Low	Moderate	No	
			WOODLAND TL MAN	0.47	Local	2	HCB	13.7	6.7	B	60	1711														
		SCHILL LI SMV	CKL RD 49 SMV	1.84	Local	2	LCB	7.3	6.2	A	80	303														
		DEVITTS RD VER	SCHILL LI SMV	0.86	Local	2	LCB	8.5	6.5	B	80	303														
		HOPKINS LI SMV	DEVITTS RD VER	1.01	Local	2	LCB	8.5	6.4	B	80	303														
		FAIRBAIRN RD VER	HOPKINS LI SMV	1.75	Local	2	LCB	8.5	6.3	B	80	303														
		HYLER LI SMV	FAIRBAIRN RD VER	0.09	Local	2	LCB	7.9	6.2	B	80	303														
		WALKERS RD VER		0.81	Local	2	LCB	7.7	6.4	B	U	303														
		LEDGE HILL RD SMV	WALKERS RD VER	0.28	Local	2	LCB	8	6.1	B	U	303														
		MARTINS RD VER	LEDGE HILL RD SMV	0.99	Local	2	LCB	7.7	6.4	B	U	303														
		BULMERS RD VER	MARTINS RD VER	1.36	Local	2	LCB	7.8	6.7	B	U	303														
		ROSCO LN VER	BULMERS RD VER	1.27	Local	2	LCB	7.7	6.4	B	U	303														
		CKL RD 121 SMV	ROSCO LN VER	0.19	Local	2	LCB	9.1	6.7	B	U	303														
21	Fairbairn Rd	CEDAR TREE RD VER	BURYS GREEN RD SMV	4.52	Local	2	G	5	5	B	W	15	No	Y	Secondary	Not accessible in Streetview. Local road. Likely low volume. N-S connection in east Kewartha Lakes near Bobcaygeon. Part of Fenelon Bobcaygeon Loop route.	H	Shared Operating space	Y	N		Shared roadway	Low	Moderate	No	M
		CKL RD 8 VER	CEDAR TREE RD VER	5.03	Local	2	LCB	6.5	5.5	B	W	113														
		SUN VALLEY RD MPO	NONQUON DR MPO	0.34	Local	2	LCB	7.5	6.5	B	50	96														
		CKL RD 24 VER		0.21	Local	1	HCB	3.5	3.5	B	W	10														
		MALLARD BAY RD EMI		0.98	Local	2	LCB	6.7	5.7	B	40	251														
		LIBERTY LN EMI	KENEDON DR EMI	0.18	Local	2	LCB	7.1	6.3	B	40	72														
		JUNIPER CT BOB	BIRCH CR BOB	0.13	Local	2	HCB	7	7	cg	50	104														
		EAST ST N BOB	JUNIPER CT BOB	0.19	Local	2	HCB	7	7	cg	50	104														

22	Cedar Tree Rd	EARL KENNEDY RD VER		1.11	Local	2	LCB	5.5	5	8	30	179	No	Y	Secondary	Provides E-W link just east of Fenelon Falls. Part of Fenelon Bobcaygeon Loop route. Gravel shoulders. Not accessible in Streetview. Local road. Likely low volume. Gravel?	H	Shared Operating space	Y	N	Shared roadway	Low	High	No	M
		CKL RD 24 VER		2.09	Local	2	LCB	14	8		4	179													
		CKL RD 36 VER	CKL RD 24 VER	0.97	Local	2	LCB	6	5	8	4	220													
		LOG HOUSE RD VER EMI	CKL RD 36 VER	3.13	Local	2	LCB	7	6	8	4	375													
		STURGEON RD VER	LOG HOUSE RD VER EMI	0.67	Local	2	LCB	7	6	8	4	399													
		RONA VISTA DR BEX	RIDGE DR BEX	0.48	Local	1	LCB	4.5	4.5	8	40	31													
		CKL RD 24 VER		1.68	Local	2	LCB	7	6	8		191													
		WALKERS RD VER	FAIRBAIN RD VER	2.07	Local	2	LCB	6	5	8	4	131													
		MARTINS RD VER	WALKERS RD VER	1.33	Local	2	LCB	6	5	8		131													
		BULMERS RD VER	MARTINS RD VER	1.35	Local	2	LCB	7	6	8		191													
			BULMERS RD VER	1.47	Local	2	LCB	7	6	8		191													
		EDGEWOOD DR VER		0.13	Local	1	LCB	3.5	3.5	na	50	15													
		ELGIN ST LND	ELGIN ST LND	0.33	Local	2	LCB	8	8	CB	50	120													
			RONA VISTA DR BEX	0.21	Local	1	LCB	4.5	4.5	8	40	31													
		ROHALLION RD CRD		0.75	Local	2	LCB	7	6	8	40	96													
				0.00																					
		MCGILL DR MAN	MCGILL DR MAN	0.28	Local	2	LCB	6.4	5.4	8	40	191													
				0.74																					
			EARL KENNEDY RD VER	0.55	Local	2	LCB	14	8		4	179													
25	Fieldside Rd		TRACEY'S HILL RD OPS	0.19	Local	2	LCB	5.5	4.5	8	4	20.6	No	Y	Secondary	Provides N-S connectivity just outside of Lindsay (and possibly at the edge of future development). Part of Bobcaygeon Connector route. Not viewable in Google Streetview. Likely low volume. Signed route possible.	H	Shared Operating space	Y		Shared roadway	Low	High	No	M
		TRACEY'S HILL RD OPS	WHEATFIELD RD OPS	1.86	Local	2	LCB	6.8	5.8	8	60	417													
		WHEATFIELD RD OPS	PIGEON LAKE RD OPS	1.23	Local	2	LCB	6.8	5.8	8	4	417													
		PIGEON LAKE RD OPS	GREYSTONE ST OPS	3.11	Local	2	LCB	6.5	6	8	4	107													
		GREYSTONE ST OPS	CHEESE FACTORY RD OPS	0.01	Local	2	LCB	6.5	6	8	4	107													
26	Tracey's Hill Rd		FIELDIDE RD OPS	0.23	Local	2	LCB	8.4	7	8	40	1263	No	Y	Secondary	Provides E-W link west of Lindsay. Part of Bobcaygeon Connector route. Narrow road, no shoulders, 60 km/h limit. Local road, signed route likely possible.	H	Paved Shoulder	N	Prohibitive conflict	Shared roadway	Low	High	No	M
		SETTLERS RD OPS	IRAC RD OPS	1.39	Local	2	LCB	7	6	8	80	727													
		IRAC RD OPS	HEIGHTS RD OPS EMI	0.88	Local	2	LCB	7	6	8	80	727													
		FIELDIDE RD OPS		0.69	Local	2	LCB	7.9	6.5	8	40	1263													
		POST RD OPS	POST RD OPS	0.70	Local	2	LCB	7.9	6.5	8	80	954													
		POST RD OPS	SETTLERS RD OPS	1.39	Local	2	LCB	7.9	6.5	8	80	954													
		HEIGHTS RD OPS EMI	ESKER RD EMI	1.18	Local	2	LCB	7	6	8	80	614													
		ESKER RD EMI	STURGEON RD EMI	2.33	Local	2	LCB	7	6	8	80	614													
		STURGEON RD EMI	CENTRELINE RD EMI	3.50	Local	2	LCB	8	5.5	8	80	238													
		CENTRELINE RD EMI	EAGLE RD EMI	1.16	Local	2	LCB	6	5	8	80	518													
		EAGLE RD EMI	PIGEONVIEW ST EMI	0.68	Local	2	LCB	6	5	8	80	518													

27	Centrelime Rd	CLEARVIEW DR EMI	SHAMROCK RD EMI	0.65	Local	2	HCB	12.5	6.5	8	80	3847	No	Y	Secondary	Part of Bobcaygeon Connector route. Provides N-S connection in southeast Kawartha Lakes. 80 km/h (mostly), arterial, unpaved shoulders, likely needs paved shoulders to be signed route.	M	Paved Shoulder	Y	Some Conflict	Paved Shoulder		Moderate	Moderate	No	M	
		SHAMROCK RD EMI	TRACEYS HILL RD EMI	1.47	Local	2	HCB	11.5	6.5	8	60	3847															
		TRACEYS HILL RD EMI	ST LUKES RD EMI	1.38	Local	2	HCB	11.5	6.5	8	80	3095															
		ST LUKES RD EMI	PIGEON LAKE RD EMI	1.45	Local	2	HCB	12.5	6.5	8	80	3095															
		PEACE RD EMI	CLEARVIEW DR EMI	1.14	Local	2	HCB	12.4	6.4	8	80	3847															
28	Emily Park Rd	HAYES II EMI	MEADOWVIEW RD EMI	1.47	Local	2	HCB	11.5	7.5	8	80	4878	No	Y	Secondary	High traffic cycling route. Provides N-S connection in southeast Kawartha Lakes, near Emily Provincial Park, connects to TCT. Rural road with gravel shoulders, fast, likely needs paved shoulders.	H	paved shoulder with buffer	Y	No conflict	Buffered paved shoulders		Moderate	High	No	M	
		MEADOWVIEW RD EMI	COTTINGHAM RD EMI	1.48	Local	2	HCB	11.5	7.5	8	80	4878															
		COTTINGHAM RD EMI		1.38	Local	2	HCB	11.5	7.5	8	80	4878															
			GRASSY RD EMI	1.44	Local	2	HCB	12.5	7.5	8	80	5971															
		GRASSY RD EMI	ANDREW CT EMI	0.82	Local	2	HCB	12.5	7.5	8	80	5971															
		ANDREW CT EMI	LUFTON CT EMI	0.28	Local	2	HCB	12.5	7.5	8	80	5673															
		LUFTON CT EMI	VALLEY RD EMI	0.27	Local	2	HCB	12.5	7.5	8	80	5673															
		VALLEY RD EMI	PEACE RD EMI	1.18	Local	2	HCB	11.5	7.5	8	80	5673															
29	Peace Rd	COWANS DR EMI	MARINA ST EMI	0.24	Local	2	HCB	11.5	6.5	8	60	3504	No	Y	Secondary	Part of Onemee Loop route. Provides E-W connection in east Kawartha Lakes, to Emily Provincial Park and TCT. Condition varies - busier part has gravel shoulders, another section not visible in Streetview seems to have no shoulders, likely low volume. 80 km/h in part. Check AADT and confirm limit.	H	Paved Shoulder	Y	Some Conflict	Paved shoulder		High	High	Yes	May want to break up phasing, with section planned for resurfacing in 2025 as short term, and rest of Peace Rd as medium long term.	
		MARINA DR BOB	EMILY PARK RD EMI	0.40	Local	2	HCB	11.5	6.5	8	60	3504															
		HEIGHTS RD OPS EMI	ESKER RD EMI	1.17	Local	2	LCB	7.5	6.5	8	80	1633															
		ESKER RD EMI	STURGEON RD EMI	2.34	Local	2	LCB	7.5	6.5	8	80	1633															
		MARINA DR BOB	MARINA ST EMI	0.22	Local	2	HCB	11.5	6.5	8	60	3504															
		STURGEON RD EMI		1.50	Local	2	HCB	10.2	6.2	8	80	3556															
			CENTRELIME RD EMI	1.03	Local	2	HCB	9.5	6.5	8	80	3504															
		CENTRELIME RD EMI	COWANS DR EMI	0.23	Local	2	HCB	11.5	6.5	8	60	3504															
			SLANTED RD OPS	0.31	Local	2	HCB	7	6	8	50	983															
		SLANTED RD OPS		0.50	Local	2	HCB	7	6	8	50	1532															
		LIAC RD OPS	HEIGHTS RD OPS EMI	0.94	Local	2	LCB	8	6	8	80	1532															
		HEIGHTS RD OPS EMI	HEIGHTS RD OPS EMI	0.73	Local	2	LCB	8	6	8	80	1532															
			LIAC RD OPS	0.65	Local	2	LCB	8	6	8	80	1532															
31	Hillhead Rd	CONFEDERATION RD OPS	RIVER RD OPS	3.73	Local	2	LCB	6	5.5	8	60	411	No	N	Secondary	Short N-S connection south of Unaday, links to VRT. Relatively narrow paved roadway. Should work as shared route.	M	Shared Operating space	Y	No conflict	Shared roadway		Low	Moderate	No	M	
33	River Rd	HILLHEAD RD OPS		0.99	Local	2	LCB	7	6	8	W	399	No	Y	Secondary	Provides N-S connection towards Lake Scugog in the south end of Kawartha Lakes. Narrow paved road, no shoulders, often seems in rough condition. Fairly scenic. Promoted as secondary cycling route.	H	Shared Operating space	Y	Some Conflict	Shared roadway		Low	High	No		
			HALTER RD OPS	1.38	Local	2	LCB	7	6	8	W	477															
		HALTER RD OPS	HILLHEAD RD OPS	1.41	Local	2	LCB	7	6	8	W	489															
		MCGILL CR MAN		4.60	Local	2	LCB	7	6	8	W	471															
			BRIDLE RD OPS	2.10	Local	2	LCB	7	6	8	W	471															
		MONTYS INN ST OPS		1.35	Local	2	LCB	7.5	6.5	8	W	596															
				1.32	Local	2	LCB	7	6	8	W	596															
			MONTYS INN ST OPS	0.62	Local	2	LCB	7.5	6.5	8	W	596															
	CARTWRIGHT MANVERS BOUNDARY RD MAN	CEDAR CR MAN	1.14	Local	2	LCB	7.5	7	8	40	397																

34	McGill Dr.		RIVER RD MAN	0.98	Local	2	LCB	7.5	7	8	50	459	No	Y	Secondary	Narrow paved local road, provides short connection near Lake Scugog in south Kawartha Lakes. Should work as a shared route. Promoted as secondary cycling route.	H	Y	Shared Operating space	Y		Some Conflict	Y	Shared roadway		Low	High	No	Y	
		MAPLE CR MAN	ARMSTRONG CT MAN	0.38	Local	2	LCB	6.7	5.7	8	40	397																		
		CEDAR CR MAN	CEDAR CR MAN	0.12	Local	2	LCB	7	6.5	8	40	397																		
		CEDAR CR MAN	MAPLE CR LND	0.17	Local	2	LCB	7	6.5	8	40	397																		
		MAPLE CR MAN	MAPLE CR LND	0.11	Local	2	LCB	7	6.5	8	40	397																		
		ARMSTRONG CT MAN		0.18	Local	2	LCB	6.7	5.7	8	40	397																		
35	Golf Course Rd.	JANETVILLE RD MAN		2.49	Local	2	HCB	12.5	6.8	8	80	1531	No	Y	Secondary	Provides short E-W link in south Kawartha Lakes, from McGill Dr. to Janetville Rd. Paved road with gravel shoulders. Promoted as secondary cycling route.	M	Y	Paved Shoulder	Y		No conflict	Y	Paved Shoulder		Moderate	Moderate	Yes	Y	
			STUB RD MPO	0.39	Local	2	HCB	12.9	6.7	8	50	2156																		
36	Janetville Rd	PIGEON CREEK RD MAN	JANET DR MAN	0.48	Arterial	2	HCB	7.5	7.5	8	50	895	No	Y	Secondary	Provides short N-S link in south Kawartha Lakes, from Golf Course Rd to Fleetwood Rd. Paved road with gravel shoulders, seems wide. Part of secondary cycling route.	M	Y	Paved Shoulder	Y		Some Conflict	Y	Paved Shoulder		Moderate	Moderate	No	Y	
			GOLF COURSE RD MAN	0.80	Local	2	HCB	13	6.8	8	60	895																		
		FLEETWOOD RD MAN	PIGEON CREEK RD MAN	1.46	Local	2	HCB	12	7.1	8	80	895																		
		JANET DR MAN	MANVERS DR MAN	0.16	Arterial	2	HCB	9.4	6.6	8	50	895																		
		MANVERS DR MAN		0.02	Arterial	2	HCB	9.4	6.4	8	50	895																		
37	Fleetwood Rd	ST GEORGE ST LND	ST DAVID ST LND	0.21	Local	2	HCB	10.2	7.2	8	50	715	No	Y	Secondary	Provides E-W route in south Kawartha Lakes, including to VRT. Narrow local road, gravel and paved sections.	M	Y	Shared Operating space	Y		Some Conflict	Y	Shared roadway		Low	Moderate	No	Y	Consider paving gravel section west of Highway 35.
		CKL RD 35 OPS	ST GEORGE ST LND	0.39	Local	2	HCB	11.2	7.2	8	50	598																		
		OLD MILL RD MAN	SKI HILL RD MAN	2.37	Local	2	LCB	7.4	5.8	8	U	261																		
		SKI HILL RD MAN		0.30	Local	2	G	5	5	8	U	21																		
		JANETVILLE RD MAN		1.10	Local	2	LCB	7	6	8	U	251																		
			CHIPMUNK RD MAN	1.91	Local	2	G	8	6	8	U	280																		
		CHIPMUNK RD MAN		0.57	Local	2	G	6.5	5.5	8	U	197																		
				1.60	Local	2	LCB	8.5	6.5	8	U	489																		
			ST MARY RD MAN	1.42	Local	2	LCB	8	6	8	U	489																		
		ST MARY RD MAN	OLD MILL RD MAN	2.39	Local	2	LCB	8.2	6.2	8	U	302																		
38	Drum Rd	MANVERS-SCUGOG TOWNLINE MAN	WILMONT RD MAN	2.96	Local	2	G	7	8	8		131	No	N	Secondary	E-W link at south end of Kawartha Lakes, connects to Pontypool and adjacent municipalities. Narrow paved road with no shoulders, no utilities.	M	Y	Shared Operating space	Y		No conflict	Y	Shared Roadway		Low	Moderate	Yes	Y	
		WILMONT RD MAN		3.03	Local	2	LCB	7.5	6.5	8		290																		
			HILLSIDE AV MAN	0.33	Local	2	HCB	7.5	6.5	8	50	338																		
		HILLSIDE AV MAN	JOHN ST MAN	0.13	Local	2	LCB	7.2	6.2	8	50	338																		
39	Ramsey Rd	ELDON RD MPO	OGEMA RD MPO	1.22	Local	2	HCB	12.5	7	8	80	3640	No	Y	Secondary	Provides E-W connection in southwest Kawartha Lakes. Part of Little Britain Loop route. Gravel shoulders, arterial. Share the Road signage currently (2B sign?). Speed limit 80 km/h. Likely needs paved shoulders to be signed route.	M	Y	paved shoulder with buffer	Y		No conflict	Y	Paved Shoulder		Moderate	High	No	Medium	Y
		OGEMA RD MPO	VALENTIA RD MPO	1.84	Local	2	HCB	12.5	7	8	80	1838																		
40	Salem Rd	BUSH RD MPO	LITTLE BRITAIN RD MPO	0.23	Local	2	LCB	9.2	6.2	8	U	650	No	Y	Secondary	No shoulders, paved local road, seems low volume. Should be feasible as signed route. Part of Little Britain Loop route.	M	Y	Shared Operating space	Y		No conflict	Y		Low	Moderate	No	M	Y	
		ELDON RD MPO	BUSH RD MPO	3.03	Local	2	LCB	7.5	6.5	8	U	650																		
41	Glen Rd	SIMCOE ST MPO	MCINDOOS CEMETERY RD MPO	0.63	Local	2	LCB	6.2	5.2	8	80	411	No	Y	Secondary	Part of Linaday Woodville Loop route. No shoulders, 60 km/h. Paved local road. Should be feasible as signed route.	H	Y	Shared Operating space	Y	N	Some Conflict	Y	Shared roadway		Low	High	No	Y	
		MCINDOOS CEMETERY RD MPO	CKL RD 46 MPO	2.43	Local	2	LCB	6	5	8	80	411																		
		CKL RD 46 MPO	WHITE ROCK RD MPO	3.04	Local	2	LCB	6.7	5.7	8	80	381																		
		WHITE ROCK RD MPO	ELDON RD MPO	3.07	Collector	2	LCB	6.7	5.7	8	80	459																		
		ELDON RD MPO	CAMBRAY RD MPO	3.07	Local	2	LCB	6.7	5.7	8	80	602																		

42	Kirkfield Road	LIFT LOCK RD W ELD CRD	ROCKY RIDGE RD CRD	0.517588541	Local	2	HCB	10.5	6.5	#	60	1208	No	Y	Secondary	Arterial w gravel shoulders. Likely needs paved shoulders to sign, except for section through village of Kirkfield, where speed slows to 40/50 km/h. Most of road is either part of Kirkfield Lift Lock Loop or is an established Secondary Cycling Route.	H	Paved Shoulder	Y	Some Conflict		Moderate	High	No	M
		ROCKY RIDGE RD CRD	TALBOT RIVER RD CRD	0.384255744	Local	2	HCB	10.5	6.5	#	60	1208													
		TALBOT RIVER RD CRD	MCGUIRE BEACH RD CRD	0.255090043	Local	2	HCB	10.5	6.5	#	60	1208													
		MCGUIRE BEACH RD CRD	KIRKFIELD RD CRD	1.194260075	Local	2	HCB	10.5	6.5	#	80	1208													
		WRIGHTS RD DAL CRD	MONCK RD DAL CRD	1.020250694	Local	2	HCB	10.5	6.5	#	80	945													
		DAY DR CRD	WRIGHTS RD DAL CRD	1.826066562	Local	2	HCB	10.5	6.5	#	80	945													
		SCHOOL HOUSE RD CRD	DAY DR CRD	1.223381202	Local	2	HCB	10.5	6.5	#	80	945													
			SCHOOL HOUSE RD CRD	1.776951792	Local	2	HCB	10.5	6.5	#	80	945													
			MCNAMEE RD CRD	0.921572342	Local	2	HCB	10.5	6.5	#	80	1208													
		WOODVILLE RD ELD MPO	LORNEVILLE RD ELD	3.29881732	Local	2	LCB	9.8	5.8	#	80	705													
		LORNEVILLE RD ELD	GLENNAAM RD ELD	3.084711699	Local	2	LCB	10	6	#	80	705													
		GLENNAAM RD ELD	PALESTINE RD ELD	3.078938423	Local	2	LCB	10	6	#	80	825													
		PALESTINE RD ELD	ELDON STATION RD ELD	3.106249235	Local	2	LCB	10	6	#	80	825													
		ELDON STATION RD ELD	TOWER RD ELD	3.948872196	Local	2	LCB	10	6	#	80	825													
		JOHN ST ELD	PORTAGE RD ELD	0.10393596	Arterial	2	HCB	6.5	6.5	cg	50	825													
		MUNROE ST ELD	JOHN ST ELD	0.028590688	Arterial	2	HCB	6.5	6.5	cg	50	825													
			MUNROE ST ELD	0.282099034	Arterial	2	HCB	6.5	6.5	cg	50	825													
		TOWER RD ELD		0.220175901	Local	2	LCB	10	6	#	50	825													
		PORTAGE RD ELD	WATER ST ELD	0.078974179	Arterial	2	HCB	6.5	6.5	cg	50	1208													
				0.750144474	Arterial	2	HCB	10.5	6.5	#	50	1208													
			LIFT LOCK RD W ELD CRD	1.535482732	Local	2	HCB	10.5	6.5	#	80	1208													
43	Eldon Road	ZION RD MPO	RANCH RD MPO	1.385446907	Local	2	HCB	10.4	6	paved	80	2827	Yes	Y	Primary	N/S Connection. Existing paved shoulders along entire length, speed limit 80 km/h (may vary). Arterial: Check AADT. Should be able to sign.	H	Paved Shoulder	Y	No conflict	Signed route (shoulder already paved)	Low	High	No	Only needs signage
			MARK ST MPO	0.239677638	Arterial	2	HCB	7.4	7.4	cg	40	2827													
		LITTLE BRITAIN RD MPO	WHITESIDE ST MPO	0.361604563	Arterial	2	HCB	7.4	7.4	cg	50	2827													
		PERRY ST MPO		0.161020861	Arterial	2	HCB	6.8	6.8	cg	50	1861													
		CRESSWELL RD MPO	FARMSTEAD RD MPO	1.386388137	Local	2	HCB	11	6	paved	60	1861													
		ALBERT ST MPO		0.420964289	Arterial	2	HCB	6.5	6.5	cg	50	1545													
		RAMSEY RD MPO	ZION RD MPO	1.377818873	Local	2	HCB	10.2	5.8	paved	80	2827													
		RANCH RD MPO		0.940838867	Local	2	HCB	10.4	6	paved	40	2827													
		MARK ST MPO	LITTLE BRITAIN RD MPO	0.199848968	Arterial	2	HCB	7.4	7.4	cg	50	2827													
		WHITESIDE ST MPO		0.329422192	Arterial	2	HCB	11.2	7.5	cg&paved	50	2827													
			SALEM RD MPO	0.683025739	Local	2	HCB	11	6	paved	80	1861													
		SALEM RD MPO	CRESSWELL RD MPO	1.382607518	Local	2	HCB	11	6	paved	80	1861													
		FARMSTEAD RD MPO	BRUCE ST MPO	0.749287186	Local	2	HCB	11	6	paved	80	1861													
		BRUCE ST MPO		0.229703961	Local	2	HCB	11	6	paved	50	1861													
			BRUCE ST MPO	0.034153466	Arterial	2	HCB	6.7	6.7	g	50	1861													

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Updated by:		Came		Step 1: Existing Conditions										Step 2: Candidate Route Considerations										Step 3: At-Improvement Identification										Step 4: Network Coordination & Design										Step 5: Route Prioritization / Phasing					
Segment #	Street Name	From	To	Length (m)	roadway Classification	Road Lanes	Surface Type	Platform Width	Surface Width	Obstacle Type	Speed	ADOT 2022	Existing Cycling Facility	Existing Walking Facility	Physically Protected Facility	Candidate Route Type	Candidate Route Description (Physical Assessment)	At-Improvement	Route Process	Centre Line Intersection (Step 2 CPM Block ID)	Left-turn Lane	Parking (C/P)	Sidewalk Status	Wayfinding / Signage	Utilities / Environmental	Route Priority	Existing Improvement	Wayfinding Improvement	Proposed Additional Improvements	Complexity	Community Need / Status	Capital / Operational Priority	Phased / Complete Recommendation	Proposed Phasing	Other Implementation Considerations														
1	Kent Street W.	ANGELINE ST N LND	ST. JOSEPH RD LND	0.09	Arterial	5	HCB	17.8	17.8	QB	50	20536	No	Yes	Yes	Primary												Multi-Use Pathway		- Crosswalk markings & bike signals at McLaughlin Rd & St Joseph Rd. - Walkability improvements	High	High	Yes	No	M														
		ST. JOSEPH RD LND	COMMERCE RD LND	0.20	Arterial	5	HCB	17.8	17.8	QB	50	20536																																					
		COMMERCE RD LND	MCLAUGHLIN RD LND	0.18	Arterial	5	HCB	17.8	17.8	QB	50	20536																																					
2	Kens Street W.	YORK ST N LND	WILLIAM ST N LND	0.08	Arterial	4	HCB	19	19	QB	40	15810	No	Yes	Yes	Primary		Important east-west spine through downtown & major commercial area. High demand for all users. 3 different character: a) commercial downtown east of Victoria, w/ 2 travel lanes & angled street parking; b) transition 4 lane mid-section from Victoria to Angeline through mix of residential, commercial, & institutional (schools, hospitals); and c) newer suburban commercial mall area west of Angeline, 5 lane cross section with centre turn lane. Sidewalks on both sides throughout, although poor conditions and some gaps towards west end. Part of multiple bus routes. Recent capital project downtown limits short-term opportunities for cycling facility. Resurfacing planned west of Victoria Ave, 2026.	High	Y	Physically Separated	Y	Varies	Both sides, poor conditions and some gaps at west end	Y	Some conflict		Separated Bicycle Lane		- Crosswalk markings at Angeline St, Adelaide St, Albert St, Victoria Ave, Cambridge St, William St, Lindsay St, Sussex St, York St. Upgrade to crosswalks and bike signals depending on design. - Walkability improvements	High	High	Yes	No	M	- Realignment of angled parking - Reconfigure lanes for use boulevard space to accommodate facility - Coordinate with Kinross Secondary Plan (31.2.2.5.5) which identifies Kent St. for streetscape improvements													
		ALBERT ST N LND	ADELAIDE ST N LND	0.28	Arterial	4	HCB	18.8	18.8	QB	50	15810																																					
		VICTORIA AV N LND	SUSSEX ST N LND	0.13	Arterial	4	HCB	14	14	QB	50	15810																																					
		JANE ST LND	ANGELINE ST N LND	0.14	Arterial	4	HCB	15	15	QB	50	15810																																					
		SUSSEX ST N LND	ALBERT ST N LND	0.19	Arterial	4	HCB	13.6	14.6	QB	50	15810																																					
		ADELAIDE ST N LND	JANE ST LND	0.14	Arterial	4	HCB	13.6	13.6	QB	50	15810																																					
		LINDSAY ST S LND	YORK ST N LND	0.11	Arterial	4	HCB	18	18	QB	40	15810																																					
		WILLIAM ST N LND	CAMBRIDGE ST N LND	0.19	Arterial	4	HCB	19	19	QB	40	15810																																					
		MCLAUGHLIN RD LND	Greenfield Road	0.08	Arterial	5	HCB	17.8	17.8	QB	50	20536																																					
3	Angeline Street South	AUX TL LND		0.05	Arterial	3		10.4	10.4	QB	40	10060	No	Yes	No	Primary	Important N-S connection for multiple modes, through mostly residential, with some commercial, parkland, and institutional (hospital, college, high school). Significant development planned toward north end. Sidewalks both sides for most of corridor, but usually abutting curb, and some gaps at north and south ends. Multiple bus routes run along road. EA done for Angeline St. from Colborne St. W. to Roosevelt St., planned to widen road and fill sidewalk gaps, no cycling facilities in preliminary design, but still being finalized. Reconstruction budgeted for 2027.	High	Y	Physically separated	N	Y	Both sides until High School, none to south.	Y	Prohibitive Conflict, for boulevard facility	Conflict	Multi-Use Pathway	From High School to Hwy 7 - dependent on development	- Mid-block PKD at Trans Canada Trail. - Crosswalk markings, improved crosswalk markings and bike signals at Mary St intersection - Crosswalk markings x3-5, dependent on side of road of MUP - Walkability improvements (Kent St to Mary St)	High	High	No	Yes	I	Considerable interest from the community but significant challenges to facilitate the implementation of the facility without changes to the road alignment, utilities, etc. Would require additional EA work as well as long-term investigation														
		AUX TL LND	SWEETNAM DR LND	0.04		3		10.7	10.7	QB	40	8879																																					
		WILSON AV LND	MARY ST W LND	0.15		3		10.7	10.7	QB	40	8879																																					
		SWEETNAM DR LND	MCGIBBON BV LND	0.12		3		10.7	10.7	QB	40	8879																																					
		MCGIBBON BV LND	WILSON AV LND	0.08		3		10.7	10.7	QB	40	8879																																					
		ROOSEVELT ST LND	KENT ST W LND	0.15		3		9.7	9.7	QB	40	8879																																					
		HOWARD AV LND	BROAD ST LND	0.12		3		9.7	9.7	QB	40	8879																																					
		Mary St. W.	McDonagh Dr.	0.21		3		10.7	10.7	QB	40	8879																																					
		MCDONAGH DR LND	DURHAM ST W LND	0.06		3		10.7	10.7	QB	40	8879																																					
		DURHAM ST W LND	MAPLE CR LND	0.05		3		9.6	9.6	QB	40	8879																																					
		MAPLE CR LND	SUNSET CT LND	0.06		3		9.6	9.6	QB	40	8879																																					
		SUNSET CT LND	HOWARD AV LND	0.19		3		10	10	QB	40	8879																																					
		BROAD ST LND	ROOSEVELT ST LND	0.01		3		9.7	9.7	QB	40	8879																																					
4	Angeline Street N.	THUNDER BRIDGE RD OPS	THUNDER BRIDGE RD OPS	0.24	Local	2	LCB	7.5	8	QB		1895	No	Yes	No	Primary	Important N-S connection for multiple modes, through mostly residential and some commercial, parkland, and institutional																																

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16	Lindsay St. N	WELLINGTON ST LND	BOND ST E LND	0.15	Arterial	2	HCB	9.6	9.6	cg	40	3574	No	Yes			Moderate	Physically separated	Y	Y7			Multi Use Pathway	Crosswalk markings and bike signals at Wellington St.	Moderate	Moderate	No	No	M	- Reallocation of space possible from three (3) lanes to two (2) to accommodate bicycle lane - - Timing may need to be advanced to long term if there are further challenges with the traffic needs relative to the space available. Could have diamond and walk sign in the interim.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		WELLINGTON ST LND	COLBORNE ST E LND	0.14		2		8.5	9.5	cg	40	3574																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		BOND ST E LND		0.15		2		9.5	9.5	cg	40	3574																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		KENT ST E LND		0.11		4		11	11	cg	40	15339																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		KING ST LND	WELLINGTON ST LND	0.09		4		11	11	cg	40	15339																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
			KING ST LND	0.05		4	HCB	11	11	cg	40	15339																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
17	Lindsay St. N	POTTINGER ST LND		0.20	Local	2	G	5	5	me	40	41	No	Inconsistent	No	Tertiary	Moderate	Y		Y7	Mostly one side, inconsistent	Y	Some conflict	Y	Neighborhood Bikeway	Sidewalk one side, north of Cottesingham Cres	Traffic Calming	Low	Low	No	Yes	U																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		COLBORNE ST W LND	POTTINGER ST LND	0.46		2	HCB	7.5	6.5	g	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		DANIEL CT LND	EGUNSTON ST LND	0.18		2	HCB	7	7	cg	40	21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		EGUNSTON ST LND	COTTINGHAM CR LND	0.13		2	HCB	7	7	cg	40	322																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		COTTINGHAM CR LND		0.46		2	HCB	8.8	5.8	g	40	80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		COTTINGHAM CR LND	COTTINGHAM CR LND	0.09		2	HCB	7	7	cg	40	322																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
			DANIEL CT LND	0.02		2	HCB	7	7	cg	40	41																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
18	Mary St. W	ADELAIDE ST S LND	ALBERT ST S LND	0.17	Arterial	3	HCB	10.1	10.1	cg	40	5039	No	Yes	No	Tertiary	Moderate	Y	Designated operating space	Y	Y	Both sides, inconsistent, some gaps	Y	Some conflict	Y	Bicycle Lane	Sidewalk, north side, Angeline St to Adelaide St. (250 m)	- Conflict zone markings for bike lane (x13) at Eakins Cres, Dormer Rd, McQuarrie Rd, Frost Pl, Hughes Ct, Madill Cres, Wilson Ave, Angeline St, Adelaide St, Lindbeth Cres, Wilson Ave, Angeline St, James St. - Bike box at north leg of Hamilton St intersection - Walkability improvements, Angeline St to Lindsay St S. - Traffic calming, McLaughlin Rd to Angeline St.	Low	Moderate	No	Yes		- Reallocation of space recommended requiring the removal or restriction of on-street parking to accommodate																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		HAMILTON ST LND	JAMES ST LND	0.29		3		10.1	10.1	cg	40	5030																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		HUGHES CT LND	FROST PL LND	0.12		2		9	9	cg	40	120																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		MCGUARRIE RD LND	DORMER RD LND	0.21		2		9	9	cg	40	1188																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		DORMER RD LND	EAKINS CR LND	0.06		2		9	9	cg	40	1189																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		EAKINS CR LND		0.04		2		9	9	cg	40	1188																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		ANGELINE ST S LND	WILSON AV LND	0.39		2		9	9	cg	40	2298																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		WILSON AV LND	MADILL CR LND	0.15		2		9	9	cg	40	777																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		MADILL CR LND	HUGHES CT LND	0.08		2		9	9	cg	40	777																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		HUGHES CT LND	MCGUARRIE RD LND	0.05		2		9	9	cg	40	120																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		ANGELINE ST S LND	ADELAIDE ST S LND	0.28		3		10.1	10.1	cg	40	5039																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		ALBERT ST S LND	HAMILTON ST LND	0.27		3		10.1	9	cg	40	5030																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		JAMES ST LND	LINDSAY ST S LND	0.28		3		10.1	10.1	cg	40	5255																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
			MCLAUGHLIN RD LND	0.05		2		8	8	cg	40	1161																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
				0.05		2		8	8	cg	40	86																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Network Development Database

Overall Info		Step 1: Existing Conditions										Step 2: Candidate Road Configurations										Step 3: AT Implementation Identification										Step 4: Network Configuration & Design										Step 5: Route Prioritization / Planning																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Segment #	Street Name	From	To	Length (m)	Roadway Classification	No. of Lanes	Surface Type	Median Width	Traffic Lane Width	Shoulder Type	Lane Wd.	AADT (2021)	Existing Traffic Facility	Existing Working Hours	Potential Future Use	Candidate Street Form	Location Relative to Key Features	Public Support	Route Priority	Funding Responsibility (Local Govt %)	Sufficient Space for Desired Facility	Permitted (Y/N)	Current Status	Workability Improvement	Conflict / Environmental	Route Priority	Costing Information	Making Improvement	Proposed Additional Improvements	Complexity	Community Benefit Potential	Adopted / Planned Project	Planned / Possible Development	Anticipated Timing	Other Implementation Considerations																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1	East Street N	MAIN ST BOB	DUNN ST BOB	0.09	Arterial	2	HCB	8.3	8.3	c&g	50	2063	No	Yes	No	Primary	Important N-S connection, with gravel shoulders. As Road leads onto a bridge, there are sidewalks on both sides but not of sufficient width	H	Y	Designated space	M	N	On one side, inconsistent	Yes	Some conflict	Y	Multi-use Pathway	N/A Walkability improvement accommodated by MUP	- Crosswalks and bike signals at Main Street intersection - P&D, crosswalk and ladder crosswalks at Cedarstreet Lane/Duke Street - P&D and crosswalk markings at Riverside Dr/Anne St. - P&D at Dunn Street - Walkability improvements consistent with recommendations identified within the TMPU (no costing required for the ATMP)	High	High	No	No	I	- Segment of East Street North between Duke Street and Boyd Street is to be prioritized in the short term. - East Street North corridor identified as a priority project																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		DUKE ST BOB	EAST ST N BOB	0.22	Arterial	2		9.5	9.5	c&g		2453																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		TAYLOR ST BOB	BICK ST BOB VER	0.13	Local	2		10.7	6.3	#		2062																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		DUNN ST BOB	TAYLOR ST BOB	0.18	Arterial	2		8.3	8.3	c&g		2062																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	East street S	RIVERSIDE DR BOB	DUKE ST BOB	0.22	Arterial	2	HCB	15	12	g&paved	50	7299	N	N	N	Primary	Sidewalk exists on one side near the bridge. Gravel shoulders on both sides, commercial on both sides but as we move further south to more gravel shoulders and there is a mix of residential and commercial on both sides. High traffic volume corridor. Potential for adding AT facilities on sections closer to the bridge.	H	Y	Physically Separated	Y	N	Inconsistent	Y	Some conflict	Y	Multi-use Pathway (Boyd street to William street) Buffered Paved Shoulder (William street to Little bob dr)	N/A Walkability Improvement accommodated by MUP and Buffered Paved Shoulder	- Crosswalks with bike signals at Boyd Street and King Street - Ladder markings at Snakepoint Road - Walkability improvement consistent with recommendations identified within the TMPU (no costing required for the ATMP)	High	High	No	No	M	- Segment of East Street South between Boyd Street and King Street East to be prioritized in the short term																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		SNAKE POINT RD BOB	MILL ST BOB	0.14	Arterial	2	HCB	15	13.5	paved	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		SNAKE POINT RD BOB		0.04	Arterial	2	HCB	13	9.5	paved	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		LITTLE BOB DR BOB		0.10	Arterial	2	HCB	12.4	8	#	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		LITTLE BOB DR BOB		0.22	Arterial	2	HCB	12.4	8.1	g&paved&BAG	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		BOYO ST BOB	RIVERSIDE DR BOB	0.18	Arterial	2	HCB	13	9.5	m&g	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		KING ST E BOB	BOYO ST BOB	0.35	Arterial	2	HCB	14	11	paved & Gravel	50	7299																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Park Street	MILL ST BOB	KING ST E BOB	0.17	Arterial	2	HCB	15	13.5	paved	50	7299	No	No	Yes	Primary	Has low density residential development alongside, quiet street connecting to downtown. As we move north, more space seems to be available on both sides. Part of this street is under previously proposed	H	Y	Shared operating Space	M	Y	None	Yes	Prohibitive conflict	Conflicts	Paved Shoulder	N/A Walkability Improvement by the Paved Shoulder	- Walkability improvements along corridor including benches / rest areas, etc. - Ladder crossing and/or P&D at Sherwood Street terminus	Moderate	High	Yes	No		- Considering an MUT is being implemented within the Park space redevelopment project, this community services projects should be aligned with the work done by engineering to improve this connection																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		MANSFIELD ST BOB	SHERWOOD ST BOB	0.14	Local	2		15	8.7	paved parking / g	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		LANCE ST BOB	MANSFIELD ST BOB	0.40	Arterial	2		7.9	7.4	#	40	1847																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		PERFECTUS DR BOB	LANCE ST BOB	0.17	Arterial	2	HCB	2.9	7.4	#	40	1847																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		MINNS AV BOB	PERFECTUS DR BOB	0.09	Arterial	2		10	6.8	#	40	1847																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Sherwood Street	MINNS AV BOB		0.13	Arterial	2		9	6.8	c&g & #	40	1847	No	Yes	Yes	Primary	Part of this street falls under previously proposed cycling route. Quiet residential street. Sidewalk exists on both sides, as one goes north, sidewalk with curb exists on the south side.	H	Y	Shared operating Space	Y	Y	Both sides, inconsistent	No	Some conflict	Y	Neighbourhood Bikeway (Canal st. W to park st. W)	Sidewalk one side (Canal st. W to park st. W)	- Traffic calming (Canal st. w to King st. W) - Walkability improvement (Canal st. w to King st. W)	Medium	High	No	No	I																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		PARK ST BOB	CANAL ST W BOB	0.10	Local	2	HCB	12.5	8.5	c&g	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		KING ST W BOB	PARK ST BOB	0.13	Local	2		8.5	8.5	c&g	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	North Street	KING ST W BOB		0.12	Local	2		7	7	c&g	40	72	No	Yes	Yes	Primary	Provides E-W connection at west side of town. As it goes into rural, it connects to Fenelon Bobsaygon route. Sidewalk on north side separated with rollover curb and asphalt strip.	H	Y	Designated space	N	Y	One side, inconsistent	Yes	Prohibitive conflict	Y	Multi-use Pathway (West street to Balacava street)	Sidewalk on one side (West street to Balacava street)	- Walkability Improvements (West street to Balacava street) - Crosswalk and bike signals at Balacava Street - P&D and Crosswalk markings at Joseph Street	High	High	No	No	M																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		NORTH ST BOB	BALACAVA ST BOB	0.13	Local	2		6	6	#	40	478																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		HEAD ST BOB	DUKE ST BOB	0.09	Arterial	2	HCB	6.5	8.5	c&g	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		REID ST BOB	HEAD ST BOB	0.10	Arterial	2		6.5	8.5	c&g	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Duke Street	WESLY ST BOB	REID ST BOB	0.31	Arterial	2		8.5	6.5	c&g	40	4803	No	Yes	Yes	Primary	E-W connection, runs through centre of town. Ditch and sidewalk on north side. Assume moves southwards, ditch is no longer present and sidewalk exists on the south side.	M	Y	Designated space	Y	Y	One side, inconsistent	Yes	No conflict	Y	Bike Lane	Sidewalk on one side (Balacava street to East Street N)	- Traffic calming - P&D and ladder markings at Main Street	Moderate	High	Yes	No	I	- If feasible, consider upgrading to protected facility, such as buffered/separated bike lanes or MUP.																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		HELEN ST BOB	EAST ST N BOB	0.04	Arterial	2		11.2	11.2	c&g	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		BALACAVA ST BOB	MAIN ST BOB	0.43	Arterial	2		10	6.9	#	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		JOSEPH ST BOB	BALACAVA ST BOB	0.08	Arterial	2	HCB	12	7.1	#	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		NORTH ST BOB	JOSEPH ST BOB	0.07	Arterial	2		8.5	6.5	c&g	40	4803																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Balacava Street	MAIN ST BOB	HELEN ST BOB	0.15	Arterial	2		11.2	11.2	c&g	40	4803	No	No	Yes	Secondary	N-S connection, in front of school. Narrow, local street with residential on both sides. Sidewalk present only in front of the school.	M	Y	Shared operating Space	N	Y	One side inconsistent	Yes	Prohibitive conflict	Y	Multi-use Pathway	Sidewalk on one side	- Walkability Improvement - Traffic calming required to accommodate school transition during high volume periods - P&D at Dunn Street	High	High	No	No	M	- MUP recommended to give a protected facility near school, although neighbourhood bikeway may be sufficient if combined with sufficient traffic calming measures.																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		BICK ST BOB VER	BICK ST BOB VER	0.05	Local	2	LCB	7	6	#	40	626																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		DUNN ST BOB	HILLVIEW DR MAN	0.28	Local	2	LCB	7	6	#	40	626																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		DUKE ST BOB	NORTH ST BOB	0.08	Local	1	HCB	6	4	#	40	588																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Hendel Street	NORTH ST BOB	DUNN ST BOB	0.23	Local	2	HCB	7	6	#	40	572	No	No	Yes	Secondary	N-S connection, limited connectivity, quiet residential street with sidewalk on north side (at Prince Street W).	M	Y	Shared operating Space	N	Y	One side, inconsistent	Yes	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side (North street to Prince st w)	- Traffic calming	Medium	L	Yes (2027)	No		- Project to be aligned with the planned 2027 road reconstruction to leverage economies of scale																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		HILLVIEW DR BOB	BICK ST BOB VER	0.03	Local	2	LCB	7	6	#	40	626																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		PRINCE ST W BOB	NORTH ST BOB	0.23	Local	2		7	6	#	40	393																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Main st	QUEEN ST BOB	PRINCE ST W BOB	0.20	Local	2	HCB	7	6	#	40	393	No	Yes	Yes	Secondary	Key connection through downtown, and to waterfront, parks, trails. Rural cross-section NE of East St. N. Urban section w/ sidewalk on East side. As we move beyond Jane Street, sidewalk alternates to the West Side with gravel shoulders on both sides. Street has convenience stores, residences located on its sides. As we move south, utilities located on the West Side can be an issue. A great candidate for bike lane or separated bike facility. Candidate for pedestrian improvements	H	Y	Designated space	Y	Y	One side	Yes	Some conflict	Y	Protected Bike lanes (South street) to East St N) Paved Shoulder (East street N to WilderNESS Park rd)	Sidewalks on one side (Front st. E to WilderNESS park rd)	- P&D and Conflict Zone Markings at Front Street W Intersection reconfiguration at Front Street E/W P&D at Jane Street - Right-turning red and add crosswalk markings at Duke street	High	Moderate	No	No		- This corridor will require considerable effort to implement the desired facility. While the majority of the corridor is identified within the short term, consideration should be given to exploring the implementation of the segment of Main Street between East Street North and Front Street East in the Medium Term - Timing of the proposed intersection improvement at Front Street E and W should be explored within the short-term at the same time as the proposed improvement on Front Street W and Joseph Street - Segment between Duke Street and King Street East considered a high priority project																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		FRONT ST W BOB	QUEEN ST BOB	0.19	Local	2		7	6	#	40	393																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		WILDERNESS PARK RD BOB		0.12	Arterial	2		12.9	6.8	#	40	2458																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		TAYLOR ST BOB	WILDERNESS PARK RD BOB	0.06	Arterial	2		13.4	7.5	#	40	2453																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		EAST ST N BOB	TAYLOR ST BOB	0.36	Arterial	2		12.7	8.1	#	40	2453																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		JANE ST BOB	EAST ST N BOB	0.18	Local	2		8.5	7	#	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		DUKE ST BOB	JANE ST BOB	0.12	Local	2		8.5	7	#	40	956																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		PRINCE ST E BOB	DUKE ST BOB	0.22	Collector	2	HCB	12	7	#	40	5065																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		JOSEPH ST BOB	PRINCE ST E BOB	0.28	Collector	2		12	7	paved	40	5065																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		FRONT ST E BOB	JOSEPH ST BOB	0.04	Collector	2		12	7	paved	40	5065																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Main st	FRONT ST W BOB	FRONT ST E BOB	0.03	Collector	4		14	14	c&g	40	5137	No	Yes	Yes	Secondary	Key connection through downtown, and to waterfront, parks, trails. Rural cross-section NE of East St. N. Urban section w/ sidewalk on East side. As we move beyond Jane Street, sidewalk alternates to the West Side with gravel shoulders on both sides. Street has convenience stores, residences located on its sides. As we move south, utilities located on the West Side can be an issue. A great candidate for bike lane or separated bike facility. Candidate for pedestrian improvements	H	Y	Designated space	Y	Y	One side	Yes	Some conflict	Y	Protected Bike lanes (South street) to East St N) Paved Shoulder (East street N to WilderNESS Park rd)	Sidewalks on one side (Front st. E to WilderNESS park rd)	- P&D and Conflict Zone Markings at Front Street W Intersection reconfiguration at Front Street E/W P&D at Jane Street - Right-turning red and add crosswalk markings at Duke street	High	Moderate	No	No		- This corridor will require considerable effort to implement the desired facility. While the majority of the corridor is identified within the short term, consideration should be given to exploring the implementation of the segment of Main Street between East Street North and Front Street East in the Medium Term - Timing of the proposed intersection improvement at Front Street E and W should be explored within the short-term at the same time as the proposed improvement on Front Street W and Joseph Street - Segment between Duke Street and King Street East considered a high priority project																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		CANAL ST W BOB	FRONT ST W BOB	0.33	Collector	4		14	14	c&g	40	5137																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		KING ST W BOB	CANAL ST W BOB	0.26	Collector	4		14	14	c&g	40	3099																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

9	Canal St	AYTID ST BOB	EAST ST S BOB	0.23	Local	2	HCB	12.5	8.5	#	40	2086	No	Yes	Yes	Secondary	Important E-W connection with waterbodies on side. Canal Street E, connecting from Boyd Street, has a rural cross-section with a pond on its East Side and no sidewalks. As we move southwards, after William Street, Canal Street E gets busy, with waterfront along its east side with parking permitted on both sides. More commercial users come up as it connects with Canal Street W. Canal Street W gets narrower as we move south, and has sidewalks on both sides.	H	Y	Shared operating Space	M	Y	Inconsistent	Yes	Some conflict	Y	Multi-use Path	Sidewalk on one side	Walkability Improvements - Crosswalk markings at Main Street	Medium	High	Yes	No		- Implementation to be coordinated with the 2026 capital project. - Ensure MUP continues the Canal St/Main St intersection to ensure a safe transition between boulevard MUP and on-street shared cycling facility.	
		WILLIAM ST BOB	NEED ST BOB	0.16	Local	2		7.1	7	#	40	1081																								
		MAIN ST BOB	WILLIAM ST BOB	0.14	Local	2		15	7	#	40	1081																								
		SHERWOOD ST BOB	MAIN ST BOB	0.16	Local	2		6	6	#	40	1716																								
10	Front St. W	COLE ST BOB		0.71	Local	2	HCB	8.5	6.5	#	40	598	No	Yes	Yes	Tertiary	Only a section (John Street to Head Street) of this street included as candidate route. Good E-W connection, scenic, along water front. Sidewalk 1 side, paved shoulder on the other side. Possible shared route.	H	Y	Shared operating Space	N	Y	One side	Yes	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side	- Traffic calming	Low	High	Yes	No			
		WEST ST BOB	COLE ST BOB	0.40	Local	2			6	6	#	40																								1275
			WEST ST BOB	0.14	Local	2			6	6	#	40															1275									
		HEAD ST BOB		0.28	Local	2			6	6	#	40															1275									
		JOHN ST BOB	HEAD ST BOB	0.16	Local	2			6	6	#	40															1275									
		MAIN ST BOB	JOHN ST BOB	0.16	Local	2			6	6	#	40															1275									
11	Joseph Street	PRINCE ST W BOB	DUKE ST BOB	0.19	Local	2	HCB	10	6	#	40	956	No	No	No	Tertiary	Quiet neighborhood street with a sidewalk on the south side. Residential along both sides. A possible candidate for pedestrian improvement due to high walking activity recorded.	L	Y	Shared operating Space	Y	Y	One side	Yes	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side (Duke Street to Prince St W)	- Traffic Calming	Low	High	Yes (Reconstruction 2028-2032)	No		- Implementation to align with the 2028 planned project timeline as identified for reconstruction. - Would require implementation of the intersection improvement which is identified as a critical conflict point in the network at North Street, Duke Street and Joseph Street.	
		QUEEN ST BOB	PRINCE ST W BOB	0.03	Local	2	HCB	10	6	#	40	956																								
		MAIN ST BOB	QUEEN ST BOB	0.21	Local	2	HCB	6	6	#	40	956																								
12	Riverside Drive	BIRCH CR BOB		0.80	Local	2	HCB	9.2	8.2	#	40	1228	No	No	Yes	Tertiary	Major N-S connection, no sidewalk on either side, rural cross-section, with gravel shoulders on both sides, mostly residential development along the route.	H	Y	Shared operating Space	Y	Y	None	Yes	Some conflict	Y	Neighbourhood Bikeway	None	- Traffic calming	Low	Moderate	No	No	M		
		FRONT ST E BOB	BIRCH CR BOB	0.52	Local	2	HCB	9.2	6.2	#	40	1228																								
		EAST ST N BOB	FRONT ST E BOB	0.07	Local	2	HCB	8.8	6.8	#	40	1228																								
13	William St	KING ST E BOB	CANAL ST E BOB	0.26	Local	2	HCB	11.5	11.5	#	40	1192	No	Yes	No	Tertiary	N-S connection, sidewalk on the south side with curb/sidewalk without curb on north side but inconsistent. As one moves beyond William Street intersection, sidewalks on either side disappear and roadway becomes narrower. Mix of neighborhood commercial and residential throughout the corridor.	M	Y	Shared operating Space	N	Y	Both sides	No	Prohibitive conflict	Y	Neighbourhood Bikeway	Sidewalk on one side (Canal St E to mid point of William Street)	- Traffic calming	Low	Low	No	No	M		
		SHAKE POINT RD BOB	KING ST E BOB	0.22	Local	2	HCB	6	6	#	40	1150																								
14	Mill Street	MARINA DR BOB	LAKELWOOD CR BOB	0.40	Local	2	LCB	8.6	6.6	#	40	578	No	No	Yes	Tertiary	road connectivity through centre of town, plus connection to Wilderness Park & trails. Rural cross section NE of County Rd 49. No sidewalks on either side. No major destinations along the route, only low-density, spread out residential.	H	Y	Shared operating Space	Y	Y	None	Yes	No conflict	Y	Neighbourhood Bikeway	Sidewalk on one side	None	Low	High	Yes (Resurfacing planned 2028)	No		- Project implementation to align with the 2028 timeline for resurfacing. - Considered a short-term priority to align with the trail improvements planned at River Park.	
		SQUIRES RW BOB	MARINA DR BOB	0.25	Local	2	HCB	8.8	6.8	#	40	1627																								
		EAST ST S BOB	SQUIRES RW BOB	0.11	Local	2	HCB	8.8	6.8	#	40	1627																								
15	Dunn Street	East St. N.	Bellevue St.	0.35	Local	2	HCB	8.5	8.5	#	40	924	No	Yes	Yes	Primary	Not Available on streetmap, sidewalk exists on the south side. Relatively narrow road, provides connection to Thomas Anderson Park.	H	Y	Shared operating Space	M	Y	One side	Yes	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side	- Traffic calming	Low	Moderate	Yes (Reconstruction planned 2028-2032)	No	M	- Implementation to be coordinated with the reconstruction project planned for 2032.	
16	Snake point road	NEED ST BOB	WILLIAM ST BOB	0.14	Local	2	HCB	5	5	#	40	1150	No	Partial (sidewalk on north side of roadway)	No	N/A	Rural cross section with residences and natural areas abutting the roadway. Scenic route accommodating local traffic providing alternate linkage to King Street and East Street North. Long driveways with set back utilities. At Need St, sidewalk picks up on the north side of the street. Some gravel / paved partial shoulder but is sufficient width. In sufficient space to accommodate designated facility. Would require speed reduction.	L	Y	Shared operating Space	Y	N	Sidewalk on one side (Need St to William St.)	Yes	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side (Need St to East Street South)	- Traffic calming	Low	Low	No	No	M		
		EAST ST S BOB	NEED ST BOB	0.21	Local	2	HCB	5	5	#	40	1150																								
17	Front St. E	HELEN ST BOB	MAIN ST BOB	0.16	Local	2	HCB	8	8	#	40	983	No	Partial (sidewalk on north side of roadway)	Yes	N/A	Rural cross section with grading challenges and physical barriers. Scenic route along the water with gravel shoulders on the southside. At Anne Street, Transitions into Riverside bridge - privately owned residences but may support active travel. Underpass below the bridge is preferred for crossing if possible.	M	Y	Shared operating Space	N	Y	Sidewalk on one side (Main St to Anne St.)	Yes	Some conflict	Y	Neighborhood bikeway	Sidewalk on one side (from Anne Street to East Street N)		Moderate	Low	No	No	L		
		ANNE ST BOB	HELEN ST BOB	0.17	Local	2	HCB	8	8	#	40	983																								
			ANNE ST BOB	0.18	Local	2	LCB	6	6	#	40	167																								
18	Cedar tree lane	JUNIPER CT BOB	BIRCH CR BOB	0.13	Local	2	HCB	7	7	#	40	104	No	No	No	N/A	Residential corridor with rural cross section. Set-back driveways with some conflicting utilities. Some right-of-way challenges. Connection to proposed trail improvements.	M	Y	Shared operating Space	N	Y	None	Yes	Some conflict	Y	Multi-use Pathway	Sidewalk on one side (from Birch Cresc. To Trail Terminus)		Low	High	No	No	L	-	- Considered a priority to align with the trail improvements planned for the extension of Wilderness Park Road and the extension of Duke Street.
		EAST ST N BOB	JUNIPER CT BOB	0.19	Local	2	HCB	7	7	#	40	104																								
19	King St. E	NEED ST BOB	RINGSWAY DR BOB	0.07	Arterial	2	HCB	8	8	#	40	1307	No	Yes	No	N/A	Residential and commercial corridor with urban cross-section and sidewalks on both sides. Relatively busy street. Positioning of utilities in some places can pose a challenge.	M	Y	Shared operating Space	N	Y	Both sides	Yes	Some conflict	Y	Cycle Track	None	Traffic calming (Bolton Street to East Street S)	High	Medium	No	No	L	-	- Considered a priority project to achieve the safer system of separated linkages throughout the community but recently reconstructed.
		WILLIAM ST BOB	NEED ST BOB	0.14	Arterial	2	HCB	8	8	#	40	1307																								
				BOLTON ST BOB	WILLIAM ST BOB	0.14	Arterial	3	HCB	10.5	10.5	#	40	1307																						

Report Date		Report By		Client		Step 1: Existing Conditions										Step 2: Evaluate Route Characteristics										Step 3: AT Improvement Identification										Step 4: Interest Construction & Design					Step 5: Route Prioritization / Phasing				
Page No.	Sheet Title	From	To	Length (km)	Roadway Classification	No. of Lanes	Surface Type	Maths. Alum.	Surface Width	Shoulder Type	Speed	ACSR 2022	Development Potential	Existing Biking Facility	Proposed Potential Mode	Landmark Route Type	Comments/Notes/Obstacles/Restrictions	Public Support	Route Potential	AT/AT Improvement Type (1-10M Score 1-5)	Left-turn Motion Not Allowed At/By	Turning (V/L/N)	Intersect (V/L/N)	Walkability Improvement	Lighting Improvement	Active Roadway	Current Improvement	Turning Improvement	Proposed Additional Infrastructure	Complexity	Community Need - Level	Capital / Planned Project	Planned / possible development	Proposed Phasing	Other Implementation/Considerations										
1	Lindsay Street	WEST ST FEF	VETERANS WY FEF	0.18	Arterial	4	HCB	14.2	14.2	4B	38	6013	N	Y	N	Secondary	Unimproved cross section with four lanes (2E and 2W) with a centre turn lane. Mix of businesses and residential and significant number of driveways accessing the road. Utilities are in close proximity to the roadway. Sidewalk expands to include 0.5m asphalt strip between sidewalk and curb. Significant vulnerable user destinations along the corridor including a school and other businesses which generate daily traffic.	H	Y	Physically Separated	Y	N	One Side, Constant	N	Some conflict	Y	Separated Bicycle Lane	Sidewalk on One side (From Trail to Green Street)	PKO at Lindsay Street and Green Street Pavement Markings for Bike Lane Transition And block unimproved crossing at Lindsay Street and VRT crossing	Moderate	Moderate	No	No	M	Resurfacing planned 2025 from West St. to Pitt St. Recommendation of reallocation of space to accommodate new facility										
		VETERANS WY FEF	GREEN ST E FEF	0.23	Arterial	4		14.2	14.2	4B	50	6013																																	
		GREEN ST E FEF	ELLIOTT ST FEF	0.19	Arterial	4		14.2	14.2	4B	50	6013																																	
		ELLIOTT ST FEF	HELEN ST FEF	0.07	Arterial	4		14.2	14.2	4B	50	6013																																	
2	Colborne Street	HELEN ST FEF	WATER ST FEF	0.23	Arterial	2	HCB	8.8	8.8	4B	40	13300	N	Y	Y	Primary	Crossing of the three means significant narrowing of the roadway. City is in the process of undertaking a redesign of the bridge which will include AT facilities. Significant natural destinations including park spaces and retail areas. Transitions to a more urbanised main street with parallel on-street parking and three lanes centre turn lane. High volumes of traffic (all modal). Downtown destination but lacking street topology to enhance space. AP route for summer extension of rail trail. Transitions to a more residential cross-section but with the same R20W which available. Sidewalk width decreases but still present on both sides.	M	Y	Physically Separated	Y	Y	Both sides, Constant	N	Some conflict	Y	Cycle Track	Sidewalk on Both sides (Bridge)	Potential line in facility of Super Sharrow with Green pavement marking Walkability improvements Crossover markings at Francis Street and Bond St. Bicycle Signals at Francis St Redesign crosswalk markings and facility transition at Princess Street Intersection	High	Moderate	No	No	N	Would require overall realignment of the way in which with roadway is designed with the removal of on-street parking and reallocation of space Resurfacing planned 2025 from Bond St. to Citizen St. Sections are to be implemented in different phases depending on the intricacy of implementation Section between Bond Street and Princess Street to be Medium Term while remaining sections would likely be more appropriate in the long term										
		WATER ST FEF	FRANCIS ST E FEF	0.32	Arterial	4		17	17	4B	40	13300																																	
		FRANCIS ST E FEF	BOND ST E FEF	0.34	Arterial	4		17	17	4B	40	13300																																	
		BOND ST E FEF	LOUISA ST FEF	0.34	Arterial	4		14	14	4B	40	13300																																	
		LOUISA ST FEF	QUEEN ST FEF	0.14	Arterial	4		14	14	4B	40	13300																																	
		QUEEN ST FEF	PRINCES ST W FEF	0.33	Arterial	4		18	14	4B	40	13300																																	
4	Bond St W	COLBORNE ST FEF	MARKET ST FEF	0.16	Local	3	HCB	8	8	4B	40	1412	N	Y	Y	Primary	Urban cross section with curbs and sidewalks on both sides of the roadway. Sidewalks have varying conditions including concrete and asphalt. Primarily residential with some local commercial. Utilities are very close to the curb. Parking is permitted with a relatively high degree of use. Towards the end of the street there is a narrowing and increased boulevard.	M	Y	Shared Operating Space	M	Y	Both sides, Constant	Y	Some conflict	Y	Neighbourhood Bikeway	Sidewalk on one side (from Bond st. w to John st. w from John st. to Farnell Park curling club)	Traffic calming Walkability improvement with a focus on the sidewalk and overall accessibility Intersection improvement at Colborne at PKO and conflict zone markings at Bond St. W	Medium	High	No	No	N	Requires the potential removal of parking										
		MARKET ST FEF	JOHN ST FEF	0.30	Local	3	HCB	8	8	4B	40	1412																																	
5	Bond St E	JOHN ST FEF		0.27	Local	2	HCB	7	7	4B	40	810	N	Y	N	Tertiary	Narrower street primarily residential with sidewalks on both sides of the roadway and parking permitted. Sidewalk on the N side is dropped and one side of the roadway becomes curbed with a parallel gravel shoulder. High frequency of driveways and condition relatively new. Some significant environmental constraints on the N side.	M	Y	Shared Operating Space	Y	N	One Side, Constant	N	Some conflict	Y	Neighbourhood Bikeway	None	Low	Moderate	No	No	N												
		COLBORNE ST FEF	MARKET ST FEF	0.18	Local	3	HCB	8	8	4B	40	1412																																	
6	Helen St	MARKET ST FEF	JOHN ST FEF	0.30	Local	3	HCB	8	8	4B	40	1412	N	Y	N	Primary	Roadway transitions from a rural cross section with wide gravel shoulders just before Redwing Avenue to a urbanised cross section with asphalt sidewalks (less than desired minimum) on both sides of the roadway. Primarily residential with some local businesses on the north side of the street. Strong presence of utilities as well as environmental features. (primarily on the south side). Parking seems to be permitted but is not consistently used along the corridor. At points there is a widening of the sidewalk, closer to 3.5m on both sides. Segment of sidewalk is missing close to the school on the S side of the roadway.	H	Y	Designated Operating Space	N	Varied	Both sides, In constant	Y	Some conflict	Y	Multi-use pathway	Sidewalk on one side (Lindsay st to King st. N) Sidewalk on both sides (from the trail near green st w to West street)	Walkability improvement (from Lindsay st to west st. N) Crosswalk markings, bike signals and crosswalks at Lindsay St. PKO at trail crossing near green st w PKO and crosswalks at north street intersection	Moderate	High	Yes	No	N	Coordination with capital project planned at the Helen and Lindsay Street Intersection (reconstruction) for 2024										
		JOHN ST FEF		0.27	Local	2	HCB	7	7	4B	40	810																																	
		REDWING RD FEF	REDWING AV FEF	0.45	Arterial	2	HCB	7	7	4B	40	5585																																	
		REDWING AV FEF	BASS ST FEF	0.20	Arterial	2	HCB	7	7	4B	40	5585																																	
		BASS ST FEF	WEST ST N FEF	0.12	Arterial	2	HCB	7	7	4B</																																			

Tools to inform the completion of Step 3 & 4 of the process (facility design)

Desirable Cycling Facility Pre-Selection Nomograph
Urban/Suburban Context (Step 1)

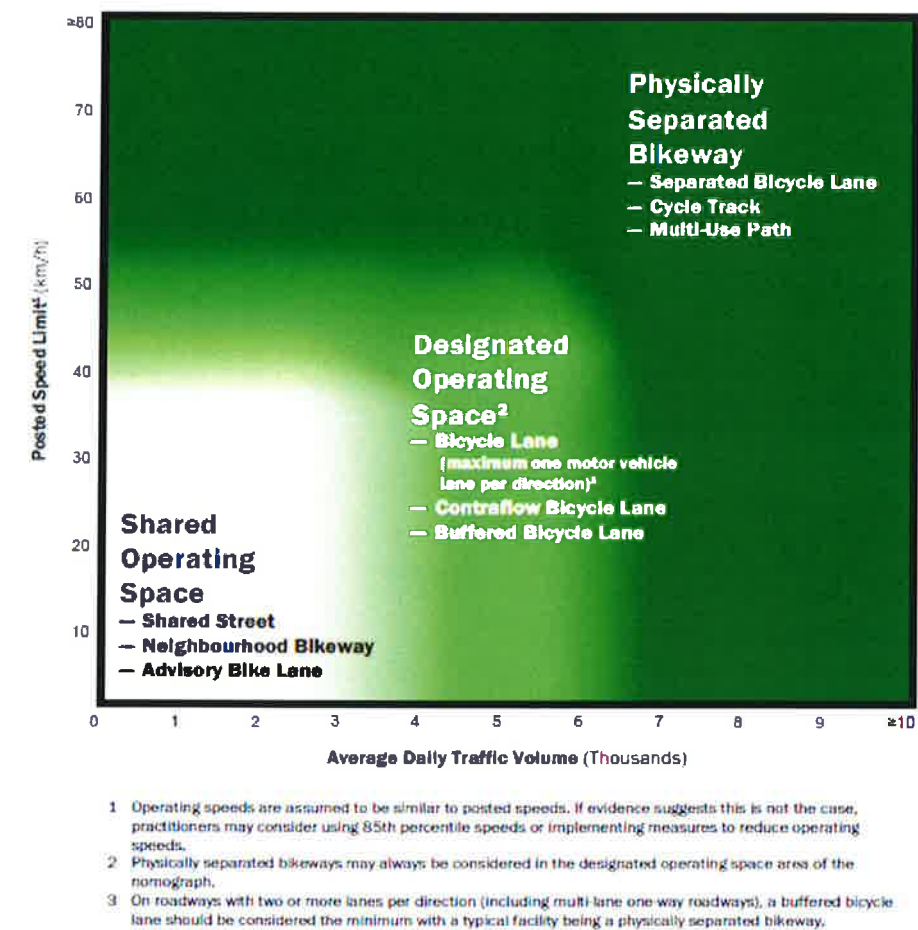


Figure 5.5 – Desirable Cycling Facility Pre-selection Nomograph — Urban/Suburban Context

The nomographs are intended to be used to identify the preliminary recommended level of separation for the various corridors. The recommendation pertains to cycling infrastructure and does not address the requirements for pedestrians - who are assumed to be accommodated outside of the road right of way. Once the level of separation has been identified; Table 5.3 is to be used to consider more of the context specific conditions along the corridor with the intent of "narrowing down" the most applicable facility.

The master plan has applied these tools to identify the recommended facility for the proposed AT network. The tools are intended to be used along with the details provided within the ATMP report, OTM Book 18, OTM Book 15 and OTM Book 12 as the City proceeds with next steps including but not limited to Environmental Assessments, preliminary and detailed design.

Desirable Cycling Facility Pre-Selection Nomograph
Rural Context¹ (Step 1)

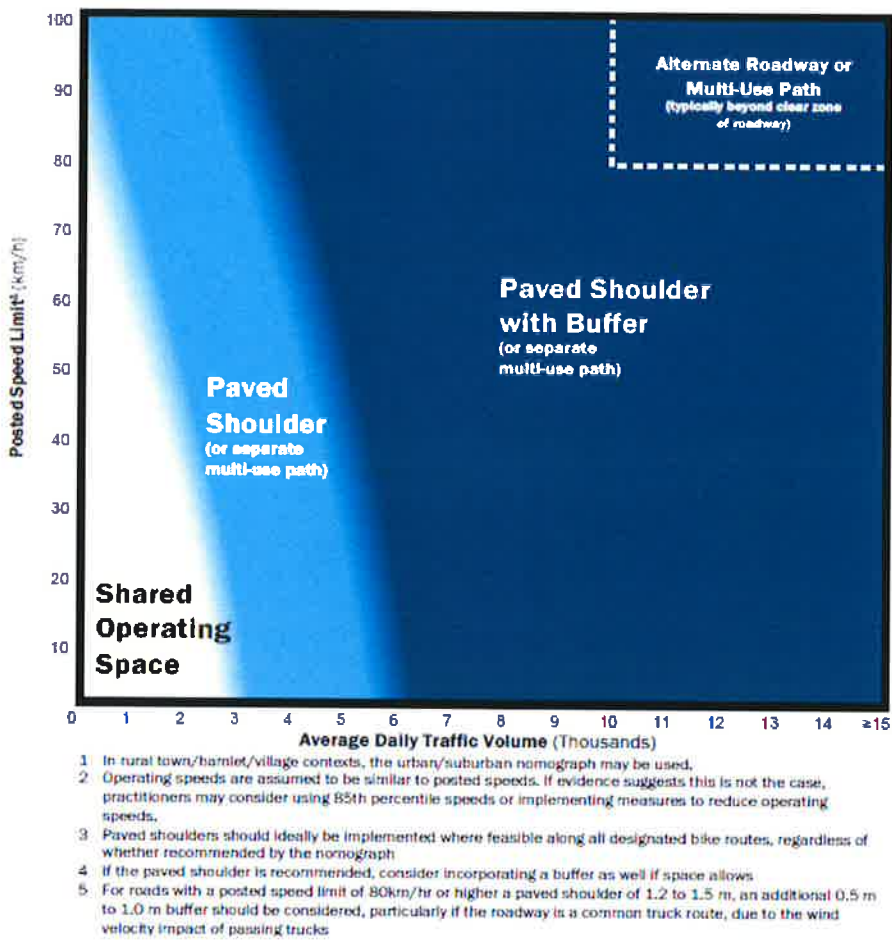


Figure 5.6 – Desirable Cycling Facility Pre-selection Nomograph — Rural Context

- 1 In rural town/hamlet/village contexts, the urban/suburban nomograph may be used.
- 2 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.
- 3 Paved shoulders should ideally be implemented where feasible along all designated bike routes, regardless of whether recommended by the nomograph.
- 4 If the paved shoulder is recommended, consider incorporating a buffer as well if space allows.
- 5 For roads with a posted speed limit of 80km/hr or higher a paved shoulder of 1.2 to 1.5 m, an additional 0.5 m to 1.0 m buffer should be considered, particularly if the roadway is a common truck route, due to the wind velocity impact of passing trucks.

Table 5.3 – Roadway Characteristics Application Heuristics Summary

	Shared Roadway	Neighbourhood Bikeway	Rural Paved Shoulder	Advisory Bicycle Lane	Bicycle Lane	Buffered Bicycle Lane	Separated Bicycle Lane	Cycle Track	Multi-Use Path
Motor vehicle speed									
30 km/h or less	✓	✓	?	?					
40 km/h	?	?	?	✓	✓	✓	✓	✓	✓
50 km/h			?	✓	✓	✓	✓	✓	✓
60 km/h			?			?	✓	✓	✓
70 to 90 km/h			?					✓	✓
Over 90 km/h								✓	✓
Motor vehicle volumes									
<1,500 vehicles/day	✓	✓	?	?	?	?			
1,500 to 3,000 vpd	?	?	?	✓	✓	✓	✓	✓	✓
3,000 to 6,000 vpd			?	?	?	?	✓	✓	✓
6,000 to 10,000 vpd			?				✓	✓	✓
>10,000 vpd							?	✓	✓
Function of street/road/highway									
Access roads (local streets)	✓	✓	✓	?	?	?			
Both mobility and access roads (minor collectors)			?	?	✓	✓	✓	✓	✓
Mobility roads (major collectors and arterials)			?		?	?	✓	✓	✓
Vehicle mix									
More than 30 trucks/buses per hour in curb lane			?			?	✓	✓	✓
Bus stops located along route			?		?	?	✓	✓	✓
Pedestrian activity									
Low pedestrian volumes	✓	✓	✓	✓	✓	✓	✓	✓	✓
High pedestrian volumes	✓	✓		✓	✓	✓	✓	✓	?
On-street parking									
Parallel parking; low turnover	?	?		?	?	?	✓	✓	✓
Parallel parking; high turnover							✓	✓	✓
Perpendicular or angle parking							✓	✓	✓
Frequency of intersections and crossings									
Limited intersections and driveway crossings	?	?	✓	✓	✓	✓	✓	✓	✓
Low-volume driveways or unsignalized intersections	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frequent high-volume driveways or unsignalized intersections					?	?	✓	✓	?
Signalized intersections with high-volume turning conflicts						?	✓	✓	?
✓	Typically appropriate for the context								
?	Requires further context specific evaluation								

Tool to inform the completion of Step 5 of the process (project phasing)

The identification of project phasing is dependent on a number of factors that are continually changing and evolving based on external decisions made by staff in other municipal departments, decision makers and partners. For the purposes of the ATMP, phasing has been identified in a corridor by corridor basis and not by individual project. The phasing assumes a project initiation date as opposed to completion date which can at times be years beyond the horizon identified.

Phasing has been identified in three horizons:

- short (0-5 years)
- medium (6-10 years)
- long (10-20 years)

To support the identification of project phasing; the project team considered two factors. The complexity of the project i.e. the amount of impact / intervention that would be needed on the current roadway conditions and context to facilitate the implementation of the proposed facility. The community need / interests as documented through our engagement program and prior input received through municipal projects. Both factors were assessed on a high, moderate or low scale and based on the combination of factors an initial phasing recommendation was made. Changes to the preliminary recommendation occurred if the corridor had been identified as part of an existing capital project within an alternate horizon and / or if there is planned development occurring which would impact the timeline and funding opportunities for the proposed project.

The following is a matrix of assessment that was completed and used to inform the identification of corridor phasing.

		Complexity		
		High	Moderate	Low
Community Interest	High	M	S	S
	Moderate	L	M	S
	Low	L	L	M

Confirmed ATMP Recommendations

Date updated: 07.26.23; Updated by: C. Basinski



Indicates a priority recommendation as discussed at the task force meeting; critical to the success of the ATMP

Immediate	Internal Single Lead	Could include:	Could include:	Existing	Low	Yes
Recommendations that can be implemented once the plan has been adopted	Implementation will be achieved by one department	- Development Services	- Kawartha TCT - EAB	Effort accommodated by current staff employed by the City where additional effort is required	Low cost and easy to implement with existing budgets	Could be covered by external funding
Alternate Timing	Internal Coordination	- Community Services	- Kawartha Lakes Cycling Club - Local Developers	New Partial	Moderate	No
Recommendations which can be implemented once other initiatives or work has been completed	Implementation will be achieved by departments in coordination	- Engineering & Corporate Assets	- HKPRD Health Unit - Kawartha Tourism	out of the context of the current staff roles but could be undertaken by partial existing staff	Moderate cost with some new monies required	No potential and/ or need for external funding coverage
Requires Investigation	External	- Public Works	- Ontario by Bikes - School Boards	New Full	High	Partial
Recommendation which require additional research/review to be undertaken to confirm next steps	Implementation will require internal and external support	- Corporate Services		Out of the context of current staff and would require new staff to fulfill role	High degree of effort associated with the project with new budget required	May be able to acquire some funding for the recommendation

Network

	Revised / Refined Recommendation	Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
1	The active transportation network is to be used as the blueprint for the identification and design of on-road active transportation infrastructure with a focus on safe and comfortable connectivity between and around communities.		Internal Coordination	Development Services Community Services Engineering	None	Existing	Low	No
2	The active transportation network is to be integrated and coordinated with the proposed trail projects and focus areas as identified in the City's Trails Master Plan 2022 to achieve seamless network connectivity and design.		Internal Coordination	Development Services Community Services Engineering	None	New Partial	Moderate	No
3	An assessment of parking needs within the built-up area is to be undertaken and where demand is not demonstrated, consideration should be given to reallocating the space to accommodate active transportation infrastructure.		Internal Coordination	Development Services Engineering	None	New Partial	Low to High	No

Guidelines

	Revised / Refined Recommendation	Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
4	The design guidance provided in the ATMP as well as other provincially accepted design guidelines such as OTM Book 18 will be used as the primary reference for all AT infrastructure include road retrofits and new developments.		Internal Coordination	Development Services Engineering	None	Existing	Low	No
5	Development standards are to be amended to reflect acceptable active transportation facility design standards including the accommodation of both pedestrian and cycling infrastructure on all major arterials and collectors (1.5m minimum sidewalk on both sides and appropriate cycling infrastructure as per OTM Book 18).		Internal Single Lead	Development Services	None	Existing	Low to Moderate	No
6	Where the desired active transportation infrastructure cannot be accommodated along the proposed corridor, traffic calming treatments and speed reducing to a minimum of 40km/h are to be implemented to improve active transportation conditions.		Internal Coordination	Development Services Engineering	None	Existing	Low to Moderate	No
7	The proposed ATMP routing and design solutions including recommended speed reductions on select streets should be reviewed in collaboration with the City's public works department with a focus on developing and implementing an urban area speed reduction campaign.		Internal Coordination	Development Services Engineering	None	Existing	Moderate	Partial
8	Bicycle parking is to be implemented at all community destinations that encourage active transportation including libraries, schools, community centres, park spaces, downtown nodes and bicycle hubs. Specific locations and parking alternatives are to be determined based on the guidelines provided in the ATMP.		Internal Coordination	Development Services Community Services	EAB Kawartha Cycling Club	New Partial	Moderate	Partial
9	The selection of preferred and appropriate bicycle parking solutions in locations throughout the City should be guided by the ATMP bicycle parking design guidance as well as best and comparable practices.		Internal Coordination	Development Services Community Services Engineering	EAB Kawartha Cycling Club	New Partial	Moderate	Partial
10	On all rural roadways a min. 1.5 m asphalt shoulder should be provided as part of road rehabilitation and reconstruction projects with a paved shoulder by-law developed and adopted to prioritize future implementation.		Internal Single Lead	Engineering	None	Existing	Low to High	No
11	Within the urban areas of the City, active transportation facilities should be constructed with asphalt or comparable surface treatment at the appropriate minimum width as per Ontario Traffic Manual Book 18 guidance. Sidewalks are to be consistently constructed using a cement treatment at a minimum 1.5m in width.		Internal Single Lead	Engineering	None	Existing	Low to High	No
12	Bicycle repair stations are to be implemented at bicycle hub locations as well as strategic community locations such as schools, downtown nodes and major / minor trailheads as identified through the Trails Master Plan update.		Internal Coordination	Development Services Community Services	None	Existing	Low	Partial

13	Allocate sufficient space to implement bike corral stations within the downtown areas of Lindsay, Bobcaygeon and Fenelon Falls with the opportunity to expand into other communities if demand warrants.		Internal Coordination	Development Services Engineering	None	Existing	Low to Moderate	Partial
14	When active transportation routes and facilities are being implemented or intersections are being reviewed by City staff, every effort should be made to implement crossing enhancements that accommodate pedestrians and cyclists in a safe and comfortable manner consistent with OTM Book 15 and 12.		Internal Coordination	Development Services Engineering	None	Existing	Low to Moderate	No
15	When confirming the preferred design solution for active transportation projects long primary corridors, every effort should be made to design a fully separated facility as per the options and alternatives outlined Ontario Traffic Manual Book 18 and considerate of the context specific conditions.		Internal Coordination	Development Services Engineering	None	New Partial	Moderate	No

Policies

Revised / Refined Recommendation		Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
16	A traffic calming policy is to be developed for both the urban and rural areas of the City and adopted through the City's transportation master plan to complement the ATMP network		Internal Coordination	Development Services Engineering	None	Existing	Low to Moderate	No
17	The active transportation network as adopted in the 2023 Active Transportation Master Plan is to be incorporated as a schedule as part of the City's Official Plan along with the necessary policy supports to ensure that the ATMP recommendations are reflected in higher level policy		Internal Coordination	Development Services	None	Existing	Moderate	No
18	The active transportation network as adopted in the 2023 Active Transportation Master Plan is to be acknowledged and incorporated into the City's Transportation Master Plan with consistent recommendations or additional information to support and facilitate the implementation of traffic calming and similar road conditions features.		Internal Coordination	Development Services Engineering	None	Existing	Low	No
19	Where possible, site plan requirements should include the consideration of and design for active transportation users with a focus on strategic place making within parking lots and in between buildings		Internal Coordination	Development Services Community Services Engineering	Local Developers	Existing	Low	No
20	Applicable municipal guidelines, standards, and bylaws are to be reviewed and amended / updated to reflect the policy framework and suggested revisions as identified within the Active Transportation Master Plan		Internal Coordination	Development Services Community Services Public Works	None	Existing	Low	No
21	Develop and adopt a complete streets policy or guide as they review and adapt road classifications to reflect changes in land use patterns and growth.		Internal Coordination	Development Services Engineering	None	New Partial	Low to Moderate	No
22	Emerging and complex policy topics such as e-mobility should continued to be monitored and discussed by the City and its partners to continually adapt and address policy concerns and opportunities.		External Coordination	Development Services	EAB Kawartha Lakes Cycling Club Kawartha Public Health	Existing	Low	No

Implementation

	Revised / Refined Recommendation	Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
23	Implementation of the AT network is to be monitored and updated relative to new development opportunities to ensure that the development approvals and site plan approval process incorporate active transportation features to the fullest extent possible.		Internal Single Lead	Development Services	Local Developers	Existing	Low to Moderate	No
24	Planning and development are responsible for the coordination of the active transportation master plan and will meet annually with representatives from the community services department and public works to ensure that there is sufficient coordination between the functional transportation plans adopted by the City.		Internal Coordination	Development Services Engineering Public Works Community Services	None	Existing	Low to High	Partial
25	On an annual basis, seek the input of ATMP partners - as outlined in the partnership strategy - to discuss active transportation infrastructure, programming and maintenance priorities.		External	Development Services	Kawartha TCT EAB Kawartha Lakes cycling Club Kawartha Public Health Kawartha Tourism School Boards	New Partial	Low	No
26	Active transportation priorities will be reviewed on an annual basis to determine which projects and programs are to proceed to implementation. Status updates and project recommendations will be summarized in an annual report to Council which will go forward at the same time as the report prepared for the trails master plan.		Internal Coordination	Development Services Engineering Public Works Community Services	None	New Partial	Low	No
27	A dedicated staff person should be identified to support and coordinated the implementation of the ATMP starting with an existing staff member and expanding to 1.0 additional FTE in year two. Depending on the level of effort required to implement the plan this may increase to 1.5-2.0 FTE based on future assessment of need.		Internal Single Lead	Engineering Development Services	None	New Full	Moderate	No
28	A partnership strategy will be implemented to support and facility the implementation of the ATMP based on the guidance provided within the ATMP document related to appropriate roles and responsibilities		External	Development Services	Kawartha Lakes Cycling Club Local Developers EAB Kawartha Tourism Ontario by bike School Boards	New Partial	Low to Moderate	No
29	Partnerships with key stakeholders and organizations that are in alignment with or support of active transportation should continue to be supported as part of enhanced community outreach.		External	Development Services	Kawartha Lakes Cycling Club Local Developers EAB Kawartha Tourism Ontario by bike School Boards	New Partial	Low to Moderate	No
30	Within the Engineering capital budget a line item of \$500,000 be identified for the implementation of active transportation projects in addition to exploring external funding opportunities as provided within the ATMP		Internal Single Lead	Engineering	None	New Partial	Low to High	Partial
31	Within the Public Works division operations budget, the line item for maintenance will be increased to \$200,000 with appropriate increases to the budget per annum based on km implemented.		Internal Single Lead	Public Works	None	Existing	Low to High	Partial
32	Within the Planning and Development Division capital budget a line item of \$50,000 be identified for the implementation AT related education and encouragement strategies with the potential to increase to \$100,000		Internal Single Lead	Development Services	None	Existing	Moderate	Partial
33	Municipal staff should annually explore external funding options and alternatives at the federal and provincial level to determine if there are opportunities to secure monies to support the implementation of the ATMP beyond municipal monies.		Internal Single Lead	Development Services Engineering	None	New Partial	Low	Yes
34	Donations to support the implementation of the ATMP should be encouraged from community groups and members with the potential for a dedicated account to monitor and track annual donations aligned with municipal planning and budget decision making		External	Development Services	External partners will be determined based on the interest of private entities	New Full	Low	No
35	The proposed phasing strategy as identified in the ATMP is to be used as the primary reference by City staff to determine annual active transportation projects and priorities and is to be reviewed and updated every 5 years.		Internal Coordination	Development Services Engineering Community Services	None	New Partial	Low	No

Programming

Revised / Refined Recommendation		Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
36	Provide additional support and maintenance of the existing Bike Share program within the City's urban and built-up areas in partnership with the community groups and external organizations that are responsible for implementation and management.		External	Development Services Corporate Services	Kawartha TCT EAB Kawartha Tourism Kawartha Lakes cycling Club	New Partial	Low to Moderate	Partial
37	The Planning and Development division will support the implementation and coordination of AT related education and outreach programs based on the recommended educational strategy outline within the ATMP		External	Development Services Community Services Corporate Services	Kawartha TCT EAB Kawartha Tourism Kawartha Lakes cycling Club School Boards	New Partial	Low to Moderate	Partial
38	Programming will be developed and implemented based on a series of target audiences, including a focus on youth and seniors to support a greater degree of culture shift towards active modes.		External	Development Services Community Services	Kawartha TCT EAB Kawartha Tourism Kawartha Lakes cycling Club School Boards	New Partial	Low to High	Partial
39	Active Transportation promotional materials including hard copy mapping are to be updated on an annual or bi-annual basis to accurately reflect the existing active transportation facilities including coordination with the Parks and Recreation department to ensure both on and off-road opportunities are reflected		Internal Coordination	Development Services Corporate Services Engineering Public Works	None	New Partial	Low to Moderate	Partial
40	The interactive online mapping system should be updated to reflect the existing active transportation and trails network and should continually be monitored and updated as projects are implemented or conditions change to ensure accuracy of information.		Internal Coordination	Development Services Corporate Services Engineering Community Services	None	Existing	Low	No
41	A comprehensive wayfinding and signage strategy - that is integrated with the Trails Master Plan Update - should be undertaken by the City based on the loop routes identified by Kawartha Tourism and routing confirmed through the ATMP with a focus on the built-up areas		Internal Coordination	Development Services Community Services Engineering Public Works	Kawartha TCT EAB Kawartha Tourism Kawartha Lakes cycling Club	New Partial	Moderate to High	Partial
42	An expansion to the Bicycle Friendly Businesses Program should be explored in partnership with Ontario by Bike and local businesses		External	Development Services Community Services	Ontario by Bikes Local Businesses	New Partial	Low	No
43	Explore acquiring a Bicycle and / or Walk Friendly Community designation in partnership with Share the Road Cycling Coalition and other applicable organizations		External	All Municipal Departments	Share the Road Cycling Coalition	Existing	Low	No
44	Support the development of active and safe routes to school programs based on the framework provided in the ATMP with the intent of having one pilot program launched within the first year of ATMP implementation.		External	Development Services	School Boards Kawartha Lakes Public Health	Existing	Low to Moderate	Partial
45	The programs and outreach strategies as identified in the ATMP are to be reviewed and prioritized by Planning and Development in partnership with Parks and Recreation with a minimum of one initiative being undertaken each year in collaboration with local agencies (including but not limited to public health), stakeholders and interests groups.		External	Development Services Community Services Corporate Services	Kawartha TCT EAB Kawartha Tourism Kawartha Lakes cycling Club	Existing	Low to High	Partial

Monitoring

Revised / Refined Recommendation		Timeline	Implementation Leadership	Internal Impact	External Impact	Staffing Resources	Money Resources	External Funding Opportunities
46	The Active Transportation Master Plan is to be revisited every 5 years and a report generated on the status of implementation and priorities for the next 5 years		Internal Coordination	Development Services Engineering Public Works Community Services	Strategic integration of stakeholders as part of an engagement process to inform the update where appropriate.	Existing	Moderate	Partial
47	The proposed active transportation network is to be reviewed on an annual basis to determine if there are any updates needed such as additional connections or opportunities that are no longer considered feasible		Internal Coordination	Development Services Engineering Public Works Community Services	None	Existing	Low	No
48	Undertake bi-annual walkability audits to inform sidewalk gap identification and the recommendation of local amenities to improve walkability Based on the confirmed framework identified through the ATMP		Internal Single Lead	Development Services	Kawartha ATMP Taskforce	Existing	Low	Partial
49	Ensure that there is appropriate understanding of the current guidelines and practices relative to active transportation by undertaking annual or bi-annual training provided by Ontario Traffic Council or other relevant organizations.		Internal Coordination	Development Services Engineering Public Works Community Services	None	Existing	Low	No
50	Utilize the minimum maintenance standards as the primary reference for the maintenance of active transportation facilities with additional consideration for the seasonal maintenance practices outline within the ATMP.		Internal Coordination	Public Works Community Services	None	Existing	Low to Moderate	No
51	Review the online reporting tool to ensure that the maintenance issues portal can accommodate active transportation related issues or maintenance requests in a way that appropriately documents the issues.		Internal Coordination	Corporate Services Public Works	NOne	New Partial	Low to Moderate	No
52	Sidewalk maintenance should be a focus to improve and enhance the maintenance practices prioritizing the maintenance of sidewalks on primary corridors and connections to the trial system.		Internal Coordination	Development Services Public Works	None	Partial New	Moderate to High	No
53	Consider the primary routes identified as part of the ATMP network for enhanced winter maintenance based on the maintenance practices identified within the ATMP.		Internal Single Lead	Public Works	None	New Partial	Moderate	Partial
54	Unsafe active transportation (walking and cycling) practices are to be monitored and managed through an integrated enforcement program led by the City in collaboration with OPP and appropriate community partners.		Internal Coordination	Public Works Corporate Services	OPP	New Full	High	Partial
55	The existing Kawartha Lakes touring cycling routes should continue to be monitored and when appropriate updated based on public and stakeholder input if they are not identified as part of the ATMP network.		Internal Coordination	Public Works Engineering	Kawartha TCT	New Partial	Moderate to High	Partial