

# TOWN OF OAKVILLE ACTIVE TRANSPORTATION MASTER PLAN (ATMP)

FINAL REPORT | NOVEMBER 2017

**wsp** + GLENN POTHIER (GLPi)





## TABLE OF CONTENTS

SECTION 1.0 Introduction .....	1
1.1 About the Plan .....	1
1.2 Why an Updated Plan? .....	2
1.3 Benefits of Active Transportation .....	2
1.4 Study Process .....	4
1.5 Vision & Objectives .....	5
SECTION 2.0 About Oakville .....	7
2.1 Community Profile.....	7
2.1.1 Existing Trends .....	10
2.1.2 Comparing Oakville .....	16
2.2 Existing Policies & Initiatives .....	18
2.2.1 Policies.....	18
2.2.2 Programs & Initiatives .....	19
2.3 What you told us.....	20
2.3.1 The Audiences.....	21
2.3.2 The Activities.....	22
2.3.3 Key Themes & Input .....	24
2.4 Opportunities and Challenges.....	25

SECTION 3.0 Oakville’s Active Transportation Network .. 27

3.1 Developing the Active Transportation Network ..... 28  
3.2 Oakville’s Active Transportation Network ..... 39  
3.3 Designing the Active Transportation Network ..... 41

SECTION 4.0 Outreach & Partnerships ..... 43

4.1 Understanding the Audiences ..... 44  
4.2 Elements of a Successful Outreach Program ..... 45  
4.3 A Proposed Outreach Program for Oakville..... 47

SECTION 5.0 Implementation ..... 51

5.1 Implementation Timeline ..... 52  
    5.1.1 How was the Phasing Plan Developed? ..... 52  
    5.1.2 Network Phasing Plan..... 53  
    5.1.3 Priority Projects..... 55  
    5.1.4 Outreach Strategy Implementation ..... 57  
5.2 Implementation Processes & Tools ..... 58  
    5.2.1 The Implementation Process..... 58  
    5.2.2 Municipal Class EA Process..... 59  
    5.2.3 Roles and Responsibilities ..... 61  
    5.2.4 Network Management Tools ..... 65  
5.3 Operation & Maintenance..... 67  
    5.3.1 What are the standards? ..... 68  
    5.3.2 What is being done in Oakville?..... 69  
    5.3.3 Future Considerations ..... 71

5.4 Monitoring & Evaluation .....	74
5.4.1 What are the standards? .....	75
5.4.2 What is being done in Oakville?.....	76
5.4.3 Future Considerations .....	77
5.5 Risk Management & Liability .....	78
5.6 Development Application Review Considerations .....	79
5.7 The Investment.....	84
5.7.1 How was the ATMP Update costed? .....	84
5.7.2 How will it be funded? .....	85
5.7.3 How much will it cost? .....	88
5.8 Conclusions & Summary of Recommendations.....	90

## ACKNOWLEDGEMENTS

We would like to thank the members of the public who gave their time and energy in the development of the Town of Oakville Active Transportation Master Plan, especially those who participated in the public meetings, completed the online survey, and the many others who provided written or verbal input to the study team.

On behalf of the study team and all those who contributed to this Master Plan, it is our hope that the Oakville Active Transportation Master Plan provides the Town and its partners with the tools and guidance necessary to improve conditions for active transportation and thus take a significant step forward in becoming the “Most Livable Town in Canada”.

## LIST OF FIGURES

Figure 1 - ATMP Update Development Process .....	4
Figure 2 - Sample of Strava Data: Total Cycling Activity .....	11
Figure 3 - Sample of Strava Data: Intersection Wait Times .....	11
Figure 4 - Average Walking Trips per Day.....	13
Figure 5 - Walkability Analysis.....	13
Figure 6 - Average Cycling Trips per Day .....	13
Figure 7 - Bikeability Analysis .....	13
Figure 8 - Overview of Background Policies Reviewed.....	18
Figure 9 - Oakville Active Transportation Network Development Process.....	28
Figure 10 - Overview of the Three-Step Facility Selection Process.....	33
Figure 11 - Candidate revisions to the active transportation network.....	34
Figure 12 - Inventory of Waypoints and Photos taken during Field Investigations .....	36
Figure 13 - Overview of Proposed Facility Types.....	40
Figure 14 - ATMP Update Implementation Process .....	58
Figure 15 - ATMP Reporting Structure.....	61

## LIST OF TABLES

Table 1 - Best Practices Review.....	16
Table 2 - Overview of Existing and Proposed Facility Types.....	39
Table 3 - Overview of Outreach Approach.....	46
Table 4 - Proposed Outreach Initiatives.....	48
Table 5 – Summary of Proposed Facility Types by Phase <sup>1</sup> .....	54
Table 6 - Proposed Short-Term Priorities.....	56
Table 7 - Internal Town Roles and Responsibilities .....	62
Table 8 - Overview of Potential Partners & Potential Roles .....	63
Table 9 - Estimated Active Transportation Network Maintenance Costs .....	72
Table 10 - Summary of Municipal Performance Measures.....	75
Table 11 – Supporting studies and materials with active transportation implications .....	79
Table 12 - Estimated Cost to implement the Oakville ATMP <sup>1</sup> .....	88

## LIST OF MAPS

- Map 1 – Existing and Previously Proposed Pedestrian Conditions
- Map 2 – Existing and Previously Proposed Cycling Conditions
- Map 3 – Existing, Previously Proposed and Candidate Pedestrian Routes
- Map 4 – Existing, Previously Proposed and Candidate Cycling Routes
- Map 5 – Proposed Active Transportation Route Hierarchy
- Map 6 – Recommended Pedestrian Facility Types
- Map 7 – Recommended Cycling Facility Types
- Map 8 – Proposed Pedestrian Network Phasing
- Map 9 – Proposed Cycling Network Phasing

## LIST OF APPENDICES

- Technical Appendix A – Existing Active Transportation Trends
- Technical Appendix B – Policy Reviews
- Technical Appendix C – Existing Programs and Initiatives
- Technical Appendix D – Consultation Summary
- Technical Appendix E – Design Guidelines
- Technical Appendix F – Target Audiences
- Technical Appendix G – Proposed Outreach Programs
- Technical Appendix H – Implementation Process
- Technical Appendix I – Implementation Tracking Tool
- Technical Appendix J – Performance Measures
- Technical Appendix K – Halton Region Active Transportation Network & Road Capital Projects





# SECTION 1.0

## Introduction

### 1.1 About the Plan

This Active Transportation Master Plan (ATMP) Update was developed for the residents of the Town of Oakville. Active transportation (AT) is part of the town's strategic vision to be the most livable town in Canada. To support this vision, the ATMP Update provides a blueprint for improving walking and cycling infrastructure, programs and initiatives over the next 20 years. This plan was developed to provide town staff and its partners with the tools, policies and guidelines necessary to influence the health and quality of life of its residents and provide a desirable community for visitors.

In March 2016, the Town of Oakville retained a consultant team led by WSP | MMM Group and facilitator Glenn Pothier (GLPi) to update the original 2009 Active Transportation Master Plan.

Together with town staff, stakeholders and residents, an updated ATMP was prepared to reflect the growth that has occurred within Oakville since 2009. The ATMP Update identifies short and long-term actions and recommendations to improve active transportation in Oakville. The ATMP Update builds on the momentum generated as a result of the 2009 ATMP to promote walking and cycling as a viable transportation mode. Implementation of the ATMP should be coordinated and collaborative. The ATMP provides a consistent approach to decision making based on best current practices, previous work completed, input collected from residents and stakeholders and sound engineering judgment. The ATMP establishes the context for the plan and presents network, phasing and supportive recommendations for the town's consideration.

## 1.2 Why an Updated Plan?

### The 2009 Plan?

Oakville's first Active Transportation Master Plan was developed in 2009 and has guided the town in its efforts to improve walking and cycling. The 2009 plan was initiated following recommendations in earlier municipal policy documents to support sustainable transportation and improve active infrastructure. The objective of the 2009 plan was to identify short and long term actions to establish a desired level of walking and cycling for the town and its residents. A set of recommendations related to outreach, infrastructure and implementation were included in the ATMP as a means of supporting and shaping future decision-making in Oakville.

### The 2017 Plan?

Almost eight years have passed and the Town of Oakville has achieved great progress improving active transportation infrastructure, policies and programs. Since adoption, a total of 185 kilometres of on and off-road active transportation routes have been implemented throughout Oakville. The town was recognized as a bike friendly community in 2013 and 2016 (Bronze). Staff, residents, stakeholders and decision makers understand the importance and influence of active living on the overall quality of life of residents. The 2017 update is not intended to "reinvent the wheel" – it is intended to build upon the successes achieved by the town. It is meant to review and revise the network and implementation strategy to ensure that what is being recommended achieves the desired outcomes of the town over the next 10 to 20 years.

## WHY UPDATE?

The ATMP has been updated to respond to current community trends, emerging design guidelines, supportive legislation and best practices. The information contained in the ATMP Update includes strategies for continued progress and success that include implementing hard infrastructure and address actions for outreach and programming. The ATMP Update is a strategy and action plan that supports decision-making related to the implementation of active transportation supportive programs, initiatives and infrastructure in Oakville and compliments the town's Transportation Master Plan and Official Plan.

## 1.3 Benefits of Active Transportation

Research shows that building a business case demonstrates the benefits of a more active lifestyle and can help influence future commitments and priorities. Investing and promoting active transportation as a viable form of transportation can generate numerous benefits throughout the town. The following is a high-level overview of some of the potential benefits that can be achieved if investments in active transportation continue to be made.



**Social:** Cycling and walking bring people together. Either can be a group activity, and both have been shown to establish community good-will and involvement by generating a common goal.



**Safety:** Research shows that as there are more cyclists on the road, motorists become more aware of how to interact with them. Cyclists tend to feel more comfortable if there are other cyclists on the road which make them more likely to cycle – safety in numbers.



**Health:** People who are inactive are at significant risk of cardiovascular disease, diabetes, cancer, hypertension, bone and joint disease and depression. Cycling and walking to destinations can provide the recommended daily physical activity while decreasing the risk of developing or the progression of chronic diseases.



**Environment:** One litre of gas emits about 2.3kg of carbon dioxide when burned. Green House Gases (GHG) is one of the primary contributors to climate change. Transportation is a major contributor accounting for approximately one third of Ontario's GHG emissions. Cycling and walking emit no GHGs.



**Tourism:** Cycling tourism is growing in Ontario at a fast rate. Research completed in 2010 indicates that over two million visitors went cycling while on their trip and spent approximately \$391 Million; an 18% increase in cycling tourism spending from 2009.



**Economic:** There are a number of economic benefits such as increased home values, lower personal transportation costs, return investment and employment. The capital cost to implement most active transportation infrastructure is far less than widening a road and more trips can be accommodated in less space.

## 1.4 Study Process

The ATMP Update was developed between March 2016 and June 2017. The process included three phases, each informed by resident, staff and stakeholder input. The process was also shaped by current best practices and lessons learned from the previous plan as well as from comparable municipalities. **Figure 1** provides an overview of the study phases and objectives.

The approach used to update the ATMP was consistent with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment master planning process including the assessment of potential alternatives, the selection of preferred options and consultation with members of the public.

Effective consultation and engagement was one of the primary study goals, and opportunities were provided at the outset of the study, maintained over the course of the development of the update, and initiated at key project milestones. The input gathered over the course of the study was documented and assessed to inform recommendations, policies, priorities and strategies. More details on the consultation program and input received are provided in **section 2.0**.

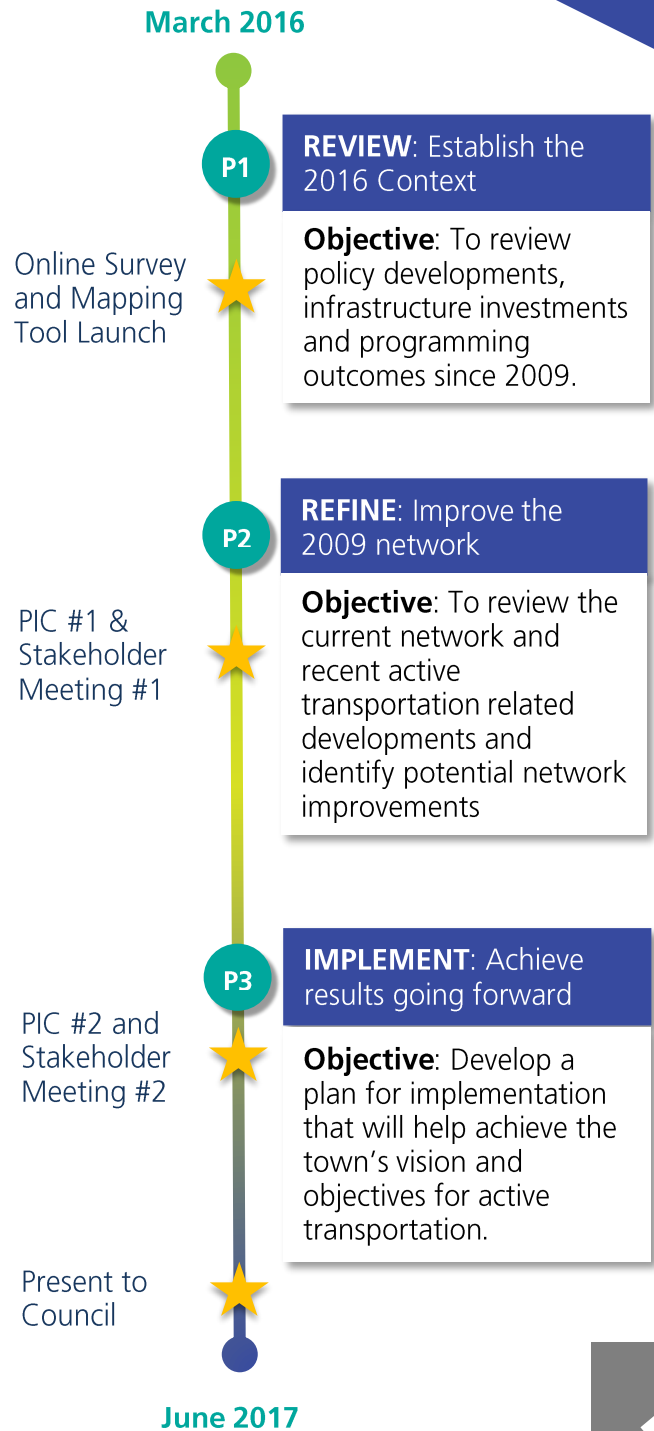


Figure 1 - ATMP Update Development Process

## 1.5 Vision & Objectives

The ATMP Update is guided by a high-level vision that reflects the town's priorities and on-going commitment to active transportation. A vision was developed for the original plan to guide the development of policies, programs and infrastructure, and to echo Oakville's strategic vision to become the most livable town in Canada. Through discussions with staff and stakeholders, it was confirmed this vision is still reflective of the desired active transportation outcomes of the community. As such, the previous vision was maintained within this ATMP update.















The Town of Oakville is a pedestrian and cycling supportive community that encourages active transportation for both utilitarian and recreational travel through:

- » Encouraging that every street **accommodates pedestrians and cyclists;**
- » Established **promotional and educational policies and programs** including a coordinated marketing strategy to encourage active transportation year-round;
- » A Town-wide **visible and connected active transportation network of on-road and off-road facilities** designed with safety in mind that are comfortable, convenient and accommodate the needs of existing and future users; and
- » **Approved Official Plan policies** and associated strategies that recognize that great places require **pedestrian and cycling friendly land development** and **streetscape design** that supports the Town of Oakville's vision to become the most livable Town in Canada."

2009

2017

The vision is supported by seven objectives. The objectives are more specific statements that are intended to be used to achieve the active transportation vision and have been used to identify policies, recommendations and actions recommended in this master plan. The seven core objectives are presented below.

-   Identify a comprehensive network that builds on the 2009 ATMP.
-   Develop a continuous system that provides connectivity.
-   Identify facility types consistent with current guidelines and accommodating all users.
-   Identify a realistic implementation strategy that provides tools to the town.
-   Identify priority projects and actions in the short and long-term.
-   Increase awareness and support for active transportation through education.
-   Confirm performance targets and monitoring tools.

# SECTION 2.0

## About Oakville

### 2.1 Community Profile

The Town of Oakville is growing and changing. It is important to understand the local context and establish an understanding of the social, demographic, economic and transportation characteristics – a community profile. Establishing a community profile helps to shape the master plan recommendations and ensures the strategies contained in the master plan are specific to the town and its residents. A scan of socio-demographic and transportation information for the town was completed to understand the current conditions and influences which form the Town of Oakville’s community profile. The community profile for Oakville was developed using the following data sources.

**Census Data:** Conducted in May 2011, it asked respondents to provide information on their age, marital status and language. The results provide socio-demographic information across Canada.

**National Household Survey (NHS):** The NHS was conducted between May and August 2011 and included 64 questions. The survey asked respondents to provide information on immigration, education, labour, mobility, income and housing.

**Transportation Tomorrow Survey 2011:** The survey is conducted every 5 years to collection information on travel trends in southern Ontario. TTS data topics include: trip purpose, mode of travel, median trip length and time period travelled.

**ATMP Update Survey (2016):** The online survey included 31 questions and collected socio-demographic and travel information from town residents. The survey was organized into two components – a cycling survey and a pedestrian survey.

# TOWN OF OAKVILLE | ACTIVE TRANSPORTATION MASTER PLAN

Key findings that form the community profile are presented below and on the following page.

182,520

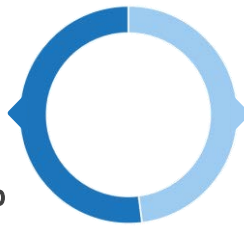


POPULATION  
IN 2011

Source: Census Data 2011



52%

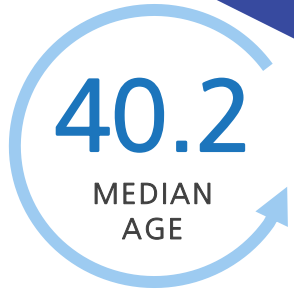


48%

Source: Census Data 2011

40.2

MEDIAN  
AGE



Source: Census Data 2011

139 km<sup>2</sup>



POPULATION DENSITY

Source: Census Data 2011



3.2

AVERAGE PERSONS  
IN HOUSEHOLD

Source: Census Data 2011



2.7

DAILY TRIPS  
PER PERSON

Source: TTS 2011



\$64,952

AVERAGE INCOME PER PERSON

Source: Census Data 2011



93%

EMPLOYMENT RATE

Source: Census Data 2011

## MODE OF TRANSPORTATION TO WORK BY OAKVILLE RESIDENTS



81%

CAR



14%

PUBLIC TRANSIT



3%

WALK



1%

BIKE



1%

OTHER

Source: National Household Survey 2011



26 minutes

MEDIAN COMMUTE TIME

Source: National Household Survey 2011

2

8





## CYCLIST RESPONSES



## PEDESTRIAN RESPONSES

CHOICE OF TRAVEL		
8%	PRIMARY	11%
TRIP FREQUENCY		
21%	DAILY	75%
TRIP PURPOSE		
55%	FITNESS / HEALTH	47%
8%	TO & FROM WORK / SCHOOL	12%
8%	RUN ERRANDS	12%
29%	RECREATION / TOURING	29%
24%	GOING TO SCHOOL	23%
COMFORT LEVEL		
72%	COMFORTABLE OR SOMEWHAT COMFORTABLE	94%
POTENTIAL IMPROVEMENTS		
71%	MORE INFRASTRUCTURE	57%
56%	BETTER CROSSINGS	59%
33%	MORE AMENITIES	29%

Source: ATMP Update Online Survey Results (2016)



**95%**

OF SURVEY RESPONDENTS ARE TOWN RESIDENTS

10 KM

**67%**

TRAVEL LESS THAN 10KM FOR WORK

## 2.1.1 Existing Trends

Data illustrating people's walking and cycling habits and trends can be a valuable tool to inform the development, update or prioritization of infrastructure improvements. Two additional data sets were used to inform the update of the ATMP. The results of these investigations and an overview of how they were used is provided below.

### Strava

In 2014, the town acquired cycling data from Strava to gain a better understanding of current use and trends. Strava is a website and mobile application that allows users to track their activity and travel using GPS technologies. Strava activities can include cycling, running, walking, hiking, etc. Using the data collected, a spatial representation is generated (also referred as heat mapping) based on volume and frequency of routes travelled. The information collected for the town captured cycling activity on roadways and existing trails including total trip counts, trips by time-frames and intersection wait times. A sample of the data collected is presented in **Figure 2**. Routes that experienced a higher volume of cyclists are illustrated in red and routes with lower cycling volumes are illustrated in blue. Results from the Strava data indicate a high volume of cyclists on a number of roads including:

- » Lakeshore Road;
- » Lower Base Line;
- » Sixth Line;
- » Rebecca Street; and
- » Cornwall Road.

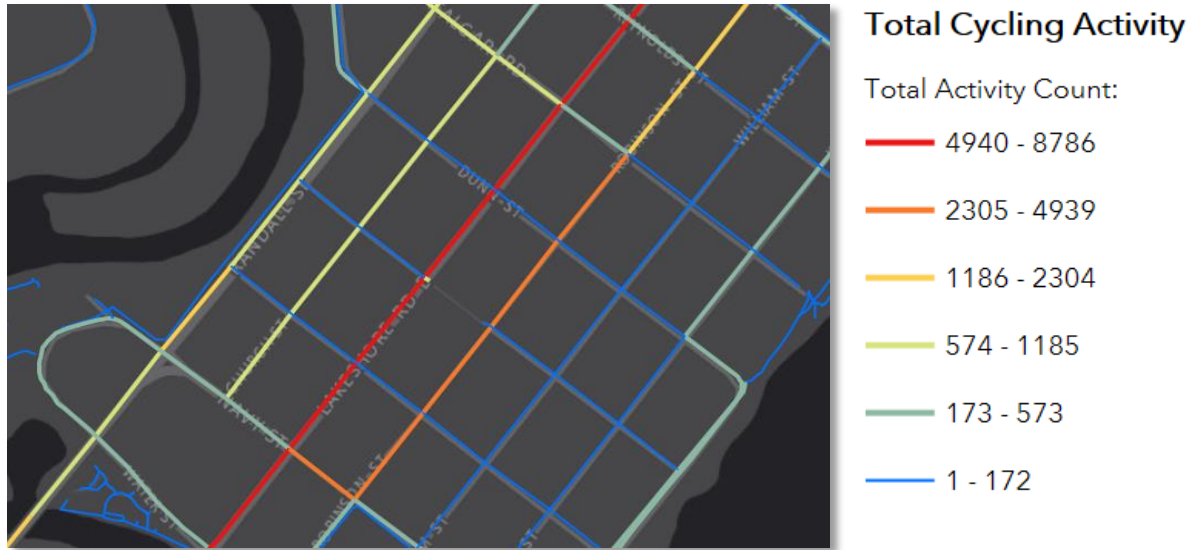
**Figure 3** illustrates a sample of the intersection wait time data. This data is valuable as it provides a snapshot of how bicycle traffic flows at intersections – long wait times over multiple intersections can make it difficult to cross a roadway and create barriers that separate destinations. Results from Strava indicate the following intersections as having the longest wait times:

- » Lower Base Line and Bronte Road;
- » William Street and Reynolds Street;
- » Trafalgar Road and Glenashton Drive;
- » Neyagawa Boulevard and Upper Middle Road;
- » Dorval Road and North Service Road; and
- » Sixth Line and Glenashton Drive.

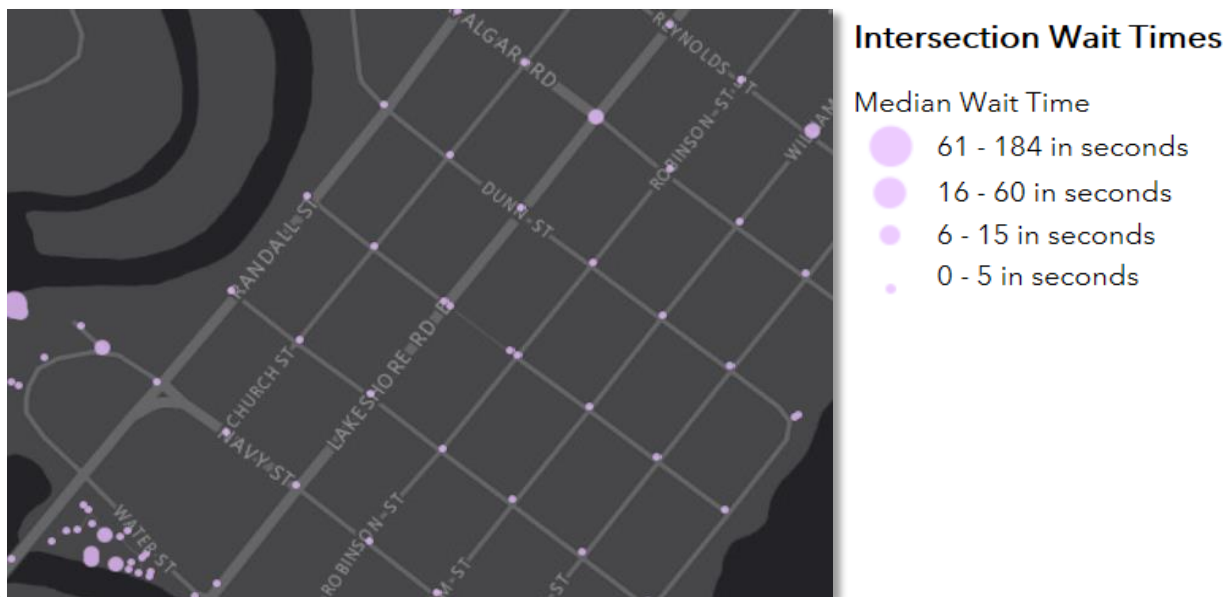
Detailed Strava results are provided in **Technical Appendix A**. Although the data is a helpful tool, it is also a subjective and voluntary representation of activities. Strava is typically used by experienced road cyclists for fitness and health purposes.

As such, it represents a very specific cyclist user group and does not necessarily represent all commuter users, all recreational cycling trips, or other active transportation users such as hikers, walkers, skateboarders, etc. Moving forward, the town will be promoting the use of this application to all residents of varying skill / comfort levels in an effort to gather more data about active transportation routes taken by all users.

**Figure 2 - Sample of Strava Data: Total Cycling Activity between October 2014 and March 2016**



**Figure 3 - Sample of Strava Data: Intersection Wait Times between October 2014 and March 2016**



## Spatial Analysis

Population density, job density and walking / cycling trip origin information was gathered and an analysis was completed to understand the spatial relationship between human behaviour and active transportation trends. The data was gathered from several sources including the Statistics Canada 2011 Census, Town of Oakville Open Data and Environics Analytics. The outcome was a set of maps visually representing the quality of walking and cycling in Oakville and the average trips per day by bike or foot. **Figures 4** and **5** illustrate the outcomes of the walking analysis and **Figures 6** and **7** illustrate the outcomes of the cycling analysis.

**Figures 4** and **6** illustrate the number of walking and cycling trips originating in Oakville. Dark colours indicate high activity and light colours indicate low activity (e.g. heat mapping). Results from the spatial analysis reveal the highest number of walking and cycling trips within:

- » West Oakville, inclusive of the Palermo Village Growth Area (Bronte Road to Third Line and Dundas Street to Upper Middle Road)
- » West Oakville (Third Line to Dorval Drive and the Queen Elizabeth Way to Upper Middle Road)

- » South East Oakville (Morrison Road to Maple Grove Drive and Devon Drive to Lakeshore Road)
- » South West Oakville, inclusive of the Bronte Village Growth Area (Bronte Road to Third Line and Lakeshore Road to Lake Ontario)

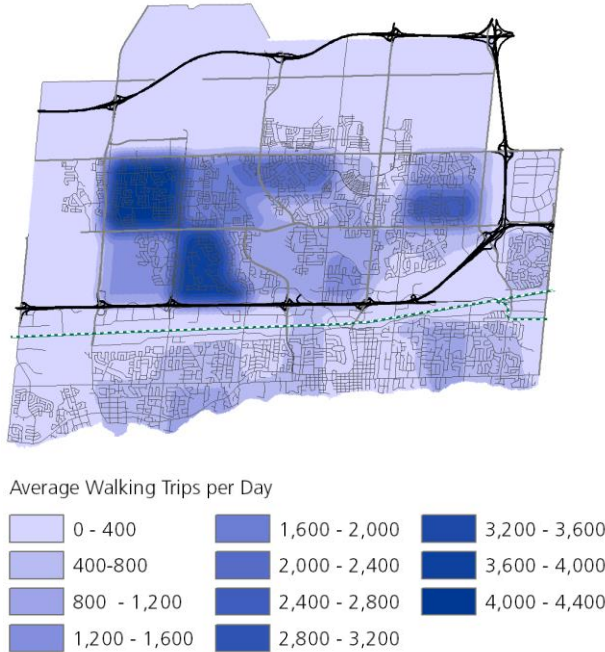
**Figures 5** and **7** illustrate the measure of factors that contribute to the overall walking and cycling quality in Oakville. The indicators used to determine the quality of the town's walking and cycling (i.e. walkability and bikeability) include:

- » Proximity to schools and parks;
- » Number of street trees;
- » Street connectivity;
- » Density and variation of businesses;
- » Density and volume of sidewalks;
- » Slope;
- » Population density; and
- » Density and volume of existing trails and bike routes.

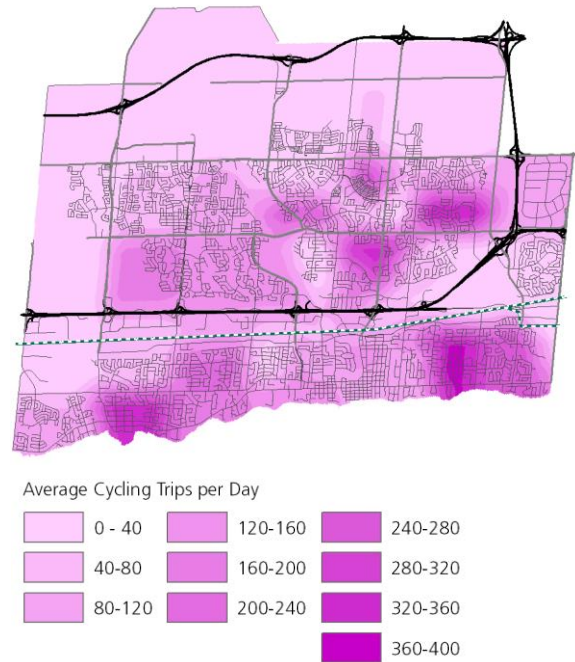
Areas in green indicate a more comfortable or "friendlier" environment for walking and cycling. Red indicates a less desirable area for walking and cycling. Results show that most of Oakville has a high walkability and bikeability score except for locations where there are major physical barriers (e.g. watercourses, valley-lands, highways, etc).

The methodology used to complete the spatial analysis and mapping outcomes is found in **Technical Appendix A**.

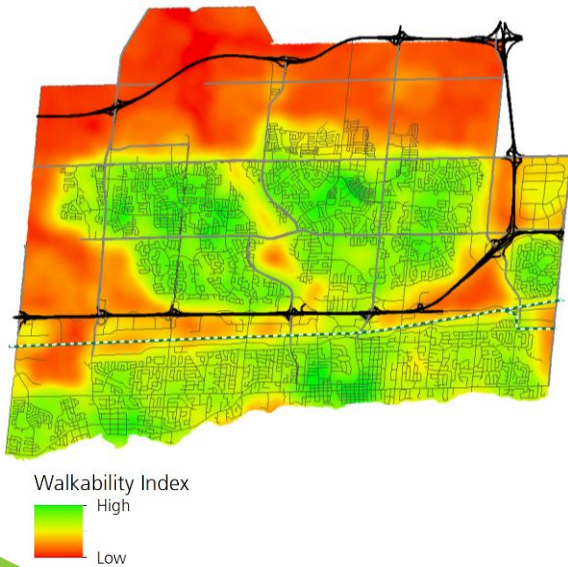
**Figure 4 - Average Walking Trips per Day**



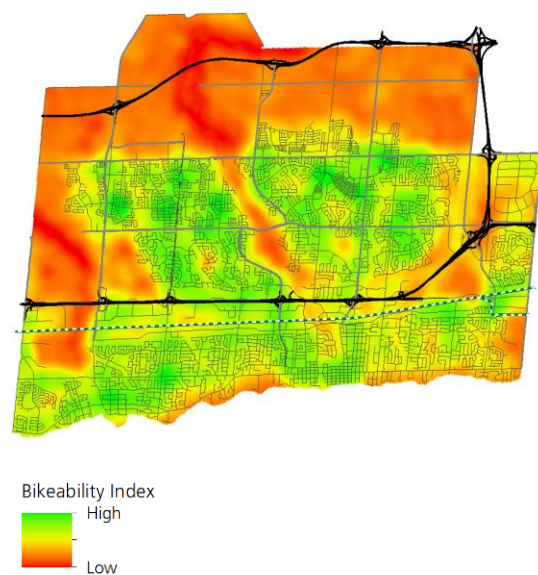
**Figure 6 - Average Cycling Trips per Day**



**Figure 5 - Walkability Analysis**



**Figure 7 - Bikeability Analysis**



## How was the analysis used?

To establish a more detailed understanding of the local context it is important to investigate and analyze current trends and future opportunities that could support active transportation. The findings from the Strava data and spatial analysis reveal where residents are currently walking and cycling as well as areas throughout the town where infrastructure improvements are still needed.

The results of the analysis were used by the study team to:

- » Identify roads / routes that have a high volume of cyclists and pedestrians and determine if the existing facility type is still appropriate or should be upgraded;
- » Identify roads / routes that have a high volume of cyclists and pedestrians and determine if the treatment / facility type proposed in the 2009 ATMP is still appropriate or should be upgraded;
- » Identify roads / routes with high volumes of cyclists and pedestrians that were not recommended as part of the 2009 active transportation network and recommend an appropriate treatment / facility type; and

- » Identify roads / routes that have a low volume of cyclists and pedestrians and determine if the existing or previously planned facility type is still appropriate or should be upgraded.

Areas were examined further to better understand what may be causing the low volumes of active transportation and to identify potential solutions to increase walking and cycling. A summary of the findings for areas of low and high active transportation activity is provided in the following sections.

## Low Active Transportation Activity

There are some locations throughout the town where the spatial analysis indicates that they are bike and walk friendly but the Strava results suggest there are low volumes of cyclists and pedestrians. An example of this would be in downtown Oakville which has a high walkability and bikeability score but doesn't seem to translate to a high number of trips per day. Although the downtown area has a number of factors that contribute to its overall walking / cycling quality, in some locations it lacks infrastructure, routing and supportive amenities due to the physical constraints of the roadways and the historic built form of the neighbourhoods.

Another area where there are less walking and cycling trips per day and low walkability / bikeability score is North Oakville. Within this area, a high proportion of red (low walkability and bikeability scores) can be attributed to a low population. As North Oakville continues to grow and active transportation infrastructure is implemented, it is expected that the average walking and cycling trips will increase in this area. The implementation of active transportation routes in addition to other factors such as proximity to parks, schools, etc. will help to increase the quality of walking and cycling in North Oakville.

## High Active Transportation Activity

In many cases, the spatial analysis results support the Strava data. Routes that experience a high volume of cyclists have higher cycling trips per day. Routes that experience a high number cycling trips per day are located in the following areas:

- » South-East Oakville – Cornwall Road to water boundary and Morrison Road to Ford Drive;
- » South-West Oakville: Bronte Road to Third Line and Lakeshore Road West to water boundary; and
- » Central Oakville – Trafalgar Road to Sixth Line and Upper Middle Road East to McCraney Street East.

Routes that experience high walking trips per day are located in the following areas:

- » West Oakville – Bronte Road to Third Line and Dundas Street West to Upper Middle Road West;
- » West Oakville – Third Line to Nottinghill Gate and Upper Middle Road West to the QEW; and
- » Central Oakville – Eighth Line to Ninth Line and Upper Middle Road East to the Cross-Town Trail.

Areas with high cycling and walking trips have high walkability and bikeability scores. These high scores can be attributed to the density of existing routes as well as other factors such as proximity to schools / parks, street connectivity, density of destinations, slope, etc.

## 2.1.2 Comparing Oakville

The ATMP is intended to build on the successes of the Town of Oakville since the adoption of the previous plan as well as lessons learned from other municipalities. Six (6) comparable municipalities within Canada were investigated to better understand infrastructure, programming and policy best practices. A summary of the municipalities investigated is provided in **Table 1**. Each municipality has developed a master plan that guides the planning, design and implementation of active transportation infrastructure.

These master plans also contain strategies to encourage people to walk and cycle more by setting targets for amount of people who could be commuting by bike or foot, expressed as a percent of the overall travel choice options (i.e. driving, taking transit, cycling, walking). This is defined in most municipalities as “mode split”. Oakville’s ATMP Update identifies outreach and infrastructure recommendations that are informed by the successes of some of these municipalities including but not limited to those highlighted on page 18.

**Table 1 - Best Practices Review**

Municipality	Population	Existing Mode Split (Walking + Cycling) <sup>1</sup>	Target Mode Split (Walking + Cycling)	Master Plan <sup>2</sup>	Master Plan Year
Oakville	182,520	4%	6%	●	2012
Cambridge	126,748	4%	12%	●	2008 / 2010
London	381,000	1%	5%	●	2016
Ottawa	870,250	2.5%	5%	●	2013
Hamilton	519,949	0.7%	10%	●	2016
Kitchener	219,153	1%	2.7%	●	2010 / 2012
Halifax	390,096	10%	25%	●	2006 / 2014

Notes:

1. Mode split is the percent of commuter trips made by a main mode of transportation. The data is based on the 2011 National Household Survey for each municipality.
2. Includes transportation master plans, active transportation master plans, cycling master plans and trails master plans.



## CAMBRIDGE (Pop. 126,748; Mode split target: 12%)

- » Collaborate with Safe Routes to School Programs.
- » Collaborate on safety, education and enforcement campaigns and programs that focus on skills training and collision prevention.
- » Collaborate with the Region of Waterloo on Commuter Option initiatives to shift transportation behaviours of City staff and other large employers in the City.

## OTTAWA (Pop. 870,250; Mode split target: 5%)

- » Incorporate the Cycling Safely Awareness program within the Transportation Demand Management program funding envelope, subject to the annual budget authorization by Council.
- » Support the development of school active transportation plans in Ottawa elementary schools, which includes the promotion of cycling.
- » Ensure the defined sidewalk pedestrian zone meets accessibility guidelines and remains unimpeded.

## LONDON (Pop. 381,000; Mode split target: 5%)

- » Work with Middlesex-London Health Unit, school boards and other supporters of CAN-BIKE London to explore the possibility of implementing a permanent CAN-BIKE program in schools throughout the city, building on the existing program.
- » Continue to explore and develop a business case for a city-wide Bike-Share Program suitable for London based on best practices from municipalities of similar scopes and scales.

## HALIFAX (Pop. 390,096; Mode split target: 25%)

- » Encourage active transportation, within new communities by designing them to be compact and mixed use, offering a wide range of live/work/shop/play opportunities within walking distance of each other.
- » Engage with the Halifax Regional School Board to encourage the siting of schools in a manner that will increase active transportation to school.
- » Continue to improve pedestrian and bicycle connections to transit service.

## 2.2 Existing Policies & Initiatives

The ATMP Update is intended to build upon and reflect the policy, infrastructure and programming changes and improvements that have been implemented since the previous plan was adopted. The following sections provide an overview of the supportive policies, programs and initiatives that have been implemented at the local, regional and provincial level which help to shape the recommendations outlined in this plan.

### 2.2.1 Policies

There are three levels of government and policies that impact active transportation from the planning stage through to design, construction and operations. Existing policies at the provincial, regional and town level were reviewed to better understand the strategic directions at each level of government. Since the development of the previous ATMP, several policies that support active transportation have been amended and / or updated. These documents continue to support the implementation and investment for active transportation and inform the development of recommendations outlined in the updated plan. **Figure 8** illustrates the different policies reviewed as part of the development of the ATMP Update.

A more detailed summary of specific policies and strategic directions that support active transportation can be found in **Technical Appendix B**.



Figure 8 - Overview of Background Policies Reviewed

## 2.2.2 Programs & Initiatives

Improving and enhancing active transportation is not just about infrastructure. Developing and implementing programs and initiatives that encourage people to become more active is a priority to the town. The ATMP contributes to fostering an active and healthy community. A number of programs and initiatives have been launched by the town to educate, promote and support active transportation in Oakville. A summary of key programs is provided below and described in more detail in **Technical Appendix C**.



**Promotional Tools and Materials:** The town has developed a number of promotional resources to encourage active transportation including online webpages which includes information for cycling safety and road laws, cycling handbooks (available in several languages) and mapping that illustrates the existing bike and trail infrastructure.



**Make Your Move:** This is the town's public education and awareness program to promote the benefits of healthy, active lifestyles and encourage residents to become more active. The program delivers courses such as CAN-BIKE to teach cycling tips and etiquette for users of all ages and skill levels.



**Oakville Cycling Camps:** Week long summer camp programs are offered for children ages 8-12 to learn about bicycle safety, maintenance and proper cycling techniques on roads and trails. The camp is led by certified CAN-BIKE instructors.

Source – Town of Oakville Graphics / Photos

**Bicycle Parking:** Complementary bike valet is offered at the Canadian Open to encourage people to cycle to and from the event. The fencing used at the Canadian Open can be used at other special events. The town has also converted three on-street parking spaces to bicycle corral parking in Downtown Oakville, Kerr Village and Bronte Village areas as part of a two-year pilot program.

## 2.3 What you told us

The development of the ATMP Update included a comprehensive consultation strategy designed to engage potential audiences that are anticipated to be impacted by the outcomes of the ATMP update.

In order to fulfill the Municipal Class EA requirements the study team was required to meet with members of the public at two (2) points over the course of the study. The study team not only completed the two points of contact but endeavoured to exceed those requirements by providing numerous opportunities for public, stakeholder and staff to provide input.

The consultant team planned and undertook in-person as well as on-line engagement activities to gather input at key stages over the course of the study.

Prior to formally launching the study to the public, the study team developed a consultation and engagement strategy. The strategy was developed based on the town's Public Engagement Guide as well as the principles of the International Association of Public Participation (IAP2). The strategy was developed as a guide for town staff and the consultant team as they worked through the study process. The strategy identified key target audiences, evaluated their involvement in the study and outlined the consultation and tactics to engage each of the unique audiences.

A detailed summary of the input received over the course of the study can be found in **Technical Appendix D**. The following sections summarize the key highlights of the input received through the consultation activities.



Public Information Centre #1 - June 22, 2016



Public Information Centre #2 – October 20, 2016

## 2.3.1 The Audiences

Audiences that are engaged throughout the study process have unique preferences and interests. Not all stakeholders will be impacted to the same extent or have the same level of understanding. The primary goal of the engagement strategy was to create meaningful and interesting methods of engagement that would sustain the attention and appeal to those involved. Varying engagement methods and activities were used for different audiences. The headings on the right outline the groups and representatives that were engaged as part of the ATMP Update. The photos below show some of the groups engaged during the study.



### TOWN REPRESENTATIVES

- » Town Council
- » Town Business Units and Departments

### GROUPS & ORGANIZATIONS

- » Trails / Cycling Interest Groups
- » Environmental Groups
- » Service Clubs
- » Health organizations / associations
- » Local Businesses
- » Residents Associations

### GOVERNMENT INSTITUTIONS

- » Bordering Municipalities
- » Halton Region
- » Ministry of Transportation Ontario (MTO) and Ministry of Natural Resources and Forestry (MNRF)
- » Schools Boards and local schools
- » Conservation Halton
- » Ontario Parks

### GENERAL PUBLIC

- » Residents of Oakville

## 2.3.2 The Activities

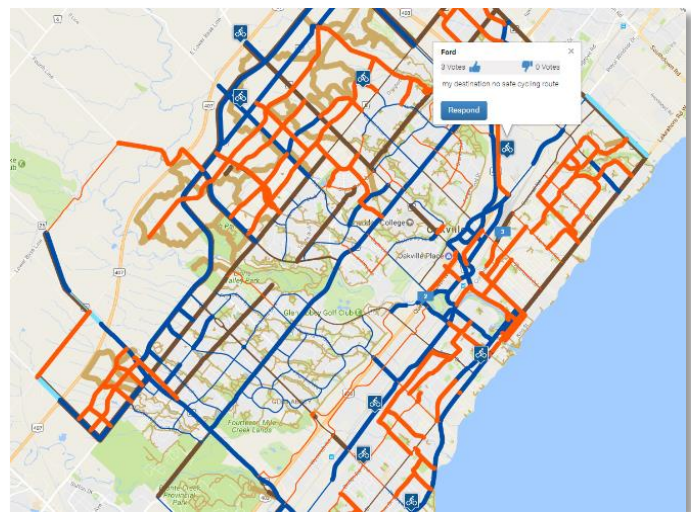
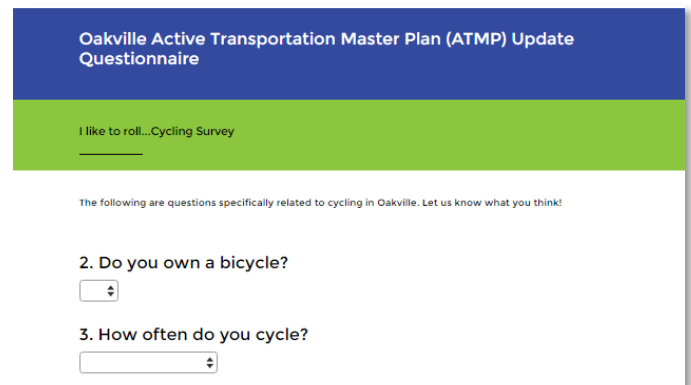
There were three types of engagement activities used over the course of the study – online, in-person and promotion / outreach. The following is a summary of the activities undertaken within each of these categories. A detailed summary of the consultation activities and the input received is found in **Technical Appendix D**.

### ONLINE

**Online Survey:** The online survey asked respondents to answer questions about their current cycling and walking habits and provide general socio-demographic information. A total of 543 responses were submitted. Key highlights from the survey are summarized in **section 2.1**.

**Interactive Mapping Tool:** A map of the existing and previously planned active transportation routes was put online. Respondents were asked to identify areas in Oakville which represent cycling opportunities or issues, walking opportunities or issues, community destinations and locations to improve existing crossings / intersection.

In addition to the online survey and interactive mapping tool, public input including questions and comments were received by the study team via email.



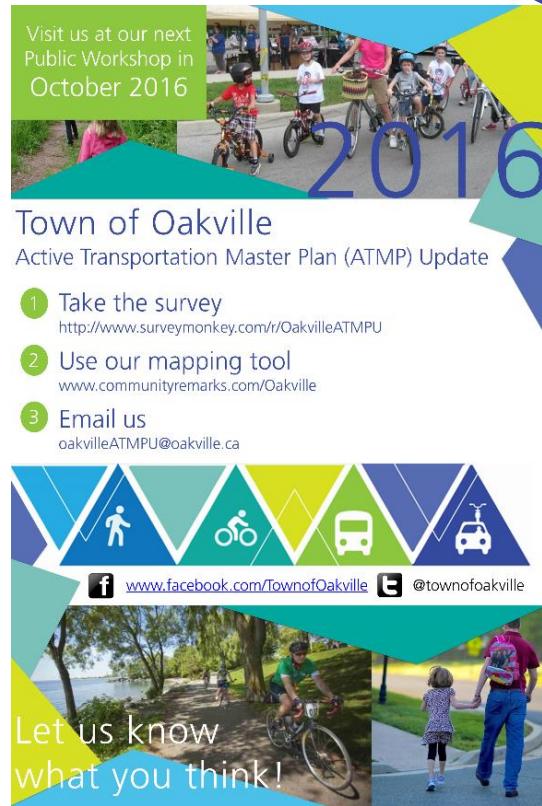
Top: Sample from the Online Survey  
Bottom: Interactive Mapping Tool Screen

## PROMOTION / OUTREACH

Display materials for the ATMP Update were used at outreach events for the town's Age Friendly Study. Recognizing the relationship between mobility, accessibility and aging populations, town staff presented information from the ATMP update including study objectives and the active transportation network. Following each of the public information centres, town staff used the display materials to gather additional input by "hosting" the displays at key locations throughout the community. The town also promoted the study using an active social media campaign including weekly and bi-weekly study updates and calls to action to participate

## IN-PERSON

**Public Information Centres:** Two public information centres (PIC's) were held during the study. The objectives of the PIC's were to present the public with information on the study process and gather input on the draft active transportation network, facility types, implementation, priorities, programs and recommendations. **Technical Agency Committee and Special Interest Focus Group Meetings:** Four meetings were held during the study. The meetings were used to discuss key milestones of the project and to gather input at different stages of the study.



Top: Promotional ATMP Update Study Poster  
Bottom: Attendees at PIC #2

## 2.3.3 Key Themes & Input

The various consultation activities resulted in a wide range of input. The input included comments, questions and ideas on how to improve active transportation in Oakville. There were a number of key themes that emerged through the various consultation and engagement activities which were used to inform the recommendations contained in the ATMP. The key themes and input are summarized below.



Provide connections across major barriers such as highway crossings, underpasses / overpasses and watercourses



Connect and continue linkages through all local communities



Improve intersection crossings for pedestrian and cyclists



Implement signage on active transportation routes



Implement formal cycling facilities on roads that experience high volumes of cyclists



Encourage more children to walk and / or cycle to and from school



More bicycle parking at key community destinations



Work with police to improve active transportation education and enforcement



## 2.4 Opportunities and Challenges

One of the primary intents of a master plan is to highlight and enhance the opportunities and to identify and address the challenges within the Community. Understanding the town's context through a background information review; consultation and engagement with key audiences, stakeholders and staff; and a socio-economic review allowed the study team to have a better understanding of the active transportation opportunities and challenges in Oakville. The team's detailed understanding of these key considerations helped to shape the proposed network, policies and recommendations that are found within the ATMP update.

### OPPORTUNITIES

**Existing Infrastructure:** Over 185 km of active transportation facilities and 1000+ km of sidewalks.

**Existing Support:** Support to improve active transportation from local businesses, advocacy groups, town and Regional staff and politicians.

**Policy Support:** Approved local, regional and provincial strategies / policies to improve walking and cycling conditions.

**Capital Budgets:** Allocated budgets and capital forecasted projects include construction of active transportation facilities.

**Partnerships:** Strong partnerships with the Region, school boards, health units, conservation authorities, etc.

**Natural Areas:** Several destinations of natural significance which can be highlighted by active forms of transportation.

**Transit:** The GO Transit stations in Oakville contain covered bike parking and could help to support the "first and last mile" trips for transit riders.

## CHALLENGES

**Staff Resources:** Limited staff resources and time to implement the master plan.

**Missing Links:** Gaps in the network that prevent connectivity for pedestrians and cyclists.

**Limited Funding:** Limited budget available and active transportation facilities are often built in pieces rather than one continuous segment.

**Topography:** Steep valleys and large water crossings obstruct direct east-west and north-south access through the town.

**Public Education:** The public is still learning about safe and appropriate ways to engage in active modes of travel.

**Behavioural Changes:** Overcoming mode choice and getting people to engage in active modes of travel.

**Highway Crossings:** The Queen Elizabeth Way (QEW) is a major barrier for pedestrian and cyclists travelling north-south through the town.

**Natural Areas:** Minimizing the potential impacts that new infrastructure and increased access to natural areas can bring.

# SECTION 3.0

## Oakville's Active Transportation Network

One of the primary purposes of the ATMP update is to review and revise the active transportation network for the Town of Oakville. The process used to update the active transportation network was heavily informed by public and stakeholder input, best practices and lessons learned from the town's experience implementing the 2009 plan, Halton Region's current ATMP, and from other comparable municipalities in Ontario. The outcome of this process not only reflects the town's priorities but those of its partners, including but not limited to Halton Region, Conservation Halton, Ontario Parks, the school boards, the Ministry of Transportation Ontario and surrounding municipalities, as well as the residents of Oakville.

The following section provides an overview of the process used to identify the updated active transportation network for Oakville, the outcomes of that process, and some considerations to help inform future design and implementation.

### 3.1 Developing the Active Transportation Network

One of the core objectives of the ATMP is the identification of a revised active transportation network for Oakville. The process used to develop the 2017 network was based on an iterative network development process (which was originally used to develop the 2009 network), with refinements to reflect the infrastructure implemented to date, the updated objectives and best practices, and the lessons learned since the last plan. The process involves five steps and was shaped by input gathered through the consultation process. A high-level overview of the process is presented in **Figure 9**. The results of each step are documented in the following sections.

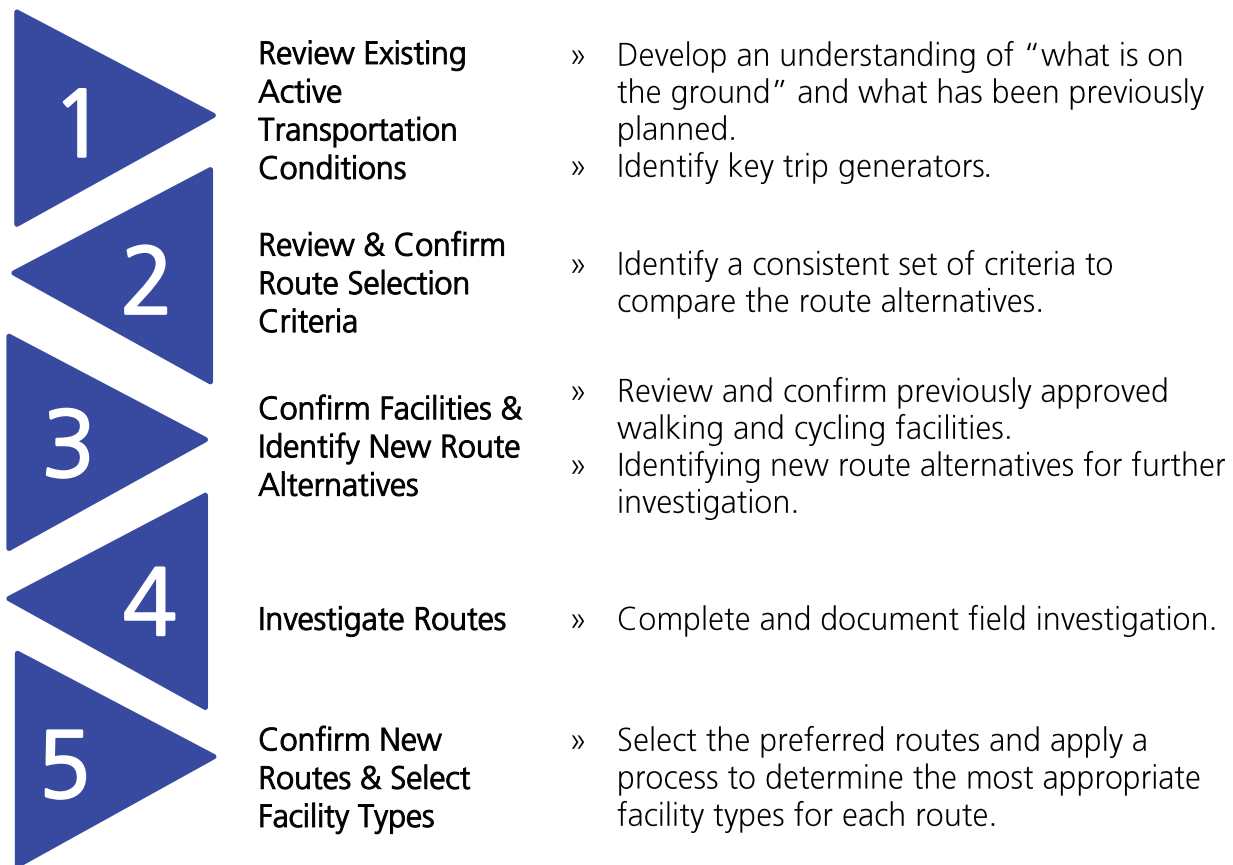
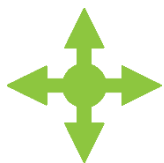


Figure 9 - Oakville Active Transportation Network Development Process

## Step 1: Review Existing Active Transportation Conditions

Town staff provided the study team with Geographic Information System (GIS) data illustrating the location and alignment of various active transportation routes and facilities within the town, as well as key destinations also known as trip generators. Understanding what is currently on the ground and where people want and need to go is vital to creating a realistic and implementable network. Oakville's existing active transportation routes are illustrated on **Maps 1 and 2**.

There are a total of 1488 kilometres of routes and facilities in Oakville including pedestrian facilities (i.e. sidewalks and trails), cycling facilities (i.e. bike lanes and signed bike routes) and routes that accommodate both pedestrians and cyclists (i.e. multi-use trails). The town's existing network is made up of a number of elements including:



**Regional Routes:** Though not under the town's jurisdiction, these routes make up the spine linkages for travelling north-south and east-west. Regional routes typically provide opportunities for longer-distance trips and link to surrounding municipalities. The regional routes presented are based on Halton Region's 2015 ATMP.



**Local Routes:** The town has implemented active transportation routes on local roads to provide access to major neighbourhoods; however, some areas have limited access and connectivity. Typically in communities such as these, there is a growing demand and a need for more infrastructure to provide greater access.



**Supportive Amenities:** A route needs to be complemented by other amenities and infrastructure (e.g. bike parking, rest areas, water stations, etc.). The town has implemented a number of active transportation amenities at key community locations which enhance the desirability of using active transportation for daily trips.



**Crossings:** Active transportation is typically challenged by a number of features that require crossing (i.e. highways, railways, watercourses and topography). Without strategic design of these features to accommodate walking and cycling, they could be considered a significant barrier.

**Connections to Transit:** The local transit and GO Transit service provide opportunities for first and last mile trips within Oakville and to surrounding communities. Transit routes – both local and regional – should be connected to active transportation routes to facilitate longer distance commuting trips.

In addition to understanding the location of key routes, it is also important to identify major trip generators, such as community destinations. Active transportation trip generators typically include two types – commuter destinations (i.e. educational, commercial and employment areas) and recreational destinations (e.g. natural areas such as parks and conservation areas, public lands, beaches, etc.). Trip generators are found within the town and in surrounding municipalities.

Key destinations were mapped, reviewed and updated based on input from stakeholders and the public. The location of these trip generators helped the study team identify missing links and areas of deficiency in the existing system where improvements are needed. The information was also used to assist in confirming the pedestrian and cycling routes previously recommended in the 2009 ATMP. The photos on the right illustrate some of the unique destinations in Oakville that were identified through consultation and engagement, and they have been highlighted in **Maps 1** and **2**.



DOWNTOWN OAKVILLE



GO TRANSIT STATIONS



OAKVILLE PLACE



SHERIDAN COLLEGE



BRONTE CREEK PROVINCIAL PARK



SIXTEEN MILE SPORTS COMPLEX



Town of Oakville  
Active Transportation Master Plan  
(ATMP)

Final November 2017



Legend

Existing and Previously Proposed Pedestrian Routes<sup>i</sup>

- |          |  |
|----------|--|
| Existing | Proposed   |
|          | Off Road Trail   |
|          | In-Boulevard Trail   |
|          | Paved Shoulder   |
|          | Sidewalk   |
| N/A      | Region Facility <sup>i</sup> (Refer to Technical Appendix K) |

Existing and Previously Proposed Pedestrian Crossings

- Existing Grade Separated Pedestrian Crossing
- Previously Proposed Grade Separated Pedestrian Crossing

Existing Regional Trails

- Waterfront Trail / Trans Canada Trail

Community Destinations

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

Transportation Features

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

Land Use Features

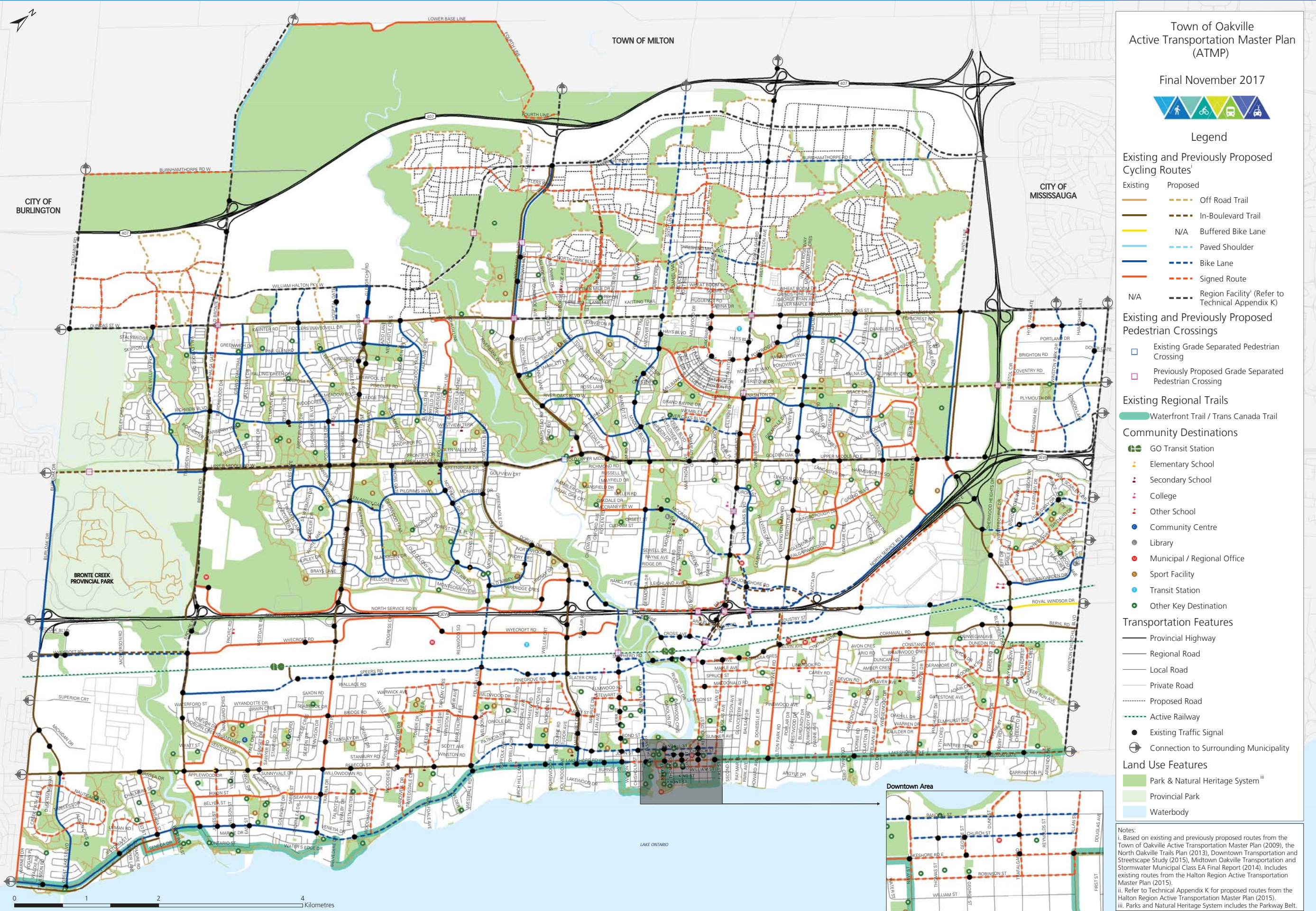
- Park & Natural Heritage System<sup>iii</sup>
- Provincial Park
- Waterbody



Notes:  
i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015), Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).  
ii. Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).  
iii. Parks and Natural Heritage System includes the Parkway Belt.







Town of Oakville  
Active Transportation Master Plan  
(ATMP)

Final November 2017



### Legend

#### Existing and Previously Proposed Cycling Routes<sup>i</sup>

- | Existing | Proposed |
|----------|----------|
|          |          |
|          |          |
|          |          |
|          |          |
|          |          |
|          |          |
| N/A      |          |

#### Existing and Previously Proposed Pedestrian Crossings

- Existing Grade Separated Pedestrian Crossing
- Previously Proposed Grade Separated Pedestrian Crossing

#### Existing Regional Trails

- Waterfront Trail / Trans Canada Trail

#### Community Destinations

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

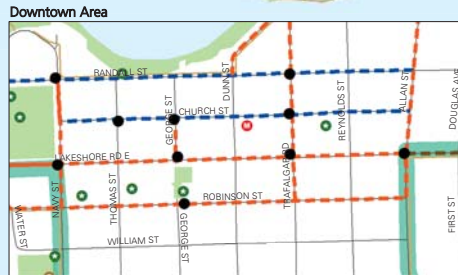
#### Transportation Features

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

#### Land Use Features

- Park & Natural Heritage System<sup>iii</sup>
- Provincial Park
- Waterbody

Notes:  
i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015), Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).  
ii. Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).  
iii. Parks and Natural Heritage System includes the Parkway Belt.





## Step 2: Review and Confirm Route Selection Criteria

Route identification, evaluation and selection starts with a consistent set of criteria that reflect the desired outcomes and objectives of the plan. Prior to developing new criteria, the town reviewed the criteria originally used in the 2009 ATMP. After reviewing and assessing the objectives of the 2016 update, as well as current best practices, it was confirmed the original 2009 criteria were still applicable. As such, the town selected to continue to use the 2009 criteria and it is presented below. The criteria were used over the course of the network development process to consider, review, and ultimately confirm the preferred routes and facility types.

SAFETY	The conflicts that could be created or prevented by implementing the route and the appeal to various users.
DIRECT / CONNECTED	How well all routes are connected to form an overall pedestrian and cycling network.
DESTINATION ORIENTED	The ability for a route to link to destinations within and outside the town.
INTEGRATED	The ability which a route is able to provide direct access to other modes of transportation, particularly public transit.
DIVERSE	The ability for a route to accommodate users of varying ages, skills and mode type.
EASILY ACCESSIBLE	The ability for a route to link local neighbourhoods and schools in a comfortable manner.
COMPLETE STREETS	The ability of routes to be part of a road that is supported by urban design and landscape principles to accommodate a range of users.
SUPPORTIVE SERVICES	How well the routes are supported by services and facilities that support walking and cycling, and encourage year-round use.

## Step 3: Confirm Facilities and Identify New Route Alternatives

A key component of the master plan update is reviewing, validating and revising what was previously proposed in the 2009 ATMP, identifying new route and facility alternatives, as well as recommending other network elements such as grade separated pedestrian crossings and transitions.

These potential revisions and new recommendations are referred to as “candidates or route alternatives” and were selected based on their ability to:

- » Build upon future planned and budgeted infrastructure projects;
- » Link directly to transit stations;
- » Provide access to downtown;
- » Connect to and through neighbourhoods (including connections to schools);
- » Complete missing links in the existing network;
- » Overcome physical barriers; and
- » Provide recreational opportunities.

### Existing and Previously Proposed Candidate Routes

All of the major existing and previously proposed routes and facility types were reassessed to determine their appropriateness. The reassessment was completed by taking into consideration the current roadway / context, and a three-step facility selection process found within Ontario’s leading cycling facility design guidelines – Ontario Traffic Manual Book 18 – Cycling Facilities.

The three-step process, illustrated in **Figure 10** considers the high-level route conditions of operating speed (how fast motor vehicles are travelling on the road) and volume (how many cars are on the road) to predetermine a level of separation of a cycling facility type (**step 1**); followed by a more detailed consideration of on and off-road factors that reflect more context specific elements (**step 2**); and finally the selection of a preferred facility type based on sound engineering and planning judgement (**step 3**).



Figure 10 – Overview of the Three-Step Facility Selection Process

As a result of the process, a number of on-road cycling facilities (existing and previously proposed in the 2009 ATMP) were identified as candidate locations to upgrade to a facility type with more separation between the cyclist and the motor vehicle. The proposed candidate revisions to the active transportation network are illustrated on **Maps 3** and **4** and represented by two line types:

- » Candidate revision (dots) to an existing facility type (solid line);
- » Candidate revision (dots) to a previously proposed facility type (dashed line).

An example of a proposed candidate revision to the active transportation network is presented in **Figure 11**.

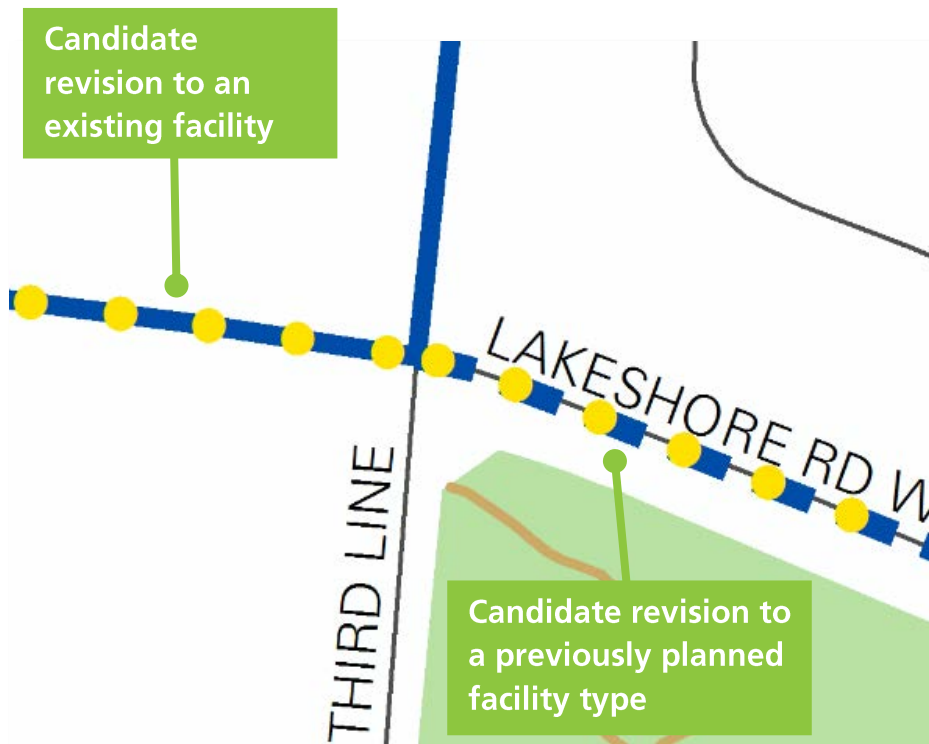


Figure 11 - Candidate revisions to the active transportation network

Town of Oakville  
Active Transportation Master Plan  
(ATMP)

Final November 2017



Legend

Existing, Previously Proposed and Candidate Pedestrian Routes<sup>i</sup>

Existing	Previously Proposed	Candidate	
			Off-Road Trail
			In-Boulevard Trail
			N/A Paved Shoulder
			Sidewalk
			Region Facility <sup>(Refer to Technical Appendix K)</sup>

Existing and Proposed Pedestrian Crossings

	Existing Grade Separated Pedestrian Crossing
	Proposed Grade Separated Pedestrian Crossing

Existing Regional Trails

Waterfront Trail / Trans Canada Trail

Community Destinations

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

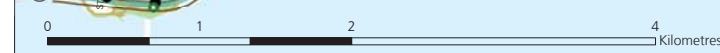
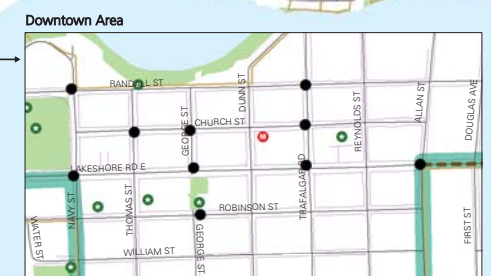
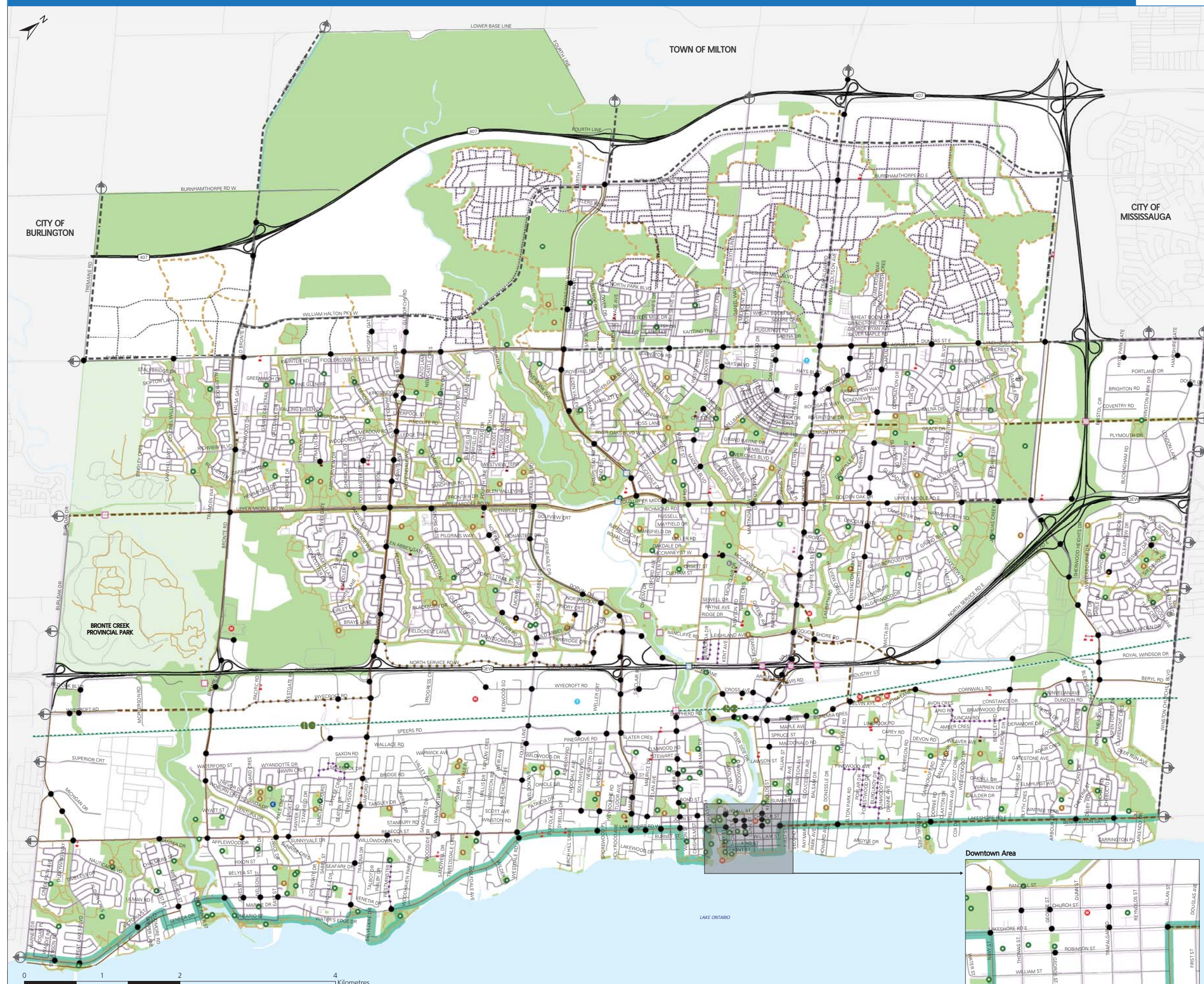
Transportation Features

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

Land Use Features

- Park & Natural Heritage System
- Provincial Park
- Waterbody

Notes:  
i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015) and the Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).  
ii. Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).  
iii. Parks and Natural Heritage System includes the Parkway Belt.







Town of Oakville  
Active Transportation Master Plan  
(ATMP)

Final November 2017



Legend

Existing, Previously Proposed and Candidate Cycling Routes<sup>i</sup>

Existing	Previously Proposed	Candidate
		Off-Road Trail
		In-Boulevard Trail
		Paved Shoulder
		Buffered Bike Lane
		Bike Lane
		Signed Route <sup>ii</sup>
		Region Facility* (Refer to Technical Appendix K)

Existing and Proposed Pedestrian Crossings

	Existing Grade Separated Pedestrian Crossing
	Proposed Grade Separated Pedestrian Crossing

Existing Regional Trails

	Waterfront Trail / Trans Canada Trail
--	---------------------------------------

Community Destinations

	GO Transit Station
	Elementary School
	Secondary School
	College
	Other School
	Community Centre
	Library
	Municipal / Regional Office
	Sport Facility
	Transit Station
	Other Key Destination

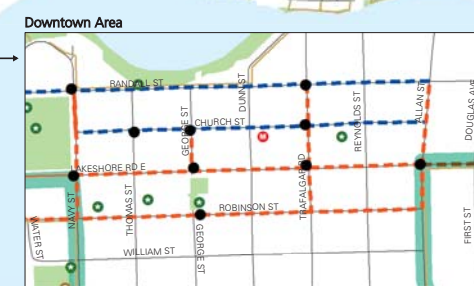
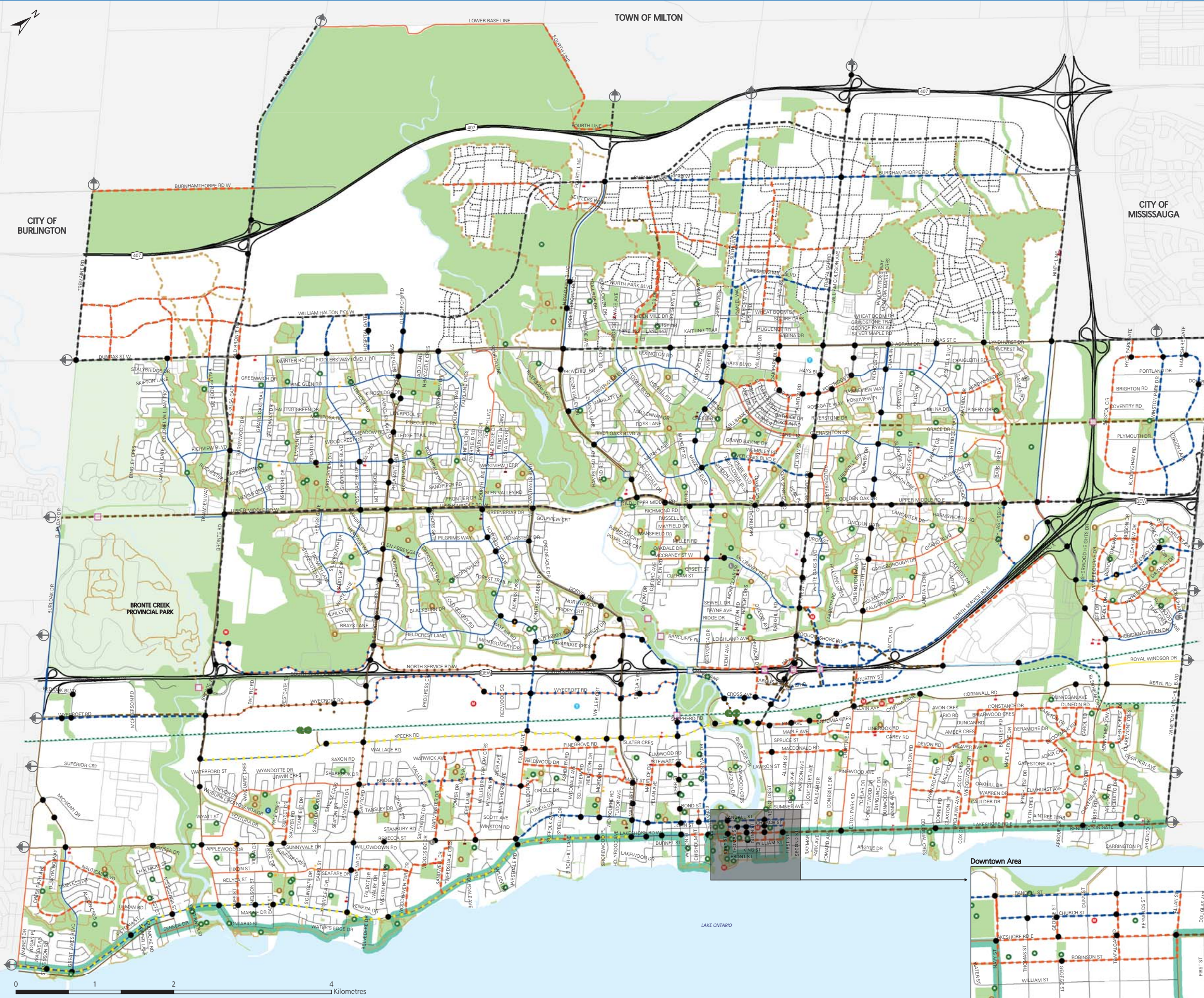
Transportation Features

	Provincial Highway
	Regional Road
	Local Road
	Private Road
	Proposed Road
	Active Railway
	Existing Traffic Signal
	Connection to Surrounding Municipality

Land Use Features

	Park & Natural Heritage System <sup>iii</sup>
	Provincial Park
	Waterbody

Notes:  
i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015) and the Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).  
ii. Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).  
iii. Parks and Natural Heritage System includes the Parkway Belt.





## Existing and Previously Proposed Candidate Grade Separated Pedestrian Crossings

In 2009, 17 grade separated (i.e. an underpass or overpass) pedestrian crossings were proposed. Similar to the previously proposed active transportation routes and facilities, these crossings were reviewed and reassessed to determine their applicability as part of the update. The crossings were reviewed based on a number of key factors including:

- » Location (e.g. crossings at-grade with the roadway);
- » Space / right-of-way limitations;
- » Potential construction costs;
- » Demand / additional user effort;
- » Maintenance; and
- » Accessibility.

Additional consideration was given to the Accessibility for Ontarians with Disabilities Act (AODA) to design a network that is accessible to people of all ages, abilities and skill-level. AODA Criteria that should be considered when designing for cyclists and pedestrian include: operational experience, width, slope, surface, changes in level and signage. Based on these factors and input received, the ATMP now recommends 6 grade separated pedestrian crossings for future implementation.

There are fewer grade separated pedestrian crossings being proposed compared to the previous 2009 plan. The feasibility to implement grade separated pedestrian crossings is challenging in the town due to space constraints, construction and operation costs and additional user effort. In addition, grade separated pedestrian crossings were proposed in the previous 2009 plan, at or near locations where a signalized intersection is already existing and the movement of pedestrian / cyclist travel is controlled. The recommended candidate grade separated pedestrian crossings are also illustrated on **Maps 3** and **4**.

## New Candidate Route Alternatives

In addition to the assessment of previously proposed active transportation routes, facilities, and grade separated pedestrian crossings, the plan identifies additional candidate route connections, both the potential alignment as well as preliminary facility types, throughout the town. The new candidate routes and facility types that were identified for additional review and consideration are illustrated on **Maps 3** and **4** as well. An assessment of each of these was completed using the route selection criteria confirmed in **step 2**, along with a significant amount of input from the public and local stakeholders.

## Step 4: Investigate Routes

Field investigations were undertaken to gain a better understanding of the current conditions of the existing and potential candidate routes. Information was gathered using two sources; GPS waypoints and photographs. These tools helped the team to better understand the specific location of route considerations and characteristics, and provide a visual representation of their location.

The information gathered forms a “database” of information which can be overlaid onto Google Earth. The database is recommended to be used as a tool to help inform implementation or when the master plan is updated and the system is reviewed. There are a total of 335 photos and 228 waypoints. **Figure 12** is an example of the information collected and how it could be presented in Google Earth.



Figure 12 - Inventory of Waypoints and Photos taken during Field Investigations

## Step 5: Confirm New Routes & Select Facility Types

Following the evaluation and investigation of potential new routes and facility types, the study team worked with staff and stakeholders to identify preferred alignments and facility types. Much of this step was completed by considering a number of engineering and design elements. The following are the primary engineering and design elements that were used to review and confirm the proposed facility types that make up the active transportation network for the Town of Oakville.

- » **Existing Road Width:** Roads with sufficient space to accommodate the minimum width of an on-road cycling facility were selected as preferred. To determine this, measurements of road cross sections and road platforms were taken in the field and using online measurement tools. This investigation also allowed the team to better understand the potential level of impact a facility type could have on the function and alignment of the roadway.
- » **Traffic Volumes & Speed:** Average Annual Daily Traffic (AADT) volumes and operating / posted speeds were reviewed to determine whether a roadway was appropriate for the implementation of an active transportation route. At locations where the AADT volumes and operating / posted speeds were very high, an alternate road / route was considered. The traffic volume and speed of the roadway also influenced the outcome of the three-step facility selection tools to determine the level of separation needed between cyclists and motorists.
- » **Ongoing Planning Projects:** In some areas there were ongoing planning and engineering projects which have a direct influence on how the roads will be aligned and designed. These areas include, but are not limited to, North Oakville, Midtown Oakville and downtown Oakville. Opportunities for enhancements in these locations were prioritized but are subject to future consideration upon the completion of these projects / environmental assessments.
- » **On-street Parking:** Cycling facilities adjacent to on-street parking, or the removal of on-street parking to accommodate cycling or walking facilities, is not considered ideal. The current locations of on-street parking were considered, and where it would be significantly impacted, consideration was given for an alternate route or a context specific design treatment.

- » **User Groups:** The intent is to provide active transportation opportunities for a range of users – people of all ages and abilities. Routes should provide access to specific destinations for all residents and should also target a number of active transportation activities (i.e. walking, cycling, in-line skating, etc.).
- » **Route Objectives:** The route objectives are determined based on the location and alignment of the route, including the surrounding land-uses and the nature of the roadway / linkage. In 2009, the ATMP defined two systems of active transportation routes that make-up the network – primary and secondary.

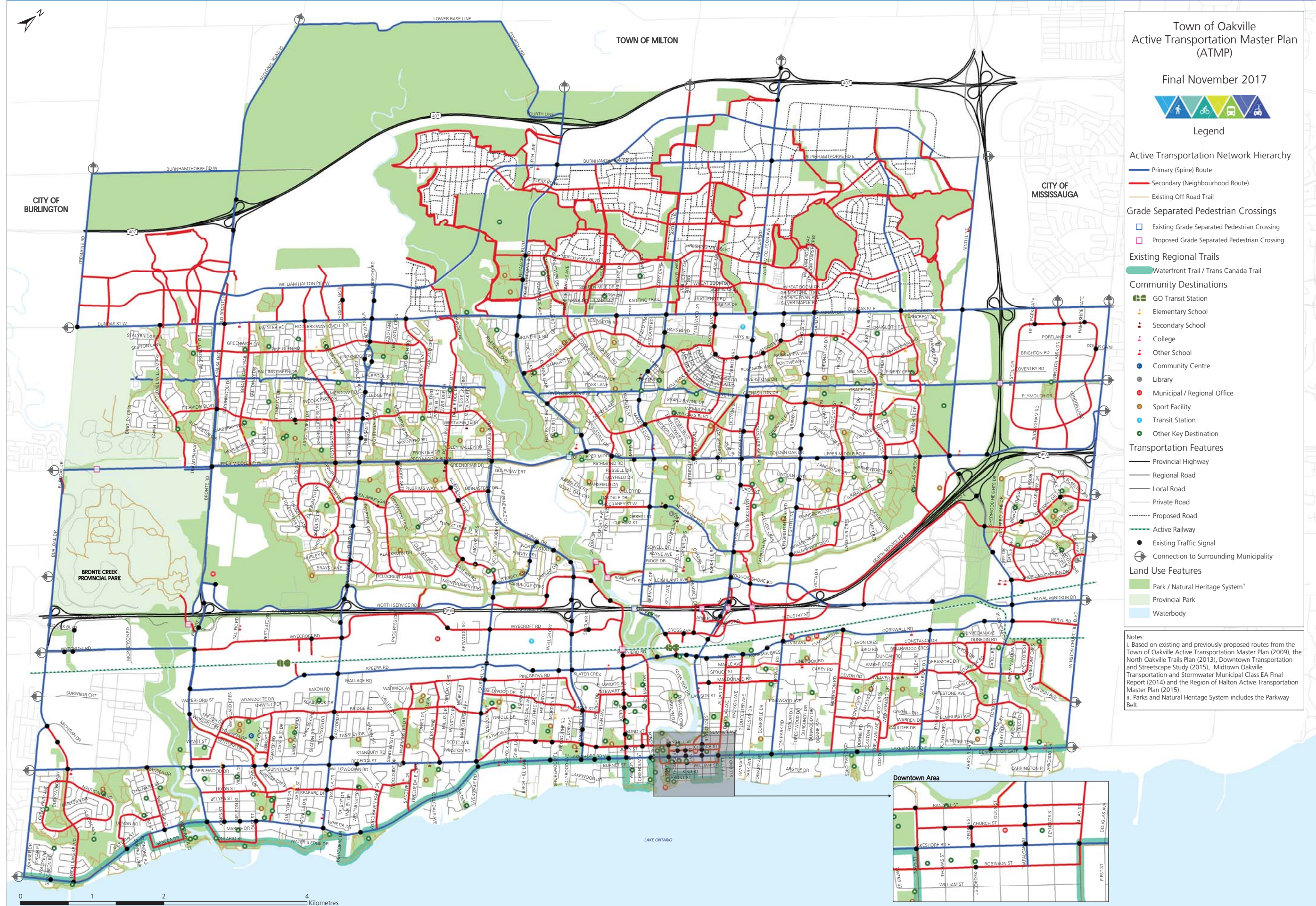
 Primary Spine Route

The primary system is considered the spine of the network and consists of north-south / east-west linkages that provide direct connections between and through urban centres with a particular focus on connecting to major commercial, employment, institutional, residential and tourist nodes and destinations throughout the town.

 Secondary Neighbourhood Route

The secondary system is made up of more localized neighbourhood connections that feed into the primary system. The secondary system takes advantage of quieter streets (less traffic), providing links to local destinations such as schools, community centres, residential areas, commercial nodes, parks and recreational areas.

As routes were considered and confirmed, the team identified which system it supported with the goal of providing a spine route system supported by a more robust system of secondary routes. The outcomes of this application are presented on **Map 5**.



Town of Oakville  
Active Transportation Master Plan (ATMP)  
Final November 2017

Legend

**Active Transportation Network Hierarchy**

- Primary (Spine) Route
- Secondary (Neighbourhood Route)
- Existing Off Road Trail

**Grade Separated Pedestrian Crossings**

- Existing Grade Separated Pedestrian Crossing
- Proposed Grade Separated Pedestrian Crossing

**Existing Regional Trails**

- Waterfront Trail / Trans Canada Trail

**Community Destinations**

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

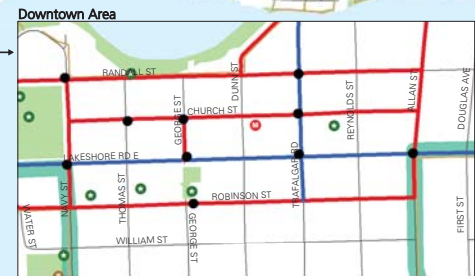
**Transportation Features**

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

**Land Use Features**

- Park / Natural Heritage System\*
- Provincial Park
- Waterbody

Notes:  
i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015), Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014) and the Region of Halton Active Transportation Master Plan (2015).  
ii. Parks and Natural Heritage System includes the Parkway Belt.







## 3.2 Oakville's Active Transportation Network

The outcome of the five (5) step network development process is a proposed system of continuous, connected and integrated active transportation routes and facilities that accommodate pedestrians and cyclists undertaking different trip types and with various levels of ability and interest. The proposed active transportation network for Oakville is illustrated on **Maps 6** and **7**.

A summary of the recommended facility types is presented **Table 2**. There are a total of 704 kilometres of proposed walking and cycling facilities identified for implementation within Oakville. Graphics of the proposed facility types are presented in **Figure 13**.

**Table 2 - Overview of Existing and Proposed Facility Types**

Facility Type	Existing (km)	Proposed (km)	Total (km)
Off-Road Trail	261.9	49.6 <sup>1</sup>	311.5
In-Boulevard Trail	69.5	68.1	137.6
Paved Shoulder	3.2	3.6	6.8
Buffered Bike Lane	0.9	16.9	17.8
Bike Lane	70.6	86.0	156.6
Signed Bike Route	50.9	99.2	150.1
Sidewalk	1031.0	383.4 <sup>2</sup>	1414.4
<b>Total</b>	1488.	706.8	2194.8

Notes:

1. Includes off-road trails proposed in the North Oakville Trails Plan.
2. Includes sidewalks previously identified in the North Oakville Trails Plan, the Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report, sidewalks proposed along regional roads, and sidewalks along town roads.



Signed Bike Route



Paved Shoulder



Bike Lane



Buffered Bike Lane



In-Boulevard Trail

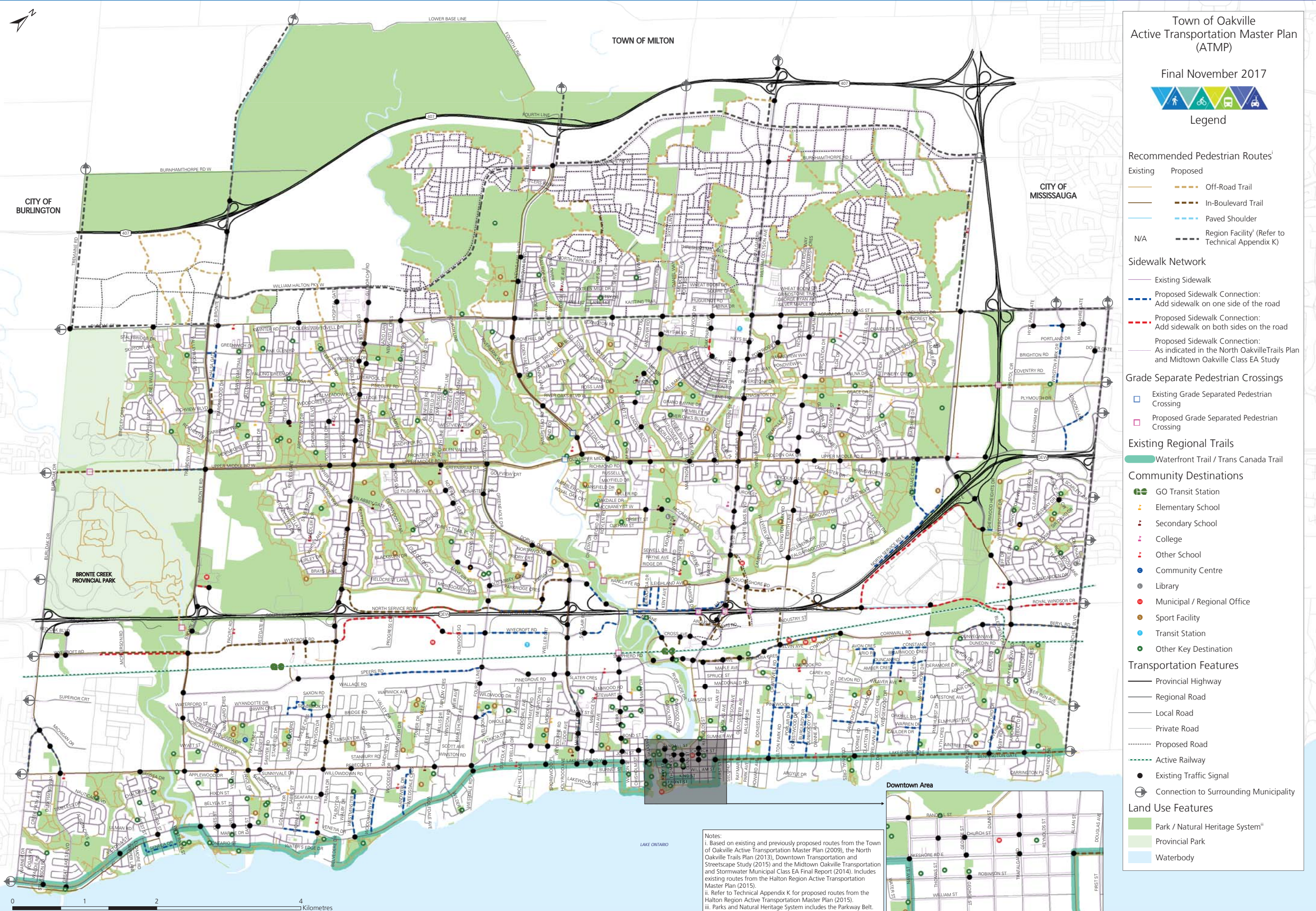


Off-road Trail



Sidewalk

Figure 13 - Overview of Proposed Facility Types (colours correspond to line work on Maps 5 and 6)



Town of Oakville  
Active Transportation Master Plan  
(ATMP)

Final November 2017

Legend

**Recommended Pedestrian Routes<sup>1</sup>**

Existing	Proposed
	Off-Road Trail
	In-Boulevard Trail
	Paved Shoulder
N/A	Region Facility <sup>2</sup> (Refer to Technical Appendix K)

**Sidewalk Network**

- Existing Sidewalk
- Proposed Sidewalk Connection: Add sidewalk on one side on the road
- Proposed Sidewalk Connection: Add sidewalk on both sides on the road
- Proposed Sidewalk Connection: As indicated in the North Oakville/Trails Plan and Midtown Oakville Class EA Study

**Grade Separate Pedestrian Crossings**

- Existing Grade Separated Pedestrian Crossing
- Proposed Grade Separated Pedestrian Crossing

**Existing Regional Trails**

- Waterfront Trail / Trans Canada Trail

**Community Destinations**

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

**Transportation Features**

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

**Land Use Features**

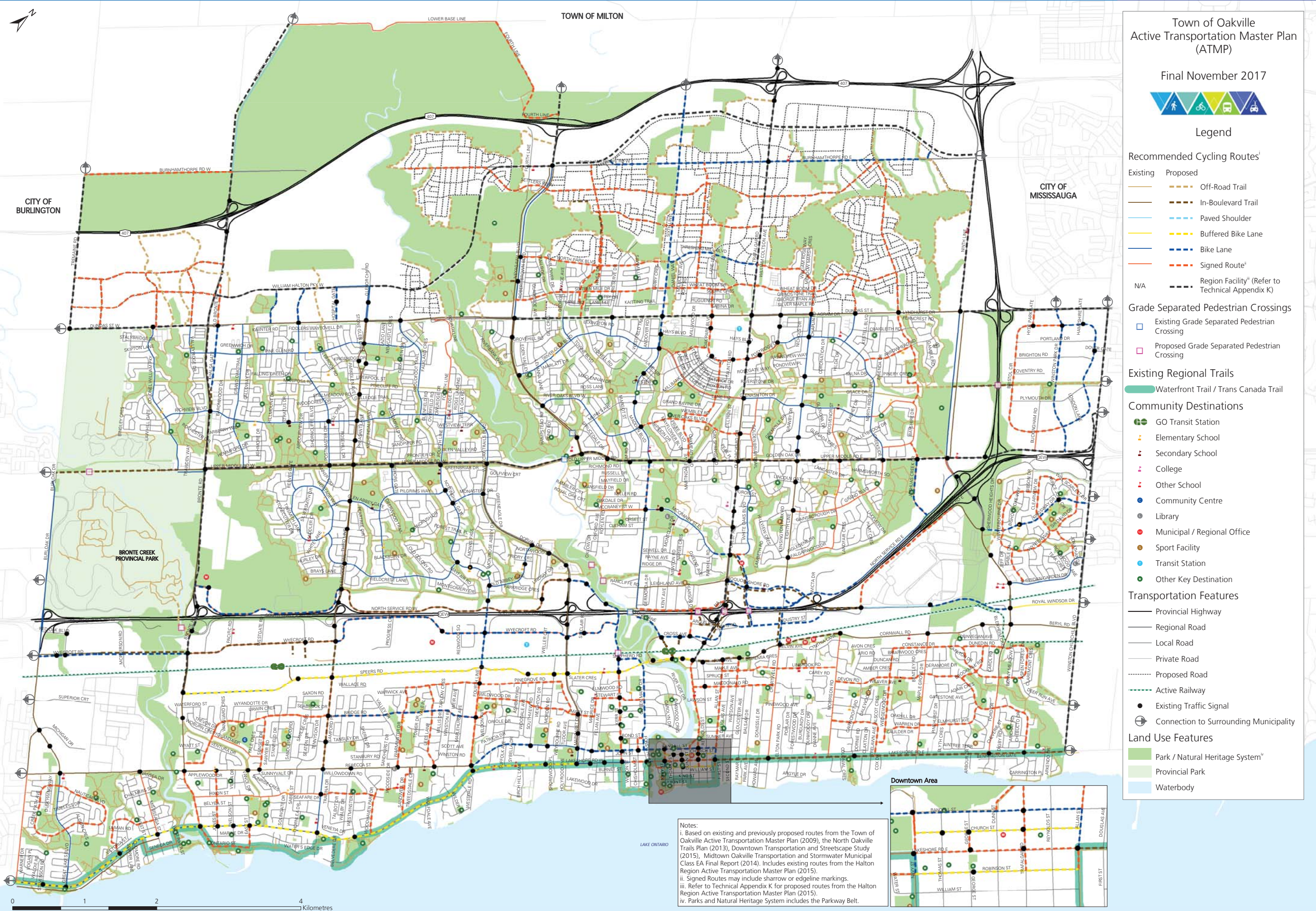
- Park / Natural Heritage System<sup>3</sup>
- Provincial Park
- Waterbody

Notes:

- Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015) and the Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).
- Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).
- Parks and Natural Heritage System includes the Parkway Belt.







Town of Oakville  
Active Transportation Master Plan  
(ATMP)  
Final November 2017

**Legend**

**Recommended Cycling Routes<sup>1</sup>**

Existing	Proposed
	Off-Road Trail
	In-Boulevard Trail
	Paved Shoulder
	Buffered Bike Lane
	Bike Lane
	Signed Route <sup>2</sup>
N/A	Region Facility <sup>3</sup> (Refer to Technical Appendix K)

**Grade Separated Pedestrian Crossings**

	Existing Grade Separated Pedestrian Crossing
	Proposed Grade Separated Pedestrian Crossing

**Existing Regional Trails**

- Waterfront Trail / Trans Canada Trail

**Community Destinations**

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

**Transportation Features**

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway
- Existing Traffic Signal
- Connection to Surrounding Municipality

**Land Use Features**

- Park / Natural Heritage System<sup>4</sup>
- Provincial Park
- Waterbody

**Notes:**  
 i. Based on existing and previously proposed routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015), Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014). Includes existing routes from the Halton Region Active Transportation Master Plan (2015).  
 ii. Signed Routes may include narrow or edge-line markings.  
 iii. Refer to Technical Appendix K for proposed routes from the Halton Region Active Transportation Master Plan (2015).  
 iv. Parks and Natural Heritage System includes the Parkway Belt.





## 3.3 Designing the Active Transportation Network

Consistency is important when designing and constructing active transportation infrastructure. As previously noted, the selection of preferred facility types for the Town of Oakville is based on Ontario Traffic Manual (OTM) Book 18: Cycling Facilities. As the town proceeds with the implementation of the active transportation network (i.e. routes, crossings, intersection treatments, and connections with transit), additional consideration and confirmation will be needed to ensure that what is being constructed is consistent with best practices and founded on sound engineering judgement. A consistent set of design guidelines should be used and referenced as the town proceeds with implementation, including the town's own engineering and design standards, as well as the following guidelines / standards:

- » OTM Book 18: Cycling Facilities ([here](#)).
- » OTM Book 15: Pedestrian Crossing Treatments ([here](#)).
- » Ministry of Transportation Ontario (MTO) Bikeways Design Guidelines.
- » National Association of City Transportation Officials Urban Bikeways Design Guide and Urban Street Design Guide ([here](#)).
- » American Association of State Highway and Transportation Officials

(AASHTO) Guide for the Development of Bicycle Facilities ([here](#)).

- » Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads ([here](#)).
- » Transportation Association of Canada (TAC) Bikeway Traffic Control Guideline for Canada ([here](#)).
- » Accessibility for Ontarians with Disabilities Act – Built Environment Standards ([here](#)).

These resources are intended to guide the design of facility types within Oakville and complement existing town guidelines including:

- » Town of Oakville Streetscape Strategy (2014)
- » Design Guidelines for Stable Residential Communities (2013)
- » North Oakville Urban Design and Open Space Guidelines (2009)
- » Oakville Universal Design Standards for Town Facilities (2015)
- » Old Bronte Road/Khalsa Gate Streetscape Plan (2012)
- » Downtown Transportation and Streetscape Strategy (2015)

**Technical Appendix E** includes an overview of key design elements that should be considered when planning and implementing the active transportation network. It should be used – along with the other guidelines noted above – as the active transportation design guide for the town.





# SECTION 4.0

## Outreach & Partnerships

Another primary objective of the ATMP update is to influence change within Oakville to encourage people continue to be active and improve their overall quality of life. These changes are not only influenced by the implementation of new infrastructure, but they can be more successful by developing and implementing outreach programs and initiatives that create a more active culture.

The development of the Town of Oakville's outreach and partnership program was driven by four objectives:

1. Creating community awareness that active transportation is a normal, convenient option for people of all ages and abilities;
2. Developing consistent messaging that can be used across a variety of events and promotional tactics and tools;
3. Demonstrating the value active transportation can bring to a community i.e. economic, tourism; and,
4. Educating audiences on their responsibilities as active transportation users.

The 2009 ATMP identified a framework of promotion and encouragement techniques to increase active transportation mode share. The town should continue its existing leadership in the delivery, education and implementation of outreach and partnership initiatives.

Section 4.0 identifies a program that builds on existing initiatives and introduces new strategies in the areas of Education, Enforcement, Promotion and Partnerships. The program has been developed to address the wants and needs of a number of different target audiences representing mode preference, socio-demographic profile and ability.

## 4.1 Understanding the Audiences

A programming and outreach strategy is meant to help shape and influence human behaviour. In advance of developing specific initiatives, it is important to understand the target audience for whom the programs are being developed. A target audience can be based on a number of factors, including but not limited to, mode of transportation, age group, gender, type of trip, etc.

An overview of the various target audiences, which will be the focus of the promotion and outreach strategy, has been prepared and can be found in **Technical Appendix F**. The audiences are organized in three categories – mode of transportation, age group and trip purpose. These categories represent the most common characteristics that influence preferences of existing and potential active transportation users.

For each audience, specific considerations and values have been identified. These have helped to shape a set of key messages which are intended to be reviewed and used as the foundation for communication and educational messages.

It is recommended that the target audience overview be used by town staff as a reference when refining and confirming potential outreach and promotion initiatives. The audience categories are not intended to be prescriptive, as there are many other audiences that will likely come forward. The town should be flexible and adaptive to address the preferences and interests of those groups / individuals, similar to the town's past initiatives to introduce cycling education programs for specific groups such as youth summer camps and senior CAN-BIKE classes.

## 4.2 Elements of a Successful Outreach Program

Community outreach and promotion is a necessary component of creating a change in human behavior. A successful outreach program should be tailored to different target audiences and should be adaptive to the wants and needs of community residents (i.e. past work completed by the town to translate cycling handbooks into various different languages).

To complement and enhance the implementation of the active transportation network, the town should also continue to work with its partners to develop and implement robust outreach programs. Understanding how to use new facility types, where to find routes, how to become more active, and how to safely walk and cycle all have a significant impact on who gets involved and how.

Community outreach will require coordination and collaboration between town staff and its partners. A typical outreach program is developed based on three areas of focus – education, promotion and enforcement. **Table 3** describes each of these elements in more detail including why they are effective, what types of programs and initiatives they could include, and how they could be achieved in a municipal context.



Walking Bus - St. Michael's Catholic School  
Source – Active & Safe Routes to School ([here](#))



Oakville Children's Festival  
Source – Town of Oakville



Walk and Wheel Emily Carr Public School  
Source – Active & Safe Routes to School ([here](#))

**Table 3 - Overview of Outreach Approach**

	EDUCATION	PROMOTION	ENFORCEMENT
WHY	People can at times be hesitant to walk or cycle because of their knowledge of how to do so. Education helps to create a greater sense of comfort and safety.	People may not have an appreciation of active transportation opportunities. Promoting why it is good to be active, and how and where you can be active, can influence and encourage people.	Rules and regulations need to be properly monitored and enforced to create a greater sense of confidence for pedestrians and cyclists, as well as motorists.
WHAT	Formal education and training encourages people to use alternative modes and can shift their transportation choices from motorized vehicles to more active forms of transportation.	People can be encouraged to adopt more sustainable transportation habits when the opportunities are more clearly promoted – both the location of infrastructure and supportive initiatives / events that take place.	Enforcement encourages users to be more aware of their rights and responsibilities. It can influence community partnerships and create a greater sense of comfort and safety.
HOW	<ul style="list-style-type: none"> <li>» Centralized Online Hub (website)</li> <li>» Partnerships with Schools</li> <li>» Training Courses &amp; Safety Education</li> </ul>	<ul style="list-style-type: none"> <li>» Workplace and Programs</li> <li>» Activities for School Children</li> <li>» Events</li> <li>» Social Media</li> <li>» Community Based Social Marketing</li> </ul>	<ul style="list-style-type: none"> <li>» Campaigns</li> <li>» Safety Blitzes</li> <li>» Community Tracking</li> <li>» Technology</li> </ul>

## 4.3 A Proposed Outreach Program for Oakville

Since 2009, the town has been working not only to provide infrastructure but to educate, promote and encourage people to become more active. However, since that time the socio-demographics and preferences of town residents have changed, as have the best practices in these three areas. To respond to this, as well as the input received through the consultation and engagement undertaken to inform the development of the ATMP update, a set of proposed outreach initiatives have been identified for the town's review and consideration.

**Table 4** summarizes the proposed initiatives that are identified for the Town of Oakville to help encourage and enhance active transportation town-wide. Each of these initiatives has been identified because of the role it could play in creating community awareness, demonstrating the values of active transportation, and educating residents on safe cycling and walking activities. Several of the recommendations are intended to support more than one initiative – education, promotion and enforcement. These initiatives are not mutually exclusive and together create a strong approach to encourage more people to walk and cycle in Oakville.

Additional details regarding resources (staff roles and time) are outlined in **Technical Appendix G** and discussed in further detail in **section 5.0**.



Source – Town of Oakville Photos

**Table 4 - Proposed Outreach Initiatives**

PROPOSED OUTREACH INITIATIVES <sup>1</sup>	PROGRAM STATUS <sup>2</sup>	CATEGORIES		
		EDUCATION	PROMOTION	ENFORCEMENT
1. Design an AT specific display and associated materials that can be used in the format of a booth at public events and festivals.	N	●	●	
2. Partner with school boards and individual schools to participate in the Active Sustainable School Transportation program	E	●	●	
3. Plan for and roll out a communications program to encourage parents to walk / bike with children to school	N	●	●	
4. Establish a Road and Trail Safety Ambassador program based on existing programs in other jurisdictions	N	●	●	
5. The town should develop, facilitate and support education initiatives to encourage children and youth to use sustainable modes of transportation such as walking, cycling and public transit	N	●	●	
6. Participate and support Smart Commute Halton to encourage employers in Oakville to promote and support walking and cycling among their employees	E		●	
7. Provide end-of-trip facilities, such as showers and secure bike parking at key locations e.g. municipal buildings, community centres, etc.	E		●	
8. Consolidate information from key partners i.e. Police, Region, Ministry, local organization, etc. and adapt / integrate into hard-copy and online AT materials i.e. newsletters, online posts, posters, etc.	E	●	●	●
9. Work with Metrolinx and other partners such as Halton Region to roll out a bike share system at mobility hubs and other key locations throughout Oakville	N		●	
10. Partner with Halton Regional Police Service to establish a plan for ongoing enforcement of bicycle helmet laws, traffic infractions and the encouragement of safe cycling and walking behaviour	N	●	●	●

PROPOSED OUTREACH INITIATIVES <sup>1</sup>	PROGRAM STATUS <sup>2</sup>	CATEGORIES		
		EDUCATION	PROMOTION	ENFORCEMENT
11. Coordinate and consult with police officers who use bicycles and patrol trails as part of a community policing approach	N	●	●	●
12. Develop and include pedestrian and cycling safety material in training programs for driver examiners, police recruits, fleet/transit operators and other officials	N	●		
13. Develop targeted information geared towards seniors and distribute at locations throughout the town with a high seniors population	N	●	●	
14. Maintain an online hub / webpage for walking and cycling information and opportunities for involvement / engagement	E	●	●	
15. Maintain / deliver Oakville specific AT mobile applications (e.g. Oakville Mobile App)	E	●	●	
16. Plan for and host profile raising events to support AT. Potential events could include Oakville Bike Challenge, Tour de Oakville, Oakville Ciclovía, etc.	N		●	
17. Use the outcomes of the Pedestrian Safety Study to develop materials to increase awareness around safety issues and solutions in Oakville	N	●	●	
18. Partner with Halton Regional Police Service to publicize pertinent information to residents related to AT and the impact on vulnerable road users	N	●	●	●
19. Purchase and install bike racks in the downtown areas and at town facilities e.g. community centres, libraries, etc.	E		●	
20. Supply and operate bike valet at major public events such as the Canadian Open, street festivals, etc.	E		●	
21. Translate AT promotional materials to maximize outreach in the Town	E	●	●	
22. Develop a comprehensive data collection program that includes online data and automatic trail display counters that encourage higher AT use	N		●	

PROPOSED OUTREACH INITIATIVES <sup>1</sup>		PROGRAM STATUS <sup>2</sup>	CATEGORIES		
			EDUCATION	PROMOTION	ENFORCEMENT
23.	Develop a formal wayfinding / signing strategy for AT routes in the Town of Oakville	N		●	
24.	As new AT infrastructure is implemented the town and its partners should host events and develop supportive information to increase awareness of how to use facilities and the location of routes	N		●	
25.	Host a bi-annual AT summit for town staff, stakeholders and the public to report on, celebrate and assess the status of the implementation of the ATMP update.	N	●	●	

Notes:

1. All outreach initiatives which involve partners to potentially support any projects or programs with funding or resources, will need to be investigated by their respective organizations further as part of their annual budgets and work plans.
2. Program Status – N: New Program, E: Existing Program

**Recommendations:**

- 1 The values and key messages identified for each of the key audiences should be reviewed and considered as the town develops future communication related to active transportation.
- 2 The town should review the proposed outreach initiatives and identify an annual action plan to educate, promote and enforce safe, enjoyable and comfortable active transportation town-wide.



# SECTION 5.0

## Implementation

This master plan update is a long-term strategy to guide the continued improvement of active transportation conditions in the Town of Oakville. The implementation of the ATMP update will take time and a coordinated and collaborative effort between town staff and its partners. A strategy is needed to guide the town's next steps providing resources and recommendations that address the planning, design, construction, operation and maintenance of active transportation infrastructure as well as programs and initiatives.

The content of Section 5.0 forms an implementation strategy for the town's ATMP update. The strategy is intended to be used as a flexible blueprint and guide that includes tools which respond to on-going changes, available budget, staff resources, funding and partnerships.

Many of the tools were originally identified in the 2009 ATMP. They have been reviewed and revised – where appropriate – to reflect best practices, lessons learned, and staff and public input.

## 5.1 Implementation Timeline

Implementation needs to continue beyond the lifespan of a master plan. Identifying a potential timeline for the implementation of various components of the master plan will help to guide future decision making and budgeting. A phased approach to implementation has been identified based on a 20+ year timeline. Implementation has been organized into two phases:

- » **Short Term Projects:** 1-10 Years
- » **Long Term Projects:** 11-20+ Years

The following sections provide an overview of the proposed phasing plan and how it was developed.

### 5.1.1 How was the Phasing Plan Developed?

The identification of phasing for proposed routes requires the consideration of a number of factors including:

- » **Approved Capital Plans:** Roadway improvements are identified in the town's ten-year capital forecast. The ATMP update phasing is aligned where feasible with the capital forecast. Coordination with large scale capital projects can be an efficient and effective way to implement active transportation infrastructure.
- » **Council Approved Secondary Plans:** On and off-road facility types are identified in strategic locations supported by the town's official plan and secondary plans (i.e. North Oakville and Midtown Oakville). Proposed phasing is consistent with the approved timeline for these projects.
- » **Route Selection Criteria:** The overarching principles / criteria were used to identify high-level phasing. For example, the criteria of connectivity and continuity helped to determine which routes needed to be implemented and when to achieve these outcomes.
- » **Consultation & Engagement:** Attendees at the second public information centres were asked to identify their top three priorities. The input was reviewed and where appropriate, incorporated into the phasing.

The intent is for the proposed phasing to be integrated into the day-to-day decision making undertaken by town staff and Council.

## 5.1.2 Network Phasing Plan

The implementation of the active transportation network for Oakville has been scheduled over a 20+ year horizon and divided into two phases.

The phasing plan is meant to be flexible and adapt to changes that occur over time such as deferred or expedited project timelines. The short-term phase is proposed to start in 2018 and occur over a 10 year horizon up to 2028. The town's annual budgeting process runs from November to December. In December 2016, the 2017 capital plan was approved by town Council outlining operating budget for various town services. The initiation of the short-term horizon is scheduled to occur in 2018 to align the budgeting process with the infrastructure recommendations outlined in the ATMP.

Implementation of active transportation infrastructure in advance of the 2018 budget will be based on the 2017 capital budget which includes projects based on the 2009 ATMP and discussions between members of the study team. Projects have been identified within each year of the short-term horizon.

**Maps 8** and **9** illustrate the proposed phasing by year for each route identified within the short-term horizon. Routes identified within the long-term phase are also identified on these maps, using one colour.

When reviewing the mapping, a number of routes within the North Oakville Secondary Planning Areas and Midtown Growth Area have not been identified within a specific year / phase. This has been done intentionally as the timing of these major road projects will be dictated by the construction timeline for the development areas.

Municipal planning documents are typically updated every five years giving municipalities an opportunity to review, revise and / or confirm proposed routes and other infrastructure recommendations. As such, the focus of the ATMP is the short-term (1-10 years), with projects identified in the long-term horizon (beyond 10 years) to be confirmed through future updates to the plan. A summary of the proposed routes, by facility type and phase, is provided in **Table 5**.

The town should adopt the proposed phasing plan as a guide for the next 10 years. The proposed routes should be reviewed on an annual basis to ensure the projects and priorities identified are feasible based on available budgets and / or coordination with other capital projects.

The phasing plan is not meant to dictate when a project is intended to commence. It is intended to be determined by town staff and Council as they proceed with the implementation of the plan.

**Table 5 – Summary of Proposed Facility Types by Phase<sup>1</sup>**

	Existing (km)	Short Term (0-10 Years)	Long Term (11-20+ Years)
Off-Road Trail <sup>2</sup>	261.9	2.4	3.6
In-Boulevard Trail	69.5	9.5	9.8
Paved Shoulder	3.2	0	0
Buffered Bike Lane	0.9	7.8	2.9
Bike Lane	71.1	30.4	1.7
Signed Route	50.9	83.4	13.2
Sidewalk <sup>2</sup>	1031.0	50.6	0

Notes:

1. Includes routes under the jurisdiction of the Town of Oakville, Conservation Halton, Ontario Parks and Metrolinx. The phasing for active transportation routes under the jurisdiction of Halton Region is not included in this plan. Refer to Technical Appendix K for the phasing of active transportation routes under the jurisdiction of Halton Region.
2. Off-road trails and sidewalks within the North Oakville Secondary Planning Areas and Midtown Growth Area have not been identified within a specific year / phase. The timing of these projects will be consistent with the construction timeline for the development areas.

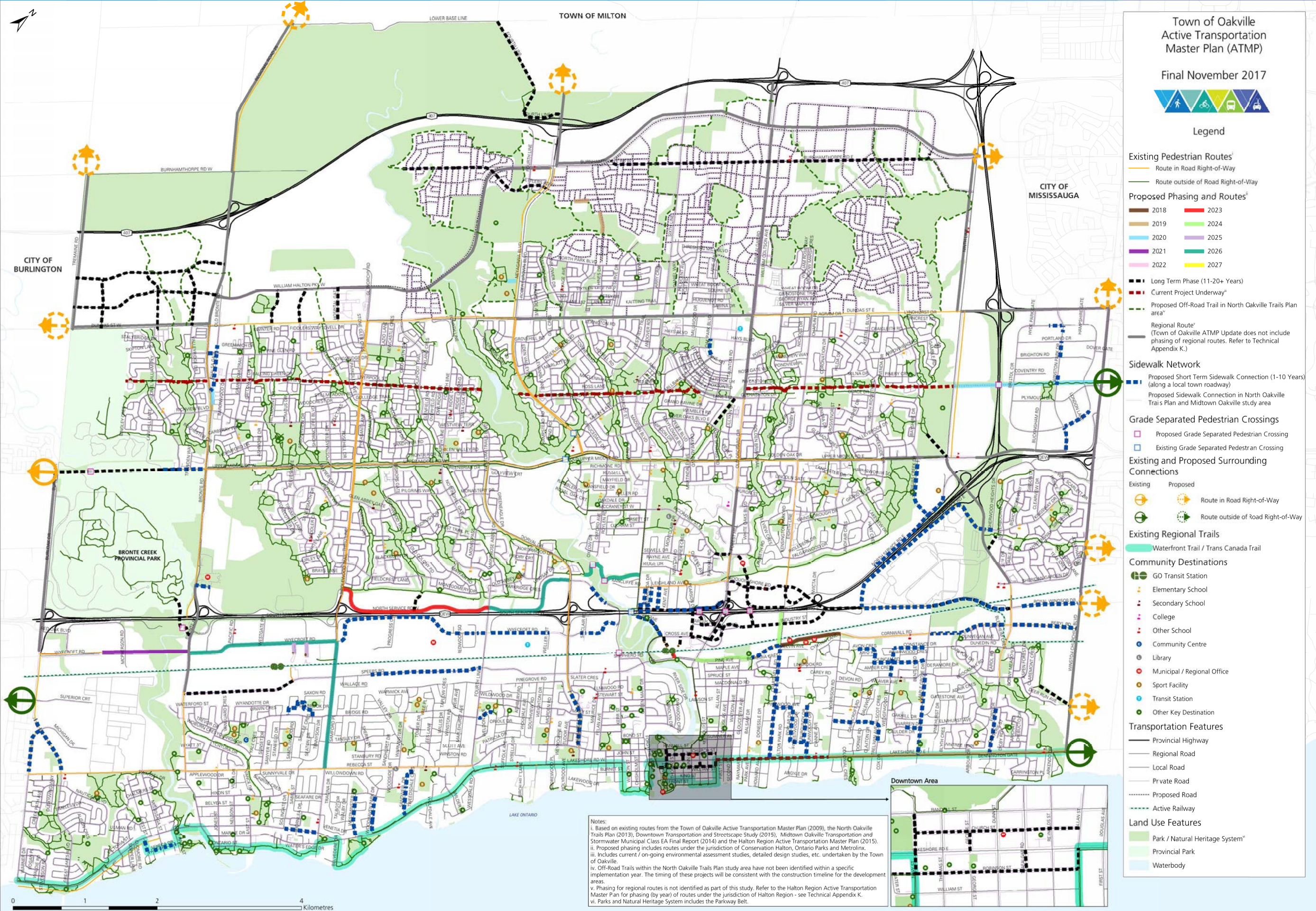
**Recommendations:**

3

Town Council should include as part of its annual budget process, funding to construct, operate and maintain the active transportation network using the phasing identified on Maps 8 and 9 as a guide.

4

Town staff should consider the ATMP recommendations prior to proceeding with all applicable capital works projects including road resurfacing, widening or rehabilitation projects and new major trail projects.



**Town of Oakville Active Transportation Master Plan (ATMP)**  
Final November 2017

**Legend**

**Existing Pedestrian Routes\***

- Route in Road Right-of-Way
- Route outside of Road Right-of-Way

**Proposed Phasing and Routes\***

2018	2023
2019	2024
2020	2025
2021	2026
2022	2027

- Long Term Phase (11-20+ Years)
- Current Project Underway\*
- Proposed Off-Road Trail in North Oakville Trails Plan area\*
- Regional Route\* (Town of Oakville ATMP Update does not include phasing of regional routes. Refer to Technical Appendix K.)

**Sidewalk Network**

- Proposed Short Term Sidewalk Connection (1-10 Years) (along a local town roadway)
- Proposed Sidewalk Connection in North Oakville Trails Plan and Midtown Oakville study area

**Grade Separated Pedestrian Crossings**

- Proposed Grade Separated Pedestrian Crossing
- Existing Grade Separated Pedestrian Crossing

**Existing and Proposed Surrounding Connections**

Existing	Proposed	Description
		Route in Road Right-of-Way
		Route outside of Road Right-of-Way

**Existing Regional Trails**

- Waterfront Trail / Trans Canada Trail

**Community Destinations**

- GO Transit Station
- Elementary School
- Secondary School
- College
- Other School
- Community Centre
- Library
- Municipal / Regional Office
- Sport Facility
- Transit Station
- Other Key Destination

**Transportation Features**

- Provincial Highway
- Regional Road
- Local Road
- Private Road
- Proposed Road
- Active Railway

**Land Use Features**

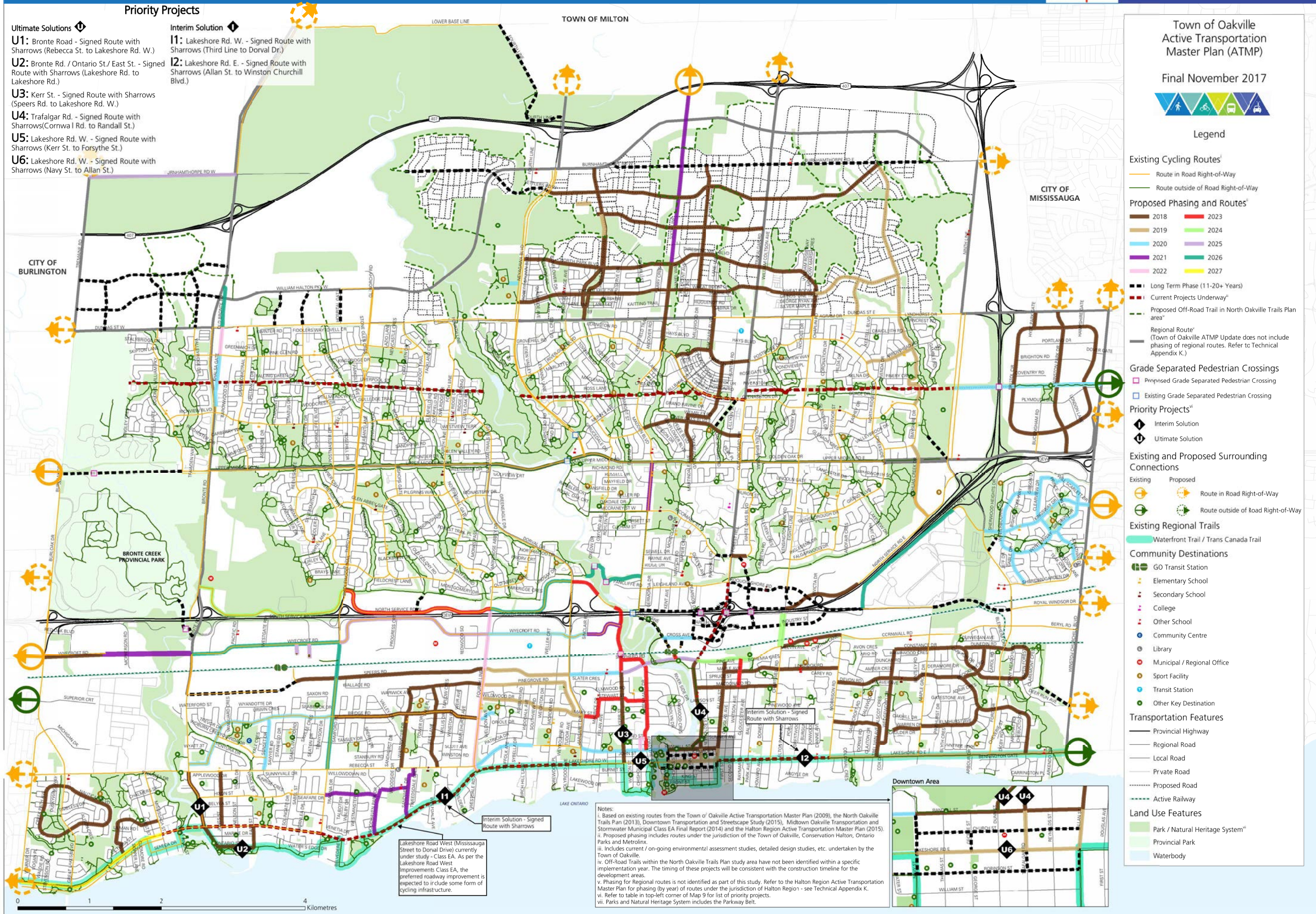
- Park / Natural Heritage System\*
- Provincial Park
- Waterbody

**Notes:**

- Based on existing routes from the Town of Oakville Active Transportation Master Plan (2009), the North Oakville Trails Plan (2013), Downtown Transportation and Streetscape Study (2015), Midtown Oakville Transportation and Stormwater Municipal Class EA Final Report (2014) and the Halton Region Active Transportation Master Plan (2015).
- Proposed phasing includes routes under the jurisdiction of Conservation Halton, Ontario Parks and Metrolinx.
- Includes current / on-going environmental assessment studies, detailed design studies, etc. undertaken by the Town of Oakville.
- Off-Road Trails within the North Oakville Trails Plan study area have not been identified within a specific implementation year. The timing of these projects will be consistent with the construction timeline for the development areas.
- Phasing for regional routes is not identified as part of this study. Refer to the Halton Region Active Transportation Master Plan for phasing (by year) of routes under the jurisdiction of Halton Region - see Technical Appendix K.
- Parks and Natural Heritage System includes the Parkway Belt.











## 5.1.3 Priority Projects

The town will achieve its long-term vision for active transportation through the continuous implementation of projects on an annual basis. Following the adoption of the ATMP, the town is recommended to proceed with the implementation of a number of projects which reflect the priorities of town staff and residents, as well as missing links and gaps in the existing system. Eight (8) priority projects have been selected and they are organized into two categories – **ultimate solutions** and **interim solutions**.

**Ultimate Solutions:** represent a project where the current conditions (e.g. roadway width, boulevard width, lifecycle of roadway, etc.) are supportive of the implementation of the preferred facility type.

**Interim Solutions:** represent a project where the current conditions are not supportive of the implementation of the preferred facility type, but a design treatment is needed due to the localized documented demand. Interim solutions are typically identified where:

- » Insufficient space to accommodate the preferred facility type;
- » Environmental constraints or Environmental Assessments are needed to confirm future impacts;
- » Land is not available to the municipality to accommodate the facility type; or
- » The budget is not available within the preferred timeline to implement the ultimate design solution.

Oakville’s priority projects are illustrated on **Maps 8** and **9** and presented with two different icons.



Ultimate Solution



Interim Solution

It is important to note that although these projects have been identified to start the process of implementation in the short-term, they may not be completed until the long-term. **Table 6** summarizes the short-term priority projects.

**Table 6 - Proposed Short-Term Priorities**

Road Name	To	From	Proposed Treatment	Project Type	
				Ultimate	Interim
Bronte Road	Rebecca Street	Lakeshore Road West	Signed Route with Sharrows	●	
Bronte Road / Ontario Street / East Street	Rebecca Street	Lakeshore Road West	Signed Route with Sharrows	●	
Kerr Street	Speers Road	Lakeshore Road West	Signed Route with Sharrows	●	
Trafalgar Road	Cornwall Road	Randall Street	Signed Route with Sharrows	●	
Lakeshore Road	Kerr Street	Forsythe Street	Signed Route with Sharrows	●	
Lakeshore Road	Navy Street	Allan Street	Signed Route with Sharrows	●	
Lakeshore Road	Third Line	Dorval Drive	Signed Route with Sharrows		●
Lakeshore Road	Allan Street	Winston Churchill Boulevard	Signed Route with Sharrows		●

**Recommendation:**

- 5** The town should prioritize the implementation of the eight short-term priority projects and integrate them into the annual budget.

## 5.1.4 Outreach Strategy Implementation

In addition to infrastructure planning, design and implementation, the town will also need to coordinate and manage outreach initiatives and programs. The development, initiation and management of supportive programs is a significant task. As the town continues to grow, along with the demand for active transportation, consideration should be given to expanding the amount of staff time dedicated to coordinating implementation.

A total of 25 proposed programs and initiatives make up the outreach strategy for the Town of Oakville (see **section 4.0**). Each of the proposed initiatives is recommended to be initiated or considered for initiation within the short-term horizon. To inform implementation, the strategy identified an anticipated level of effort needed to undertake each of the proposed initiatives. The results of this exercise are documented in **Technical Appendix G**. The level of effort was represented using a percentage of time for the Sustainable Transportation Program Coordinator – the town’s implementation lead for the ATMP. Based on a work schedule of 35 hours per week, it is estimated the total annual percent of a Full Time Equivalent (FTE)’s time to champion the proposed outreach programs and initiatives will exceed 100%.

This indicates that in addition to the town’s current staffing resources, one additional staff (or more) will be needed to realistically manage and oversee the delivery of outreach programs. In order to facilitate the implementation of the proposed outreach strategy, the town should explore increasing staffing by one (1) FTE position.

The FTE would support the existing sustainable transportation program coordinator, and would be responsible for championing active transportation initiatives and programming. They would be able to dedicate sufficient time and effort to ensure that continued outreach is achieved. More specifically, an FTE would:

- » Develop education, safety and promotional materials;
- » Plan projects and initiatives to enhance local involvement;
- » Enhance existing community events to increase the profile of active transportation;
- » Develop new supportive programs that are age specific;
- » Develop monitoring, evaluating, and reporting mechanisms for all outreach components; and
- » Continue to create and maintain partnerships with all groups to further the outreach of active transportation program initiatives.

## 5.2 Implementation Processes & Tools

The implementation of the ATMP will be a collaborative and coordinated effort between town staff and its partners. A clearly documented process and set of tools are needed to ensure that implementation is consistent. The following sections include proposed strategies and tools to help guide future decision making.

### 5.2.1 The Implementation Process

When proceeding to the detailed design and implementation phase, next steps will evolve through environmental assessment planning and capital budget processes. In addition to these ongoing planning processes, a step-by-step process specific to active transportation implementation has been outlined.

The process is illustrated in **Figure 14** and was originally identified in the 2009 ATMP. Since that time, it has been reviewed and revised to address current best practices and lessons learned. The process is intended to be used by the town to guide future planning, design and implementation. Additional details on each of the stages is provided in **Technical Appendix H**.

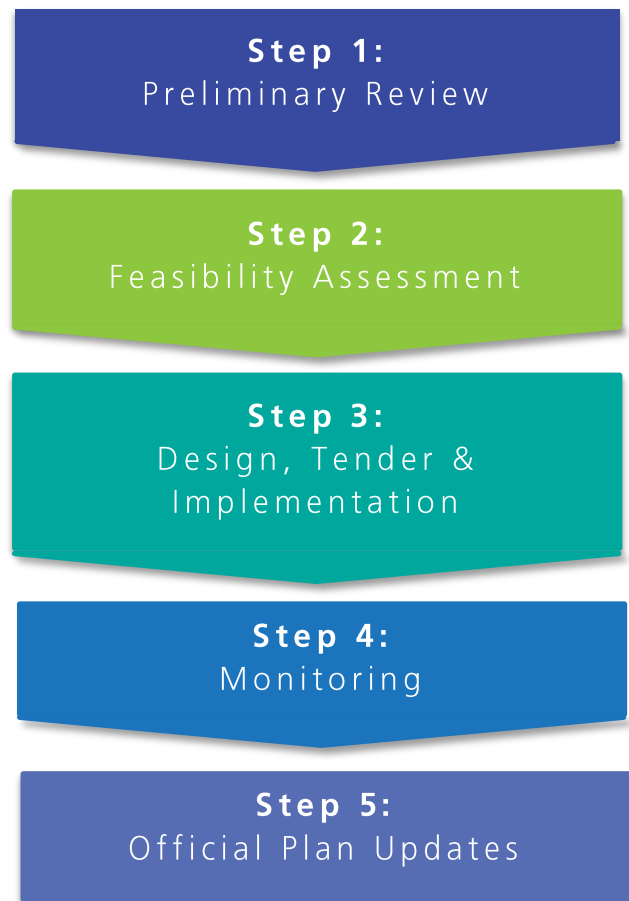


Figure 14 - ATMP Update Implementation Process

## 5.2.2 Municipal Class EA Process

Many large scale infrastructure projects require the completion of an Environmental Assessment. As a result of completing the Oakville ATMP the town will have completed the necessary steps to fulfill Phases 1 and 2 of the Municipal Class EA (MCEA) process. Further assessment and environmental impacts will need to be discussed in the future stages of the routes implementation to determine next steps. A number of updates have been made to the MCEA Act which pre-approves the construction or operation of walking and cycling facilities both within and outside of the road right-of-way. The following are examples of the changes that were made by the Province:

- » Normal or emergency operation and maintenance of linear facilities now includes multi-use trails, and are pre-approved;
- » Projects where the proposed improvement does not require significant changes to the roadway or where traffic impacts have been studied and mitigated;
- » Construction or removal of multi-use trails within existing or protected rights-of-way are pre-approved; and
- » Construction or removal of multi-use trails including water crossings outside existing rights-of-way identify cost thresholds.

Projects valued between \$3.5 and \$9.5M should adhere to Schedule B, and over \$9.5M should adhere to Schedule C. The exemption is maintained for smaller projects and larger projects are to follow a well-accepted and proven process.



Schedule A and A+ projects are considered pre-approved and do not require a full Class EA. Using the information made available during the network development process, each route was reviewed and a preliminary schedule was identified. The results are documented in **Technical Appendix I**. The results of this exercise indicated that the majority of the proposed projects are either A or A+ schedule, or are considered part of a large scale construction project that has already been identified by the town.

Though these results indicate a more streamlined approach for implementation, the town will need to undertake a more detailed investigation of the environmental impacts to determine the EA schedule of each project as the project moves forward from planning through to implementation.

When making a determination regarding an appropriate MCEA schedule, other site specific factors including potential impacts to natural areas must be considered. Based on this assessment, the town will need to confirm whether a higher order schedule may be required.

Depending on the nature of the project, the appropriate form of consultation (i.e. public information centres, workshops, meetings, etc.) with both the public (those directly affected by the project), as well as interested community members and stakeholders, will need to be investigated and confirmed.

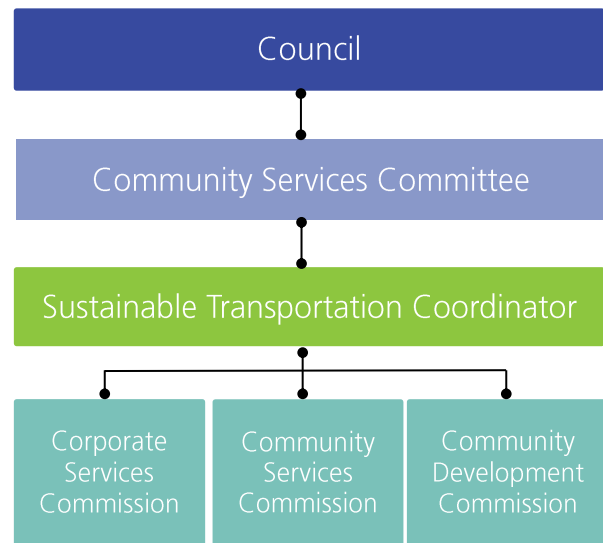
## 5.2.3 Roles and Responsibilities

With numerous recommendations, it is important to define who will lead, support or contribute to their implementation. Implementation should be a collaborative effort. Without partnerships and ongoing communication and coordination, implementation of the master plan may see road blocks. Within the Town of Oakville, implementation of the ATMP will be coordinated by staff in various departments. A suggested reporting structure for managing and implementing the ATMP is presented in **Figure 15**.

Ultimately, the ATMP is approved by Council and projects are scheduled on an annual basis; however, on a day to day basis, the town's sustainable transportation program coordinator is responsible for managing the various components of implementation, including infrastructure and programming with input from other departments and partners.

As it stands, the active transportation portfolio at the Town of Oakville requires a vast amount of effort, beyond what can be completed by one individual.

As noted above, the assessment completed to understand the level of effort needed to facilitate the implementation of the proposed outreach strategy revealed that additional support for the current sustainable transportation program coordinator will be needed in the form of one extra FTE. This individual would directly support the sustainable transportation program coordinator and would be responsible for the day to day coordination of the plan.



**Figure 15 - ATMP Reporting Structure**

Because of the current town reporting structure, as well as the numerous components of plan implementation, who will address the implementation of various components of the ATMP is important to understand. Some assumptions have been generated related to the roles and responsibilities for the individuals and departments identified in the reporting structure noted above. These assumptions should be reviewed by town staff and used to inform communication and education materials to more clearly inform stakeholders. **Table 7** provides an overview of the proposed roles and responsibilities.

**Table 7 - Internal Town Roles and Responsibilities**

Town Staff / Department	Responsibility								
	Planning	Design	Policies	Construction	Operation	Maintenance	Enforcement	Education	Promotion
Sustainable Transportation Coordinator	●	●	●	●	●			●	●
Full Time Employee (FTE) Position								●	●
Corporate Services Commission	●			●					
Community Services Commission	●	●	●	●	●	●			
Community Development Commission	●	●	●	●	●	●			

As noted throughout the ATMP report, the implementation of the proposed network and the outreach strategy will require significant coordination and collaboration between town staff and its partners. A strong foundation of partnerships have been established through the implementation of the 2009 plan, and should continue to be enhanced as the town proceeds with the implementation of the updated plan.



Understanding the various external partners and clearly identifying a strategy for how they will be involved in the implementation of the plan will help to streamline future communication with these groups and effectively strategize about who will be involved in which initiatives. **Table 8** identifies some of the potential partners and how they could contribute to the implementation of the master plan.

**Table 8 - Overview of Potential Partners & Potential Roles**

PARTNER	POTENTIAL ROLE
Halton Region Public Works Department	Implement linkages along regional roads which provide connections into and out of Oakville.
Ministry of Transportation Ontario (MTO)	The implementation of proposed active transportation linkages which impact provincial highways and require approval by the Ministry of Transportation.
Halton Region Health Department	Promote the connection between health and AT as well as safe walking / cycling practices and policies.
Halton Region Police Service	Monitor and enforce safe and proper cycling / pedestrian activities and provide the town with up to date information on collisions or related requests.
School Boards	Provide input on opportunities to partner with local schools who may be interested in participating in local events.
Conservation Halton	Provide input on the potential connections which can be made into local conservation lands and opportunities to highlight local natural areas. The conservation authority also has other activities which they are required to undertake based on the Conservation Authorities Act Regulation (Section 28). Conservation Halton plays many roles in the planning review process, both as an advisory agency and regulatory agency, pursuant Ontario Regulation 162/06.
Post-Secondary Institutions	Sheridan College is a key destination in Oakville. Staff at Sheridan College should be engaged to ensure that connectivity and continuity in the network is achieved. In addition, other opportunities to partner with the organizations for local events and educational opportunities should be explored.

PARTNER	POTENTIAL ROLE
Regional Stakeholders	Regional stakeholders such as the Ministry of Transportation, Trans Canada Trail Association and Share the Road Cycling Coalition should be engaged as the ATMP update is implemented to: encourage and support recreational and commuter cycling and active and healthy lifestyles; help municipalities advance safe cycling networks; enhance infrastructure to make roads safer for all road users; and to build on cycling tourism.
CAN-Bike Program	Continue to work with CAN-Bike Develop to further promote and teach a series of CAN-BIKE courses to residents on safe cycling practices ranging from anticipating traffic dynamics, recognizing road hazards and collision-avoidance techniques to increasing confidence and enjoyment on the road.
Ontario Parks	Provide input on the potential connections which can be made into Bronte Creek Provincial Parks and opportunities to highlight areas of natural significance.
Local Advocacy Groups / Organizations	Local advocacy groups are represented by town residents of varying ages and abilities. These groups have first-hand knowledge of routes in Oakville and may identify opportunities for local events to promote active transportation

As noted above, the partners noted in **Table 8** are not intended to be a fulsome list of partners. There are some that will likely play a more prominent role in the design and implementation of routes / facilities while others will influence the development and delivery of supportive programs. The proposed partners are intended to be reviewed and updated by town staff as opportunities arise. Though not identified, other partners may emerge as resources. Partnerships should be a priority and future opportunities to partner with external agencies and organizations should continue to be identified.

## 5.2.4 Network Management Tools

Implementation of the ATMP will require a tool to help track the work that is being completed. The GIS database prepared as a result of the network development process can be used by town staff as a mean of tracking implementation of the active transportation network as well as an overall asset management tool.

Once the ATMP has been adopted, the information contained within the GIS database should be integrated into the town's GIS database and should be managed by staff. The GIS database is a tool which can be used in the following ways:

- » To develop a KMZ or KML file which can be overlaid into Google Earth to facilitate internal and external communication regarding the network;
- » To track implementation and confirm the feasibility of proposed facilities, as well as network priorities;
- » To document the implementation of new routes by updating the facility type component of the database resulting in fewer master plan updates; and
- » To update the town's map of walking and cycling routes.

When developing tools, it is important to acknowledge that not all people have access to the programs needed. As such, the team has developed an Excel version of the information presented in GIS. The tables are formatted to mimic the formatting of the GIS database – see **Technical Appendix I.**

This appendix should be used as a tool by town staff to track implementation of the proposed routes / facility types and to inform future budgeting and decision making. Key information contained within this appendix includes:

- » Visual representation of the line type by facility type displayed on Maps 5 and 6;
- » Unit costs applied by facility type
- » Break-down of capital approved, municipal and regional projects;
- » Start and end point, total length and jurisdiction of route
- » Proposed route hierarchy consistent with Maps 3 and 4; and
- » Information regarding motor-vehicle operating speeds, AADT volumes and field investigation observations of each route.

## *Recommendations:*

6

The town should consider using the proposed reporting structure and roles and responsibilities identified within the ATMP when moving forward with implementation.

7

Town staff should periodically review the potential opportunities for additional partners to support the town in the implementation of the ATMP.

8

Town staff from various divisions should continue to work together to coordinate the implementation of ATMP. A point person from each division should be identified to track progress and next steps.

9

Town staff should investigate the environmental impacts and determine the appropriate schedule for each individual project to inform the necessary next steps that should be completed.

10

Town staff should maintain and update annually the Geographic Information System (GIS) based Network Management Tool developed as part of the ATMP and use this tool to assist in planning for the implementation and management of active transportation infrastructure.

## 5.3 Operation & Maintenance

Maintenance practices vary by municipality and the maintenance approach varies by facility type. The appropriate maintenance of active transportation facilities can help to leverage capital investments, support user safety and comfort while also increasing the lifespan of the infrastructure.

There are active transportation maintenance practices for all seasons including:

- » Sweeping;
- » Surface repairs;
- » Pavement markings & signage;
- » Vegetation management;
- » Snow clearance / ice control; and
- » Drainage improvements & drainage grates.

As the network expands, the maintenance practices and level of service limits will need to be adapted to address new facilities, expectations of the public, and minimum standards. The town should also consider having seasonal active transportation networks (i.e. summer network, winter network), as some of the off-road trails and pathways are closed in the winter months.

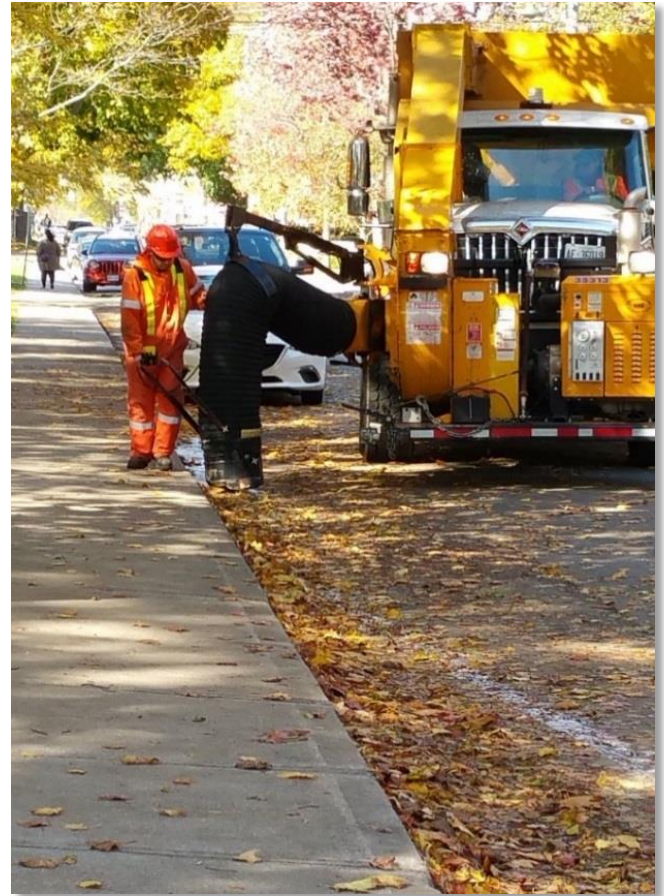
In principle, priority should be given to those routes and roads where there is a high volume of automobile, cyclist and pedestrian traffic. Identifying these core connections within Oakville and making the necessary bylaw and policy revisions to allow for them to receive immediate maintenance should be considered.

This master plan provides information on suggested maintenance approaches and level of service thresholds that should be used to inform an update to the town's own maintenance procedures. The following sections provide the town with references and resources associated with active transportation infrastructure maintenance. The town should proceed to update its on and off-road route maintenance level of service practices, and assess the impact to operating budgets, equipment needs and resources.

## 5.3.1 What are the standards?

Municipalities currently use the Provincial Minimum Maintenance Standards ([here](#)) to inform maintenance practices. The *Ministry of Transportation Regulations 239/02* outlines the minimum maintenance requirements. The standards are based on the potential for hazardous road conditions for motorists. Though not currently considered as part of these standards, bicycles are also considered vehicles under the Highway Traffic Act (HTA) and users of the roadway. With their lower threshold for conditions and deficiencies (i.e. vulnerability to potholes and cracks), additional consideration for standards that accommodate all users, including cyclists is needed. The minimum standards (currently being updated) outlined in the regulations include:

- » Monitoring of conditions including frequency of patrolling to check for conditions, weather monitoring and snow accumulation;
- » Addressing winter road conditions including snow accumulation and ice formation on roadways;
- » Potholes, shoulder drop-offs, cracks and debris;
- » Lighting, signs and traffic control signals;
- » Bridge deck spalls; and
- » Roadway and sidewalk surface discontinuities.



## 5.3.2 What is being done in Oakville?

The town's current maintenance practices are consistent with the provincial Minimum Maintenance Standards. To maintain the road infrastructure in a state of good repair, the town provides cold mix patching, hot mix paving, shoulder maintenance, crack sealing, road resurfacing, sweeping and flushing, curb and gutter repair, bridge and culvert repair, sidewalk and pathway repair / cleaning, snow plowing, salting, sanding and snow removal.

In addition to these services, the town provides maintenance operations to preserve the roadway aesthetics including litter control, street sweeping and bulk leaf collections.

Oakville's estimated maintenance cost during winter months is approximately \$1,800 per lane kilometre (one side of the road). The estimated maintenance cost during non-winter months is approximately \$5,900 per lane kilometre.

The level of service applied in Oakville is defined using three classes:

- » **Primary roads:** streets with the greatest volume of traffic; typically arterials roads.
- » **Secondary Roads:** streets that lead to primary roads; typically collector roads.
- » **Residential Roads:** streets with the lowest volume of traffic.

Primary and secondary roads are typically cleared first to ensure that residents and emergency vehicles can safely travel to hospitals, schools and workplaces, and access public transportation systems. Residential streets are cleared only after snow accumulates in excess of 7.5 centimetres. When all streets require plowing, they are to be cleared within 24 hours after the end of the storm.

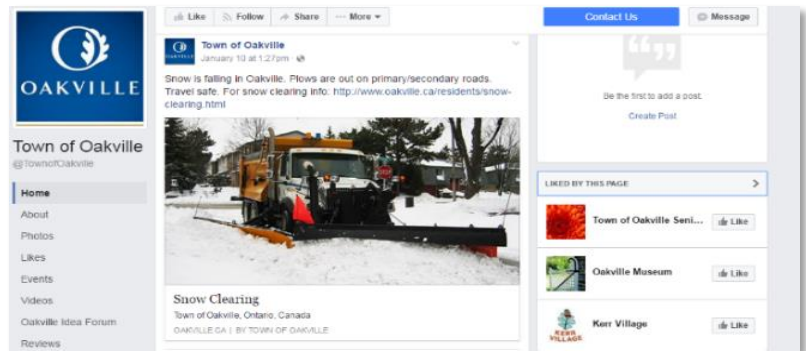
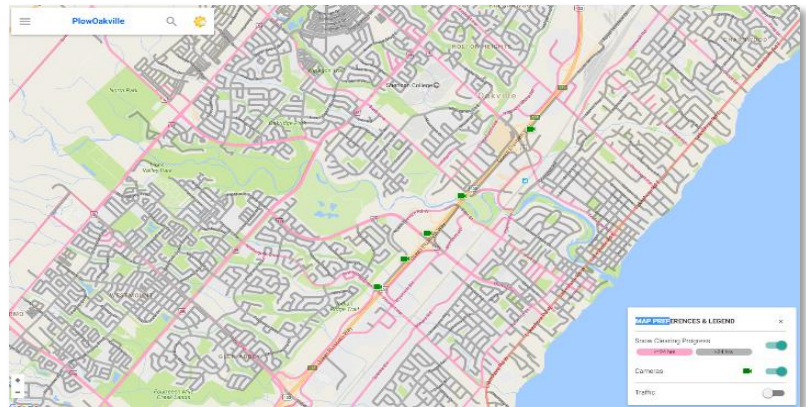
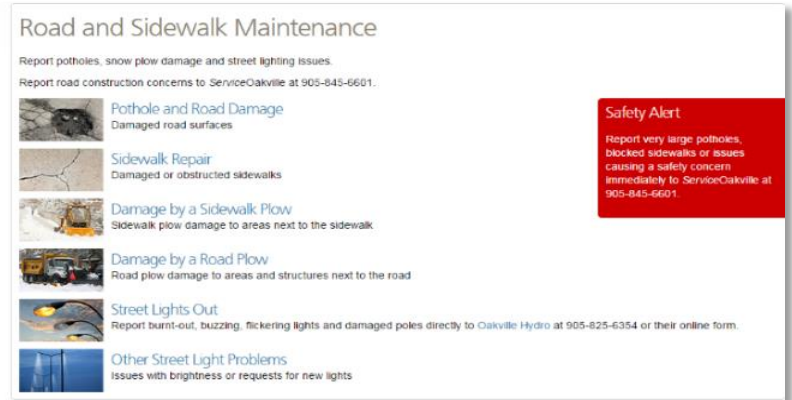
Sidewalks are cleared after snow accumulates in excess of 5 centimetres, and only after roads are cleared. Sidewalks located on primary and secondary roads with schools are plowed first, followed by residential sidewalks.

One of the key components of maintenance and monitoring, and a way to manage risk and liability, is effective documentation and tracking of maintenance practices. The following describes tools that town staff are currently using to receive and track requests / feedback on their winter and annual road maintenance operations.

Report a Program –by phone or online ([here](#)) –a tool that allows residents to report a problem or make a service request online, and issues are typically inspected within three to five business days.

PlowOakville ([here](#)) – an online mapping tool that uses GPS technology to track the progress of the town’s plows as they clear roads during a snow event.

Social media – Facebook ([here](#)) and Twitter ([here](#)) – is monitored and maintained as a method of tracking issues that arise. Issues flagged through social media are addressed when possible. Updates and information regarding maintenance operations are also shared on social media.





### 5.3.3 Future Considerations

To support active transportation as a more viable transportation mode, there needs to be consideration for additional maintenance. Enhanced maintenance could include repairs to potholes, shoulder drop-offs, pavement cracks and line markings, replacement of route signage as well as the removal or sweeping of debris.

Maintenance within Oakville is being undertaken consistent with the Minimum Maintenance Standards. These standards are currently being updated; however, once the standards have been confirmed and adopted, the town should consider developing a level of service standard specifically related to active transportation. Consideration for an expanded maintenance and operations budget should be explored as the network is implemented. The budget will depend strongly on the types of facilities that are implemented and their intended use.

To inform future budgeting and costing, additional information is needed on the typical cost for various types of route and facility maintenance. **Table 9** summarizes the annual maintenance costs for the active transportation network at full build-out.

The costing was established based on typical maintenance costs for both seasonal and winter maintenance. Typical costs and assumptions regarding what is included in each cost are summarized in **Technical Appendix I**. This appendix should be used as a resource by town staff to inform future costing and budgeting associated with facility and route maintenance.

**Table 9 - Estimated Active Transportation Network Maintenance Costs**

	Total Km (Existing & Proposed)	Per km Cost (per year) <sup>1</sup>	Cost per Year
Off-Road Trail	311.5	\$1,060	\$330,178
In-Boulevard Trail <sup>2</sup>	138.9	\$4,235 - \$4,860	\$588,132 - \$674,929
Paved Shoulder	1.0	\$6,260 - \$7,660	\$6,141 - \$7,514
Buffered Bike Lane	17.8	\$8,050 - \$9,650	\$143,289 - \$171,769
Bike Lane	105.4	\$6,650 - \$8,050	\$700,794 - \$848,330
Signed Route	147.2	\$260	\$38,266 - \$38,266
Sidewalk	1081.6	\$2,550	\$2,758,108
<b>Total</b>			<b>\$4,564,909 - \$4,829,094</b>

Notes:

1. The cost to maintain facilities may range due to several factors including type of facility, age of facility, materials used, width of facility and frequency of maintenance.
2. Includes the cost to maintain existing and proposed in-boulevard trails located in town road rights-of-way and existing in-boulevard trails located in regional road rights-of-way. This table does not include the cost to maintain proposed in-boulevard trails located in regional road rights-of-way.

On-road active transportation facilities should be maintained at the same standard as the rest of the roadway which means that no additional cost is accrued for the maintenance of these facilities. The maintenance costs associated with in-boulevard trails located in regional road rights-of-way is the responsibility of the town. It is recommended that the town adjust and review maintenance budgets on a yearly basis to reflect newly constructed in-boulevard trails located in regional road rights-of-way as well as in-boulevard trails under the jurisdiction of other partners.

## *Recommendations:*

11

The town should identify specific maintenance and operation practices for specific facility types included in the active transportation network. As new facilities are implemented, the town should consider whether the current maintenance practices address them appropriately.

12

The town should review and revise the annual sidewalk maintenance budget as they increase the number of new sidewalks implemented as a result of the ATMP.

13

The town should develop a level of service standard for the maintenance and operations of active transportation facilities during the winter months.

## 5.4 Monitoring & Evaluation

Implementation does not end with construction. Evaluating and documenting what is achieved will help assess the influence the infrastructure and programs have on achieving master plan goals and objectives.

Performance measures can help to prioritize projects, track project progress and gauge user interest. Research shows that meaningful and context-sensitive performance measures can help to:

- » Demonstrate the value of pedestrian and bicycle projects to citizens and elected officials;
- » Track the success of an active transportation program, policy, or facility;
- » Inform smarter investments through data-driven measures of success;
- » Comply with funding requirements at varying levels of government;
- » Produce a better built environment for walking and bicycling;
- » Provide information to engage a broad set of stakeholders in project and program identification and prioritization; and
- » Capture the value of new and innovative datasets and data collection methods for the active transportation field.

The type of performance measures applied by municipalities can vary depending on desired outcomes available data.

As performance measures become more widely used by municipalities, the need to incorporate them into municipal planning processes becomes increasingly more important. Specifically, the development and documentation of performance measures to help inform the annual budgeting process to leverage increased capital investments that support the implementation of the plan.

Information contained within these sections has been developed based on provincially recognized standards and processes for performance measures, current practices in Oakville, and future considerations

### 5.4.1 What are the standards?

In 2000, the Ontario Ministry of Municipal Affairs and Housing (MMAH) developed the Municipal Performance Measurement Program (MPMP). The MPMP requires Ontario municipalities to annually measure and report performance results to their taxpayers. The MPMP consists of performance measures that are organized into 12 municipal service areas. **Table 10** provides a summary of MPMP performance measures and a broad objective of each measure as it relates to Roadways and Parks & Recreation service areas.

Data is collected through the annual Financial Information Return (FIR). The FIR is the main data collection tool used by the MMAH containing a standard document to be used and submitted annually by all Ontario municipalities. Data collected through the MPMP is also used by the Municipal Benchmarking Network Canada (formerly Ontario Municipal Benchmarking Initiative – OMBI). The tool highlights over 850 performance measures used by municipalities across Ontario and Canada and publishes best practices in service delivery methods.

**Table 10 - Summary of Municipal Performance Measures**

Service Area	Objective	Measure
<b>ROADWAYS</b>		
Paved Roads	Efficient maintenance of paved roads	Operating costs for paved (hard top) roads per km
Unpaved Roads	Efficient maintenance of unpaved roads	Operating costs for unpaved (hard top) roads per km
Winter Maintenance of roadways	Efficient winter maintenance of roadways	Operating costs for winter maintenance of roadways per lane km maintained in winter
Pavement Condition	Pavement condition meets municipal objectives	Percentage of paved lane km where the condition is rated as good to very good
Response to winter storm events	Appropriate response to winter storm events	Percentage of winter events where the response met or exceeded locally determined road maintenance standards.
<b>PARKS AND RECREATION</b>		
Trails	Trails provide recreation opportunities	Total kilometres of trails per 1,000 persons

## 5.4.2 What is being done in Oakville?

Consistent with requirements set-out by the Ontario MMHA, the Town of Oakville is enrolled in the Municipal Performance Measurement Program to collect and report on performance data for various town services areas. The data is used to support the town's annual targets and reporting initiatives including:

**Performance-Based, Program-Based (PB2) Budgeting system:** PB2 focuses on programs rather than traditional line item budgeting in the town's annual capital plan. Emphasis is on the allocation of resources to programs based on desired outcomes and measurement of actual program results against expected outcomes.

**Bi-annual citizen surveys:** Conducted every two years to measure resident satisfaction with town programs and services, and to help set Council's strategic priorities.

**Annual Strategic Plan Review:** Documentation of the town's progress toward implementation of the Council's four-year strategic work plan.

**Annual Accomplishments Report:** A summary of Oakville's annual accomplishments specific to the environment, economic development, fiscal sustainability and town operations.

In 2010, the town launched an online performance measurement web page ([here](#)) to make information about key performance measures more available to the public. The online tool provides an overview of performance targets and data for eight services areas that include transportation, natural environmental and sustainability. Some of the key areas measure data related to active transportation and recreational trails.

The active transportation target is infrastructure focussed and measures the total kilometres of new bike lanes, signed route, off-road trails and sidewalks constructed and / or funded by the town.

### 5.4.3 Future Considerations

Identifying and applying a set of performance measures can help staff assess the level of influence active transportation infrastructure and programs have to achieve the plan's vision and objectives. The data collected to quantify and measure performance targets can help inform future priorities and rationalize increased capital investments that support future growth of active transportation in Oakville.

A number of performance measures have been identified for Oakville's review and consideration. They are included in **Technical Appendix J**. The town should review the performance measures and revise them to more appropriately align with the objectives and goals of the ATMP.

Once the performance measures have been refined, the town should identify an approach to implement the measures and articulate the roles, responsibilities and partnerships that will be needed to facilitate their use and application as well as establish a timeline to do so.

#### *Recommendation:*

14

The town should review, revise and adopt the performance measures as outlined in the plan to establish a process where data is collected every two years to measure performance of the ATMP.

## 5.5 Risk Management & Liability

The way in which active transportation routes are designed and maintained can have a direct influence on liability. On-road cycling facilities are compared against the same liability criteria as roadways and sidewalks which means the town could be partially liable if the facility is improperly designed, constructed or maintained. Though trails are separated, because a bicycle is legally defined as a vehicle, those trails where cycling is permitted may need to adhere to the same requirements as a roadway / highway. This further reinforces the importance of adhering to provincial and national design guidelines and standards as they provide the greatest legal protection.

In addition to using guidelines and standards to mitigate risk and liability issues, the town should also consider the following when designing, implementing and maintaining active transportation facilities:

- » Improve the physical environment, increase public awareness of the rights and obligations of users, and improve access to educational programs;
- » Select and design facilities in compliance with the highest prevailing standards;
- » Design concepts should comply with all applicable laws and regulations;
- » Conform to acceptable standards, and if hazards cannot be removed, they should be isolated with a barrier or notified by clear warning signs;
- » Monitor on and off-road facilities through regular patrols, document the physical conditions and operations, and promptly respond as needed;
- » Keep written records of all monitoring and maintenance activities;
- » Avoid using descriptions such as “safe” or “safer” for routes;
- » Maintain proper insurance coverage;
- » When considering new active transportation routes or modifications to the system, document the assessment tool used to select the preferred facility; and
- » Consider using principles outlined in the Centre for Sustainable Transportation’s Child and Youth Friendly Land Use and Transport Planning Guidelines.

### **Recommendation:**

15

The town should review and adopt the appropriate risk management and liability prevention strategies into day-to-day decision making related to active transportation planning, design and maintenance.



## 5.6 Development Application Review Considerations

In Oakville, Development Application Guidelines / Terms of Reference have been created to guide the preparation of a number of studies that are required to assess various technical aspects of a submitted development application. The guidelines / terms of reference for each submission requirement provide a brief overview of the specific scope of work and the purpose to be addressed in each report. The guidelines/terms of reference are dependent on the type of application and the specifics of the proposal being submitted to the town. The guidelines / terms of reference are grouped into the categories below:

- » Description of Site and Proposal
- » Engineering Considerations
- » Urban Design Considerations
- » Environmental Considerations
- » Transportation Considerations
- » Financial Considerations
- » Cultural Considerations

As part of the update to the Town of Oakville’s ATMP, the recommendations and strategies identified in the original 2009 plan were reviewed to ensure consistency with the town’s current guidelines / terms of reference and best practices.

Consideration and integration of active transportation is an essential component

to a study process and completion for many town projects. Error! Reference source not found. summarizes the various supporting studies and materials that may be required to accompany a development application. These studies in **Table 11** have the potential for active transportation to be included into the work completed.

**Table 11 – Supporting studies and materials with active transportation implications**

NAME OF STUDY OR PLAN	INTENT OF THE STUDY OR PLAN
Urban Design Brief	Describes and illustrates an overall design strategy for a proposed development
Urban Design Brief For Subdivisions	Describes and illustrates an overall design strategy for a new community
Streetscape Master Plan	Outlines a strategic approach for the creation and implementation of a unified and legible streetscape design

NAME OF STUDY OR PLAN	INTENT OF THE STUDY OR PLAN
Streetscape Plan	Illustrates proposed improvements to existing streetscapes and/or new streetscapes that demonstrate conformity with the town's design and functional expectations for municipal rights-of-way
Transportation Impact Analysis	Evaluates the effects of a proposed development on the existing road network
Pedestrian Circulation Plan	Depicts and describes how pedestrians will access and move through a proposed development
Parking Study	Estimates demand, outlines issues and shows parking layout for a proposed development

Key development studies / plans were reviewed to better understand the role of the required studies and plans in the development application review process, and to identify opportunities to improve active transportation outcomes within the review process.

The following provides a summary and key recommendations as it relates to the town's guidelines for Site Description Information, Transportation Impact Analysis, Pedestrian Circulation Plans, and Parking Studies.

## #1 Site Description Information

Site Description Information is required to support proposed development applications and comes in several forms:

- » An aerial photograph;
- » Legal plan of survey; and / or
- » A concept/site plan.

The site plan in particular has the greatest ramifications regarding active transportation. Within the existing Terms of Reference, a site plan is recommended to include existing and proposed site circulation characteristics, including the layout of access to and from the site, parking, and pedestrian and cycling circulation.

It is recommended that consideration be given to either reordering the transportation terms to show active transportation as the priority travel modes, or to replace the itemized list with a requirement to incorporate the recommendations of the TIA and Parking Study.

## #2 Transportation Impact Analysis

A Transportation Impact Analysis (TIA) evaluates the effects of a proposed development on the existing road network.

The current Guidelines/Terms of Reference requires that the study:

- Reflect a multi-modal approach to transportation planning including cyclists, pedestrians and transit
- Include traffic volumes, transit service, pedestrian and bicycle facilities and traffic volumes (current and future).

It is recommended this be supplemented by including consideration for multi-modal congestion management, with an emphasis on transit and active transportation. This will support and promote active transportation considerations for congestion management at the TIA stage of development, as well as link improvements to alternate transportation modes including transit, walking, cycling and ride-sharing. Consideration could be given to providing instructions on quantifying service levels to support engineers and planners when preparing and reviewing reports, and to explain the intent of the technical analysis for Council and members of the public.

## #3 Pedestrian Circulation Plan

A Pedestrian Circulation Plan depicts and describes pedestrian access to and movement through a proposed development. The Terms of Reference currently recommends the following:

- » Visually identify all existing and proposed pedestrian linkages through, within, and around the perimeter of the site including connections made to adjacent sites, through parking areas, and to “local transit amenities”;
- » Identify how and where the needs of pedestrians are accommodated throughout the site, including persons walking and cycling, and those with disabilities; and
- » Identify the construction specifications and materials to be used for all pedestrian linkages.

It is recommended the Terms of Reference require proposals for linkages to and from other modes of transportation (e.g. transit to pedestrian, cyclist to pedestrian, etc.). Alternatively, consideration could be given to replacing the above list with a requirement to incorporate the TIA and Parking Study recommendations.

## #4 Parking Study

The parking study is intended to estimate the demand for, outline issues with, and recommend a parking layout for a proposed development. The current Terms of Reference call for an inventory of the following:

- » Parking facilities;
- » Utilization rates of the existing facilities or proposed use during peak periods of parking demand;
- » An estimate of the parking demand generated by each component of the development (residents, employees, visitors) and;
- » An assessment of the feasibility and appropriateness of shared parking on the site.

It is also noted the Ministry of the Environment and Climate Change (MOECC) has called for the elimination of minimum parking requirements over the following five years, citing them as “a barrier to creating complete, compact and mixed-use communities,” particularly in transit corridors and other high density areas (Land-Use Planning action 1.4, Climate Change Action Plan, 2016).

It is recommended that reductions or factors related to multi-modal levels of service be included in any calculation as a separate line item under how the report should be prepared. Factors should consider multi-modal congestion management, with an emphasis on transit and active transportation. This will support and promote active transportation considerations for congestion management at the TIA stage of development, as well as link improvements to alternative transportation modes including transit, walking, cycling and ride-sharing.

Additional consideration should be taken to avoid providing any indications that an as-of-right reduction in zoning minimums would be automatically supported by staff. It is further recommended that the parking plan, when dealing with bikes, identify locations and access routes to interior storage and locker room facilities. There is no *Planning Act* ability to require or regulate such facilities, however staff can request that applicants include this level of detail in all submitted materials.

## Recommendations:

16

Town staff should review the Zoning By-Law standards related to car parking for consideration of a potential reduction to encourage people to walk, cycle, roll and take transit, and be consistent with the Ministry of the Environment and Climate Change minimum parking requirements.

17

Town staff should update the Transportation Impact Analysis Terms of Reference to include consideration for the management of congestion through the increased use of sustainable modes i.e. transit, walking, cycling, etc.

18

Town staff should update the Pedestrian Circulation Plan Terms of Reference to include a requirement to propose new linkages that connect users to and from all modes of transportation (e.g. transit to pedestrian, cyclist to pedestrian, etc.)

19

Town staff should update the Parking Study Terms of Reference to include:

- » Calculations for reductions and / or factors related to multi-modal levels of service; and,
- » Identification of locations and access routes to interior storage and locker room facilities in parking plans.

20

Recommendations included in the Transportation Impact Analysis should be considered in the Urban Design Brief and Urban Design Brief for Subdivisions and the Terms of Reference should be updated to reflect the need for these recommendations to be linked.

## 5.7 The Investment

Implementing, operating and maintaining the active transportation network and programs requires resources – both staff time and funding. In addition to proposed phasing timelines, there needs to be supportive strategies that facilitate the funding for the recommendations outlined in the ATMP update, and the individuals who are responsible for the various components of the plan.

This section provides an overview of the approach that was used to develop costing associated with the proposed network. It provides a detailed overview of these costs, as well as proposed tools to help inform and determine operating and capital budgets on an annual basis.

### 5.7.1 How was the ATMP Update costed?

An estimated cost for the implementation of the active transportation system has been developed for the town's consideration as they inform future budgets and decision making. The costing is based on a set of unit prices presented in **Technical Appendix I**. Select unit prices used to cost the network are highlighted in this appendix and should be used as a reference as projects move from the master planning stage through to detailed design and implementation.

Unit prices have been identified based on best practices from various municipalities throughout southern Ontario and reflect 2017 dollars and are blended rates. It is recognized that the level of effort will vary on a project-by-project basis and some projects could require additional work than other projects included in cost estimates. The unit prices:

- » Are intended to be used for functional design purposes as they only include the installation of facilities and do not include contingency, design and approvals costs;
- » Do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside draining works, or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways, unless otherwise noted;
- » Assume typical environmental conditions and topography; and
- » Do not include applicable taxes and permit fees – which are considered additional.

## 5.7.2 How will it be funded?

The Town of Oakville has a long-standing history of allocating funds for active transportation initiatives. The 2017 capital plan sets out a forecast of \$4,485,000 over the next ten years (2018-2027) for infrastructure and \$800,000 for outreach programs. In order to implement the network and strategies recommended in the ATMP update, additional investments will be needed from the town, its partners, and through other potential funding sources. The proposed active transportation network, and the supporting outreach strategy, have been costed and organized based on two categories – funded and unfunded projects – each explained below.

### FUNDED PROJECTS

**Annual Capital Forecasts:** Proposed infrastructure may be funded in conjunction with large-scale projects. The town's capital plan is updated on an annual basis and set-outs a 10-year forecast. When the capital plan is being updated, town staff should continue to investigate opportunities to coordinate the implementation of active transportation facilities as part of other infrastructure projects.

**Midtown Oakville Projects:** Implementation of the active transportation network, including both the on and off-road facilities and the pedestrian grade separations, are subject to future funding and timing of the road network within Midtown Oakville. The cost to build active transportation infrastructure will be part of the overall development costs, and will be integrated within the future budget forecasts for Midtown Oakville.

**Development Charges By-Law:** Future planned infrastructure (including routes / facility types) identified in the original 2009 plan is funded through budgets based on the town's Development Charges. The cost to build an active transportation facility type is part of the overall development cost, and is integrated within the development budget.

**Coordination with Regional Projects:** Implementation of the active transportation network will require coordination with on-going and future planned Regional projects. The Town of Oakville, Halton Region, and the Region of Peel should continue to work together to identify construction opportunities for the implementation of infrastructure located on roads under both Region's jurisdiction.

## UNFUNDED PROJECTS

**External Funding Sources:** There are a number of funding opportunities available at the provincial and federal level. Where possible, external funding sources should be explored such as:

- » Federal Gas Tax Fund ([here](#));
- » Provincial Gas Tax Fund ([here](#));
- » Federation of Canadian Municipalities Green Municipal Fund ([here](#));
- » Federal Infrastructure Stimulus Program ([here](#));
- » Provincial Infrastructure Stimulus Program ([here](#));
- » Ontario Municipal Cycling Infrastructure Program ([here](#));
- » Ontario Municipal Climate Change Program ([here](#)); and
- » Corporate Environmental Funds.

**Partnerships:** Partnerships have already been developed through past work implementing the 2009 plan. These partnerships, as well as new partnerships, should continue to be explored that contribute to the funding of potential programs or infrastructure. The potential partners have been identified in Table 12 and should be considered as the ATMP update is implemented.

**Economies of Scale:** Opportunities should be identified where economies of scale can be realized. As large-scale infrastructure projects are identified, consideration for opportunities to coordinate the implementation of pedestrian or cycling routes should be made.

The Town of Oakville has successfully received external funding for active transportation specific initiatives. Most recently, the Ontario150 Partnership Program, a new \$5 million provincial funding program to support new partnerships and innovative ways to engage youth, was awarded. Town staff submitted a grant application in partnership with Strava Inc. to engage and collaborate with 150 youth (ages 15-19). The intent of the program is to partner with receptive secondary schools and school boards to:

- » Track routes students use to get to and from school;
- » Track routes to other destinations via bicycle, walking, rollerblading, skateboarding, etc.;
- » To educate students and parents about different travel modes to and from school;
- » To collect information on school travel patterns that could help to inform potential future infrastructure improvements and identify existing barriers; and
- » Encourage sustainable communities by promoting physical and mental health.



Consistent with the program requirements, the goal of this project is to use innovative techniques that will engage youth to track their travel and encourage active transportation and healthy living. This project is meant to offer Oakville youth the skills and resources to take active roles in the community, promote sustainable travel within the community, and raise awareness on the many benefits of active transportation.

It is also recommended that the town continue to explore options to fund programs or infrastructure in partnership with the Federal Government. Over the next 12 years, the Federal Government has committed to fund \$180 million for new investment in infrastructure. Town staff should assess potential funding streams from the Federal Government (e.g. Public Transit Infrastructure, Green Infrastructure, etc.) to help support the implementation of the ATMP.

The town should leverage its strong local community partners such as the school boards, community residents associations, regional health representatives, and advocacy groups, etc., to engage the targeted youth groups and encourage participation from multiple opportunities.

### **Recommendations:**

21

Town staff should continue to identify projects which can be funded by existing programs established by various service areas within the town.

22

The town should continue to explore external funding sources and partnerships to help fund the proposed “enhancements” as well as other programs and promotional initiatives.

23

The town should continue to identify opportunities to coordinate large-scale capital projects to achieve economies of scale and build the costs for cycling facilities into those budgets.



### 5.7.3 How much will it cost?

The estimated cost to implement the proposed active transportation network, programs and grade separated pedestrian crossings is presented in **Table 12**. The table is organized into two categories – funded projects and unfunded projects – and outlines the estimated costs for all the jurisdictions responsible to implement the ATMP.

**Table 12 - Estimated Cost to implement the Oakville ATMP<sup>1</sup>**

	Oakville	Metrolinx	Conservation Halton	Ontario Parks	Total
<b>FUNDED PROJECTS &amp; PROGRAMS</b>					
Short Term AT Routes / Facilities	\$9,754,266	-	-	-	\$9,754,266
Long Term Routes AT / Facilities	\$2,840,376	-	-	\$207,084	\$3,047,460
Grade Separated Pedestrian Crossings <sup>2</sup>	\$10,900,000	-	-	-	\$10,900,000
AT Programs & Initiatives <sup>3</sup>	\$800,000	-	-	-	\$800,000
<b>Total Funded</b>	<b>\$24,294,642</b>	<b>\$0</b>	<b>\$0</b>	<b>\$207,084</b>	<b>\$24,501,726</b>
<b>UNFUNDED PROJECTS &amp; PROGRAMS</b>					
Short Term AT Routes / Facilities <sup>4</sup>	\$16,182,993	\$122,400	\$269,295	-	\$15,574,688
Long Term Routes AT / Facilities	\$75,780	\$70,441	-	-	\$146,221
AT Related Studies / Investigations <sup>5</sup>	\$2,000,000	-	-	-	\$2,000,000
Grade Separated Pedestrian Crossings <sup>6</sup>	\$900,000	-	-	-	\$900,000
AT Programs & Initiatives	\$3,695,000	-	-	-	\$3,695,000
<b>Total Unfunded</b>	<b>\$22,853,773</b>	<b>\$192,841</b>	<b>\$269,295</b>	<b>\$0</b>	<b>\$23,315,909</b>
<b>TOTAL (FUNDED + UNFUNDED)</b>					
<b>Total</b>	<b>\$47,148,115</b>	<b>\$192,841</b>	<b>\$269,295</b>	<b>\$207,084</b>	<b>\$47,817,635</b>

**Notes:**

1. The capital cost of active transportation facilities located in Oakville under the jurisdiction of Halton Region is captured in the Halton Region Active Transportation Master Plan (2015) and not included in this fee estimate. Refer to Technical Appendix K for active transportation routes proposed under the jurisdiction of Halton Region.
2. Estimated cost for the AT component (if not a stand-alone AT project) of proposed grade separated pedestrian crossings. Funded grade separated pedestrian crossings previously identified in the original 2009 plan and currently funded for in the Town’s DC By-Law. These crossings are proposed at Kerr Street and the existing railway (north of Speers Road); the Cross-Town Trail crossing at Highway 403; and in Bronte Creek Provincial Park (extension of Upper Middle Road at Bronte Creek).
3. \$800,000 for active transportation initiatives / programs identified between 2017 and 2025 in the Town of Oakville’s 2017 Capital Budget and 10 Year Financial Plan.
4. Includes the cost to implement sidewalks only on town roads and not does include a price for new sidewalks / improvements that may be requested by Council and / or local residents in the future e.g. ad-hoc requests.
5. Assumes \$100,000 per year to undertake active transportation related studies / investigations (e.g. feasibility studies, route corridor study, etc.)
6. Estimated cost for the AT component (if not a stand-alone AT project) of proposed grade separated pedestrian crossings. Unfunded grade separated pedestrian crossings are not included / funded for in the Town’s current DC By-Law. These crossings are proposed in Conservation Halton lands (2 locations crossing the Sixteen Mile Creek) and Bronte Creek Provincial Park (crossing over Bronte Creek, south of QEW).



The estimated total cost to implement the recommended active transportation infrastructure and supportive outreach programs is approximately \$47.8 million over 20+ years. This includes nearly \$28.9 million for the proposed active transportation routes / facility types, \$11.8 million for the proposed grade separated pedestrian crossings, \$2 million for active transportation related studies / investigations and \$4.5 million for outreach programs. This does not include new development north of Dundas Street, or any infrastructure planned in Midtown Oakville, or projects contained within Halton's ATMP.

Approximately \$24 million of the total cost has already been allocated for through major infrastructure projects and programming initiatives identified in the town's capital budget, as well as projects included in the current DC By-law. Approximately \$23 million of the total cost is currently unfunded and will require additional consideration regarding funding options.

Details regarding the cost for the ATMP are contained in **Technical Appendix I**. It is recommended that this appendix be used as a tool by town staff to track implementation of the network and to inform future budgeting / decision making. Though the preliminary costing is meant to inform future decision making, the phasing and costing is not meant to be prescriptive.

### *Recommendations:*

24

Technical Appendix I, the ATMP network management and implementation tool, should be used as a reference to inform the town's future budgeting and costing for routes and facility types.

25

The town should use the preliminary costing to inform future budgeting decisions on an annual basis. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.

## 5.8 Conclusions & Summary of Recommendations

The Oakville ATMP is the town's blueprint to improve walking and cycling infrastructure, programs and initiatives over the next 20+ years. The master plan is a tool which is meant to be used to inform policies, processes and programs that are needed to respond to new community trends and the growing demand for active transportation.

The content of the ATMP is shaped by the input received from town staff, residents, stakeholders and interest groups over the course of the study. It is intended to achieve the active transportation vision and supportive objectives which were determined in the early stages of the project. The recommendations and strategies outlined in the ATMP respond to the unique needs of Oakville and are based on best practices, lessons learned and sound engineering / planning / design judgement. This plan will see the Town of Oakville continue to grow as a destination for walking and cycling, but more importantly a community with a high quality of life, and happy and healthy residents.

The recommendations outlined in the ATMP create a foundation for the future implementation of active transportation infrastructure and programs to improve walking and cycling conditions and behaviour in Oakville. A summary of recommendations contained in the master plan is provided below. The numbers correspond to the recommendation number in the body of the report.

## *Recommendations:*

1

The values and key messages identified for each of the key audiences should be reviewed and considered as the town develops future communication related to active transportation.

2

The town should review the proposed outreach initiatives and identify an annual action plan to educate, promote and enforce safe, enjoyable and comfortable active transportation town-wide.

3

Town Council should include as part of its annual budget process, funding to construct, operate and maintain the active transportation network using the phasing identified on Maps 8 and 9 as a guide.

4

Town staff should consider the ATMP recommendations prior to proceeding with all applicable capital works projects including road resurfacing, widening or rehabilitation projects, and new major trail projects.

5

The town should prioritize the implementation of the eight short-term priority projects and integrate them into the annual budget.

6

The town should consider using the proposed reporting structure and roles and responsibilities identified within the ATMP when moving forward with implementation.

7

Town staff should periodically review the potential opportunities for additional partners to support the town in the implementation of the ATMP.

8

Town staff from various divisions should continue to work together to coordinate the implementation of ATMP. A point person from each division should be identified to track progress and next steps.

9

Town staff should investigate the environmental impacts and determine the appropriate schedule for each individual project to inform the necessary next steps that should be completed.

10

Town staff should maintain and update annually the Geographic Information System (GIS) based Network Management Tool developed as part of the ATMP and use this tool to assist in planning for the implementation and management of active transportation infrastructure.

11

The town should identify specific maintenance and operation practices for specific facility types included in the active transportation network. As new facilities are implemented, the town should consider whether the current maintenance practices address them appropriately.

12

The town should review and revise the annual sidewalk maintenance budget as they increase the number of new sidewalks implemented as a result of the ATMP.

13

The town should develop a level of service standard for the maintenance and operations of active transportation facilities during the winter months.

14

The town should review, revise and adopt the performance measures as outlined in the plan to establish a process where data is collected every two years to measure the performance of the ATMP.

15

The town should review and adopt appropriate risk management and liability prevention strategies into day-to-day decision making related to active transportation planning, design and maintenance.

16

Town staff should review the Zoning By-Law standards related to car parking for consideration of a potential reduction to encourage people to walk, cycle, roll and take transit, and be consistent with the Ministry of the Environment and Climate Change minimum parking requirements.

17

Town staff should update the Transportation Impact Analysis Terms of Reference to include consideration for the management of congestion through the increased use of sustainable modes i.e. transit, walking, cycling, rolling, etc.

18

Town staff should update the Pedestrian Circulation Plan Terms of Reference to include considerations for linkages that connect users to and from all modes of transportation (e.g. transit to pedestrian, cyclist to pedestrian, etc.).

19

Town staff should update the Parking Study Terms of Reference to include:

- » Calculations for reductions and / or factors related to multi-modal levels of service; and,
- » Identification of locations and access routes to interior storage and locker room facilities in parking plans.



20

Recommendations included in the Transportation Impact Analysis should be considered in the Urban Design Brief and Urban Design Brief for Subdivisions and the Terms of Reference should be updated to reflect the need for these recommendations to be linked.

21

Town staff should continue to identify projects which can be funded by existing programs established by various service areas within the town.

22

The town should continue to explore external funding sources and partnerships to help fund the proposed “enhancements” as well as other programs and promotional initiatives.

23

The town should continue to identify opportunities to coordinate large-scale capital projects to achieve economies of scale and build the costs for cycling facilities into those budgets.

24

Technical Appendix I, the ATMP network management and implementation tool, should be used as a reference to inform the town’s future budgeting and costing for routes and facility types.

25

The town should use the preliminary costing to inform future budgeting decisions on an annual basis. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.

---

<sup>1</sup> Active Transportation Performance Measures (2015). Fehr & Peers. [http://www.fehrandpeers.com/wp-content/uploads/2016/12/ATPMasuresReport12\\_16.pdf](http://www.fehrandpeers.com/wp-content/uploads/2016/12/ATPMasuresReport12_16.pdf)