



Wellington County **ACTIVE TRANSPORTATION PLAN**

Final Report | September 2012





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WELLINGTON COUNTY ACTIVE TRANSPORTATION PLAN

EXECUTIVE SUMMARY

INTRODUCTION

Wellington County in association with the seven local area municipalities and Wellington-Dufferin-Guelph (*WDG*) *in motion* have committed to developing and implementing a county-wide Active Transportation Plan. The plan is a long-term strategy to create a pedestrian and cycling supportive environment that will encourage both utilitarian and recreational travel by walking and cycling while promoting the importance of active lifestyles for residents and tourists. As fuel prices continue to rise and obesity continues to be an issue for people of all ages it will become increasingly important that a well-planned and designed active transportation system forms part of a County and local municipal transportation strategy. Wellington County's Active Transportation Master Plan will assist the County and local municipalities in meeting their community planning and transportation objectives for the future. It will provide guidance as future transportation infrastructure improvements are considered. Perhaps the most important, the implementation of the County's Active Transportation Master Plan will contribute towards meeting the County and local municipal strategic goals of fostering a healthy and more sustainable community that will benefit all residents as well as the local economy and environment for all to enjoy.

An important part of the plan is an Active Transportation Network that will provide residents and visitors with on-road and off-road trails and active transportation corridors connecting the County's communities. An equally important part of the plan is the promotion of Active Transportation. Promotion includes education and encouragement initiatives to raise awareness of the numerous health, environmental and economic benefits of Active Transportation, all of which are needed to bring about a "cultural shift" and get residents to make incremental changes in the way they move about Wellington County as part of their everyday life.



The Wellington County Active Transportation Plan has been designed to be a living document that is flexible and capable of evolving over time. It is intended to maintain and enhance existing programs and infrastructure, while guiding the development and implementation of new active transportation facilities and programs.

The Public Health Agency of Canada defines Active Transportation (AT) as:

“Any form of human-powered transportation – walking, cycling, using a wheelchair, in-line skating or skateboarding.”

At the same time the County study was initiated, the Township of Centre Wellington also retained the MMM team to undertake a study to develop a local Trails Master Plan. The two studies were undertaken simultaneously. This included stakeholder and public consultation events.

In Wellington County, Active Transportation includes Active Recreation, Active Destination Oriented Trips and Active Commuting. Although the concept of Active Transportation in Wellington County is relatively new, interest in, and the development of trails and trail related initiatives have been taking place for many years, primarily through local groups and local initiatives. The Wellington County Active Transportation Plan recognizes and commends these initiatives and attempts to bring many of them together under a common framework for moving forward into the future at a County-wide level.

The Active Transportation Plan was initiated in June 2011 when a team of active transportation specialists led by the MMM Group was retained by the County and local municipal partners to assist in the development of the plan. A Steering Committee consisting of staff from the County, staff and/or Council representatives from each of the seven local municipalities, WDG *in motion* and Wellington-Dufferin-Guelph Public Health, Ministry of Transportation (MTO) and the City of Guelph guided the development of the Active Transportation Plan.



VISION & OBJECTIVES

Wellington County and the local area municipalities acknowledge the importance of future investment in active transportation facilities and opportunities. The Wellington County Official Plan and Five Year Trails Plan are two current documents that support the development of active transportation activities and initiatives. Both documents emphasize the



provision and development of pedestrian and cycling facilities and initiatives. In addition, several of the local area municipalities have developed policies that make reference to improving the pedestrian and cyclist environment.

The following vision for Active Transportation in Wellington County was developed by the study team, which was reviewed, refined and confirmed based on input from the Steering Committee, stakeholders and the public:

“Create and improve opportunities through the County for active recreation and active transportation.”



Key study objectives for the development of the Active Transportation Plan included:

- Examining the current status of active transportation and trails in the County;
- Recommending a network of active transportation routes throughout the County and connecting to neighbouring municipalities;
- Providing recommendations regarding Official Plan policy;
- Illustrating and describing guidelines and standards for the construction of active transportation facilities;
- Recommending education and promotion programs related to active transportation; and
- Identifying costs and priorities as part of a phased action plan.

THE CURRENT STATUS OF ACTIVE TRANSPORTATION IN WELLINGTON COUNTY

Active Transportation activities provide significant health and fitness, transportation, environmental, economic and tourism benefits. Municipalities in southern Ontario and across North America are implementing initiatives to promote and encourage active transportation as a viable alternative to the private automobile for short-distance trips and as a method of promoting a more active and healthy lifestyle.

Completed by: *in motion* Wellington-Dufferin-Guelph Public Health and Harry Cummings & Associates

Sample Size: 8,589 randomly selected households of which 1,159 completed the survey.

Study Purpose: was designed to capture information on the physical activity levels of adults including the different types, frequency and duration of light, moderate and vigorous activities they participated in.

The Wellington-Dufferin-Guelph *in motion* Physical Activity Survey Report (2008) was designed to capture information on the physical activity level of adults including the different types, frequency and duration of light, moderate and vigorous activities they participated in. Some of the key findings included:



- 85.7% of males and 87.9% of females who do not regularly exercise intend to begin regular exercise in the next six months;
- Approximately two thirds of male residents in Wellington (71.9%) and approximately three quarters of female residents (82.8%) had recently seen, heard or read an advertising message promoting the benefits of physical activity;
- Approximately one quarter of residents in Wellington County (male: 28.1% and female: 20.6%) are less physically active than they were two years ago; and
- A little less than one third of residents in Wellington County (male: 25.2% and female: 32.8%) are more physically active than they were two years ago.

The **County Official Plan** supports environmental responsibility and convenient transportation through encouraging pedestrian and cycling activities as a means of travel for recreational and utilitarian purposes. Not all of the local municipalities have a local Official Plan document, however they all have policies or programs that support active transportation in some way including:

- Zoning By-laws;
- Development Charge By-laws;
- Trail and Cycling related Committees;
- Walking Charters; and
- Design and/or Sustainable Development Guidelines.

As part of the development of the Wellington County Active Transportation Plan a review of the current County Official Plan was undertaken and suggestions for policy revisions were proposed. It is recommended that these suggestions be considered during the next update of the County Official Plan. Based on this review and consultation with the Steering Committee, two general recommendations were made and further details regarding Official Plan policy considerations are contained in Chapter 4 of this report:

- That Official Plan policy wording related to Active Transportation be included in the Transportation Section (current Section 12) of the Official Plan; and
- That policy wording in the Official Plan related to Active Transportation be broad and overarching, and include references to the Wellington County Active Transportation Plan as the detailed guiding document regarding Active Transportation in Wellington County.



PUBLIC & STAKEHOLDER CONSULTATION

An important component of the study process for developing the Active Transportation Plan was consulting with County and local municipal staff, members of the public, the Steering Committee and local stakeholders. The involvement of members of the public was essential in creating an interest throughout the County and building momentum for the plan, and increasing awareness of the benefits of implementing active transportation related facilities, routing and programming.

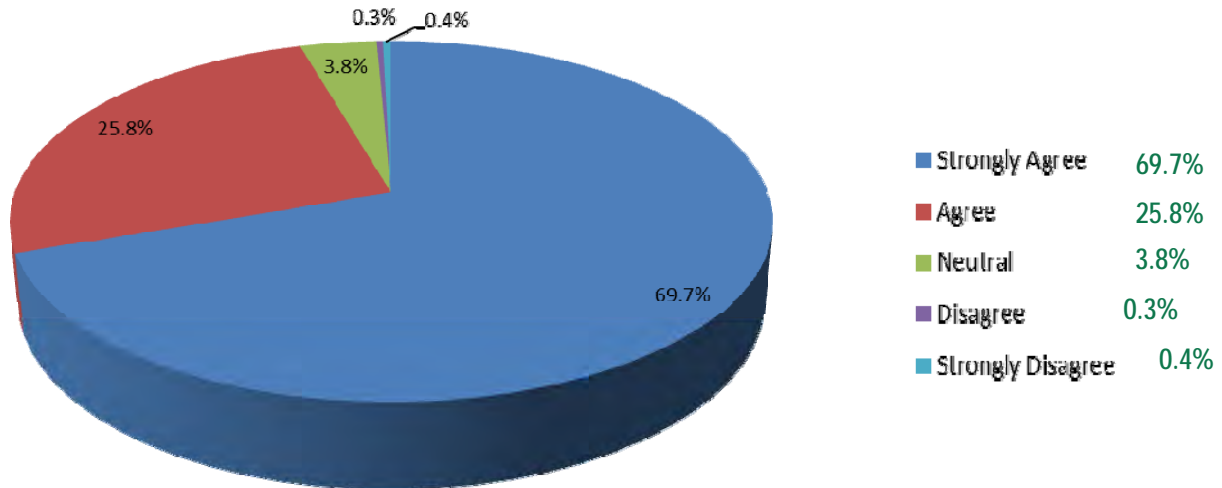


Consultation with the public was undertaken through a multi-faceted approach which used innovative techniques such as:

- *Postings on the County's* the Wellington-Dufferin-Guelph Public Health, WDG *in motion* and the local municipal webpages where possible;
- *An online questionnaire* which was also provided in hard copy at key locations throughout the County;
- *An outreach / consultation program with local school aged children* including an in school initiative which asked children to take pictures of trails as well as a brochure with youth friendly questions and a Quick Response ("QR") code linked to the County website which provided users with key study information;
- *A display of study promotional materials at key locations* throughout the County such as local community centres, family health teams, retirement facilities, municipal offices and County Library Branches;
- *Study promotional business cards* with the contact information for study representatives to enable members of the public to submit comments and ideas to the study team over the course of the study.
- *Publishing of Study information in Local Newsletters* including but not limited to the Minto Recreation, OMAFRA, seniors' newsletters, Trail Club, Public & Catholic Elementary School and various businesses throughout the County;
- *Two Stakeholder Working Group Sessions* that were held at key points throughout the study process which provided the Committee and study team the opportunity to discuss potential changes to the network, policies and recommendations as well as the implementation strategy; and
- *Two Rounds of Public Information Centres*, each at three strategic venues throughout the County.
- *An All Council Information Meeting*, where the draft report was presented to members of County Council and all Local Municipal Councils at one joint meeting.



Over 700 people responded to the questionnaire which revealed significant overall support of the County's investment in active transportation and trail improvements which would ultimately lead to the increased opportunity for active transportation and recreational activities.



Over 95% of questionnaire respondents agreed that Wellington County should invest in improvements that provide opportunities for active transportation and trail use in the County.

In addition, respondents were also asked to provide their opinion on the type of active transportation facilities or amenities which should be considered for implementation throughout the County. Responses indicated that by developing more multi-use *hiking and cycling trails, bike lanes of paved shoulder on roads as well as better connections to key destinations*, residents and visitors would be more inclined to increase their level of participation.

Attendees at the Stakeholder Working Groups and the Public Information Centres were encouraged to provide their comments to the study team members as well as directly on the maps provided displaying the proposed candidate route network. Comments received from the public, AT committee, local stakeholders, GRCA and local municipal staff were reviewed and considered in detail for inclusion in the Active Transportation Plan report. Full details of the consultation program are contained in **Appendix B** of this report.

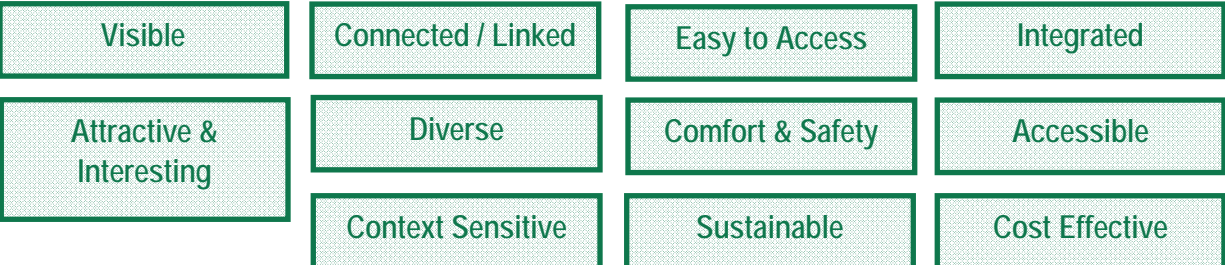
THE ACTIVE TRANSPORTATION NETWORK

One of the primary objectives of the Wellington County Active Transportation Plan was to identify a continuous and connected active transportation network that provides safe recreational and utilitarian routes which builds upon, connects and supports existing and planned local municipal routes and facilities. The Active Transportation Master Network documented in this report includes a proposed network of active transportation routes that were identified through an iterative process that involved public and stakeholder consultation and input at various stages of the study. Key steps in the process included:



1. The development and application of route selection principles and assembly of background mapping of the existing network;
2. Development of a candidate route network and field investigations of the candidate route network;
3. Review by the Steering Committee, public and stakeholder review of candidate routes; and
4. Development of a recommended network with active transportation facility types and priorities for implementation that were reviewed by the Steering Committee, stakeholders and the public.

Route Selection Principles



Development of the Candidate Route Network

The first phase in developing the draft network involved the preparation of an inventory of existing and previously proposed on and off-road cycling, pedestrian and trail facilities throughout the County. The task included a review of key County documents (e.g. the Official Plan and the Wellington Walks Trail Guide (2011)) as well as local municipal planning documents and hard copy maps that were available.

The County provided the study team with a digital Geographic Information System (GIS) database of the County, and this was supplemented by some additional GIS data generated by some of the local municipalities.

Information included in the GIS database provided by the County included:

- Roadways;
- Existing Trails;
- Lakes, Rivers and Streams;
- County Forests;
- Railways;
- Posted Speed Limits;
- Points of Interest, Destinations and Attractions;
- Multi-use and Regional Trails; and
- Conservation Areas.

A set of on and off-road candidate routes were identified linking key destinations, local communities and attractions throughout the County. The candidate routes were further refined based on input from County Staff, local municipal staff, the AT Committee, Wellington-Dufferin-Guelph Public Health, City of Guelph, MTO and WDG *in motion* as well as key stakeholders and the public.



Field Investigations and Development of the Recommended Active Transportation Route Network

The refined candidate route alternatives were then investigated in the field to confirm their suitability for inclusion as part of the proposed active transportation network. Route selection was based on the application of the route selection principles, the experience of the study team, observations made in the field and local insight from AT committee members. In addition information relating to missing links, road and right-of-way widths, distance from key destinations and the nearest proposed route, and the cost effectiveness of implementing an active transportation facility were considered.

The recommended County-wide Active Transportation Network is illustrated in **Map EX-1** and enlargements of each area municipality are shown in **Maps EX-2 through EX-8**:

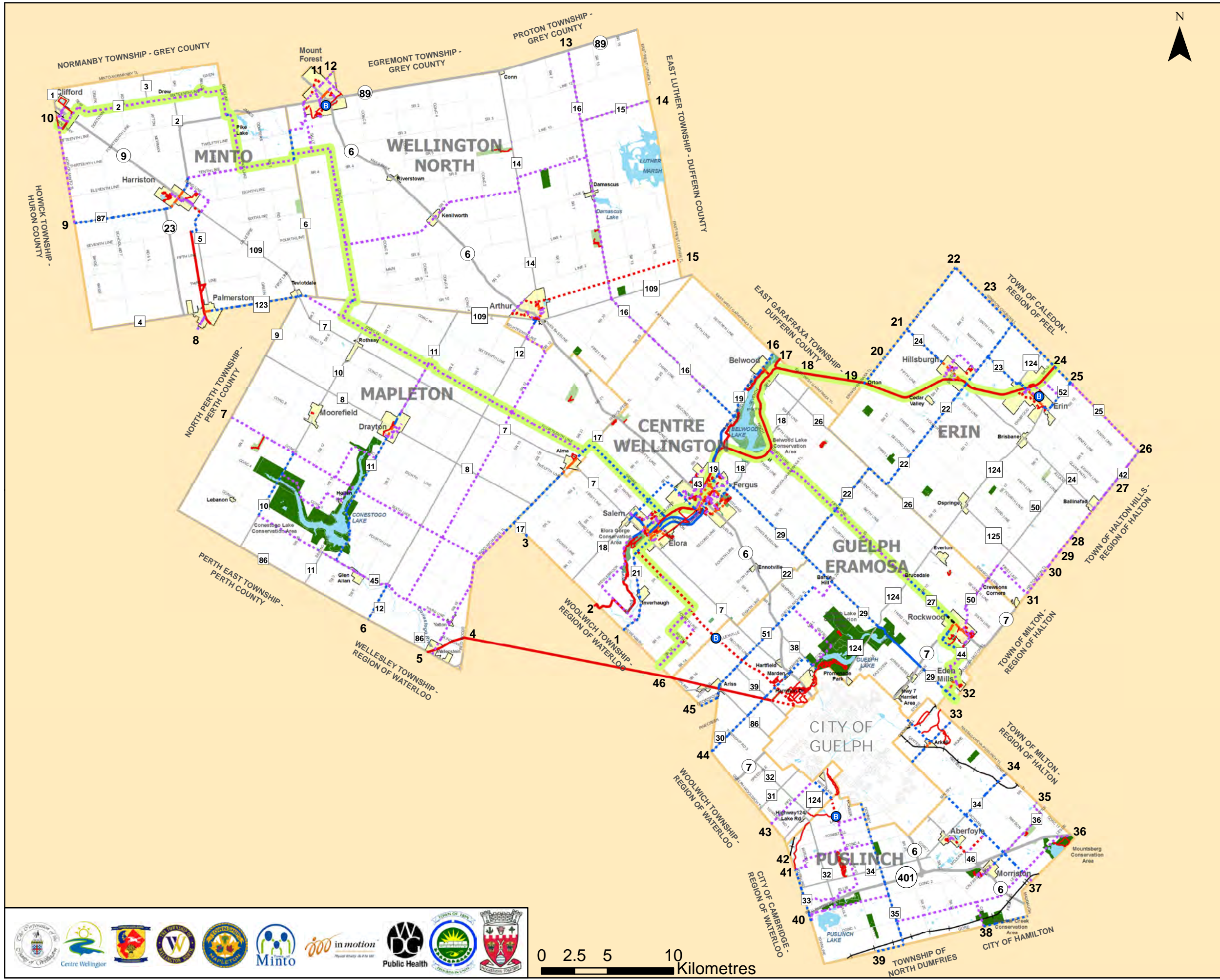
- Township of Centre Wellington (Map EX-2);
- Township of Mapleton (Map EX-5);
- Town of Erin (Map EX-3);
- Town of Minto (Map EX-6);
- Township of Guelph-Eramosa (Map EX-4);
- Township of Puslinch (Map EX-7); and
- Township of Wellington North (Map EX-8).

County and local municipal boundaries are not always apparent or important to pedestrians and cyclists. A municipal or county boundary can sometimes become the “end of the road”, simply because a proper active transportation connection has not been made to the neighbouring County or municipality. In an effort to make seamless connections to surrounding municipalities, all municipal master plans for Wellington County’s neighbours were examined and these are summarized in **Table EX.1**. **Table EX.1** should be read in conjunction with **Map EX-1**.

Table EX.1: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
1	Kitchener and Walter Bean Trail/Grand Valley Trail	Kathleen St. N	Region of Waterloo Cycling Master Plan
2	Waterloo and Kitchener and Walter Bean Trail/Grand Valley Trail	Grand Valley Trail	Grand Valley Trail Association
3	Elmira and Waterloo	Floradale Rd.	Region of Waterloo Cycling Master Plan
4	Guelph	Kissing Bridge Trail/Trans Canada Trail	Region of Waterloo Cycling Master Plan
5	Waterloo	Hergott Rd.	Region of Waterloo Cycling Master Plan
6	Linwood	Manser Rd.	Region of Waterloo Cycling Master Plan
7	Palmerston	Road 157	Consulting Team

MAP EX.1 NETWORK FACILITY TYPES COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN



Legend

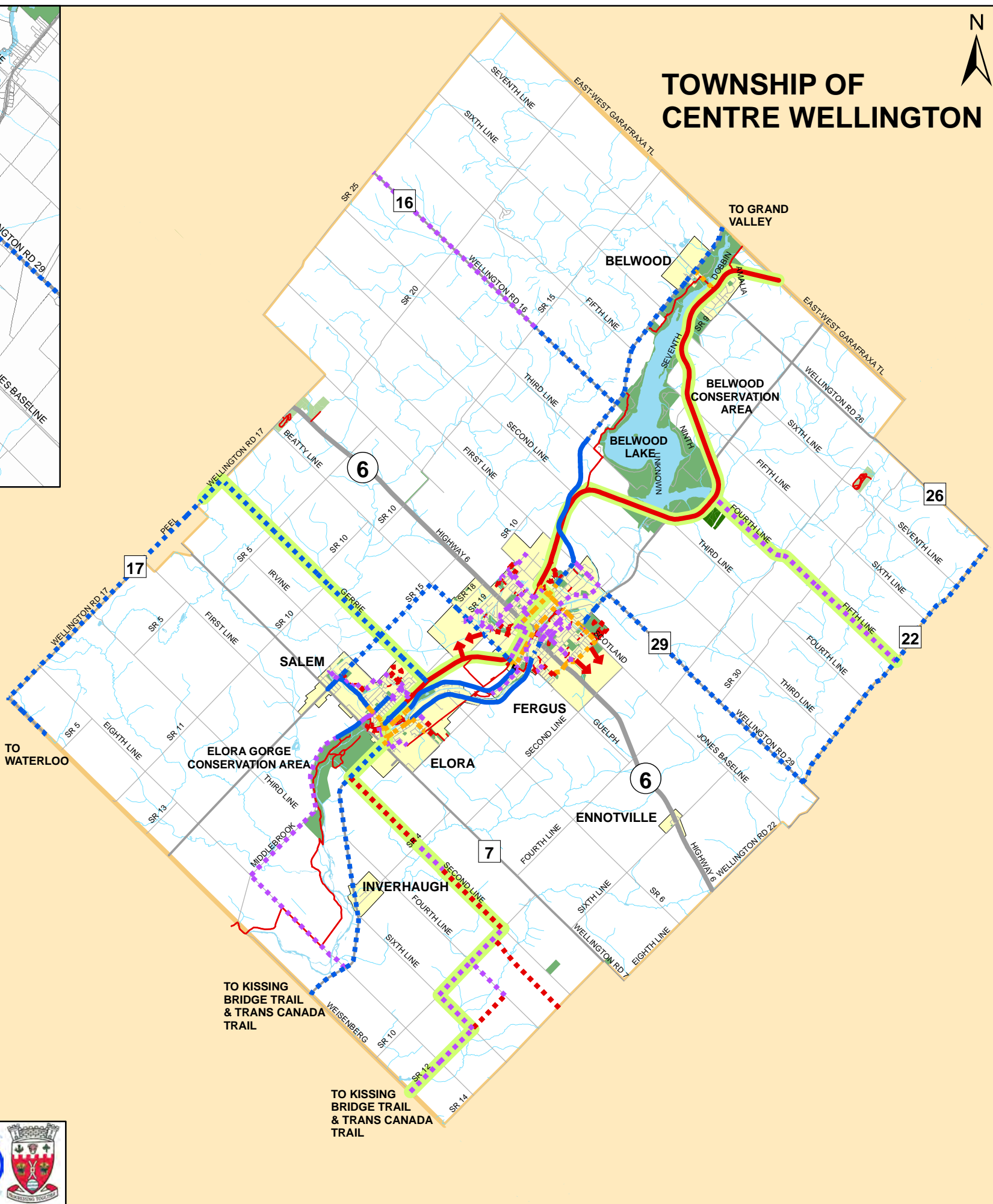
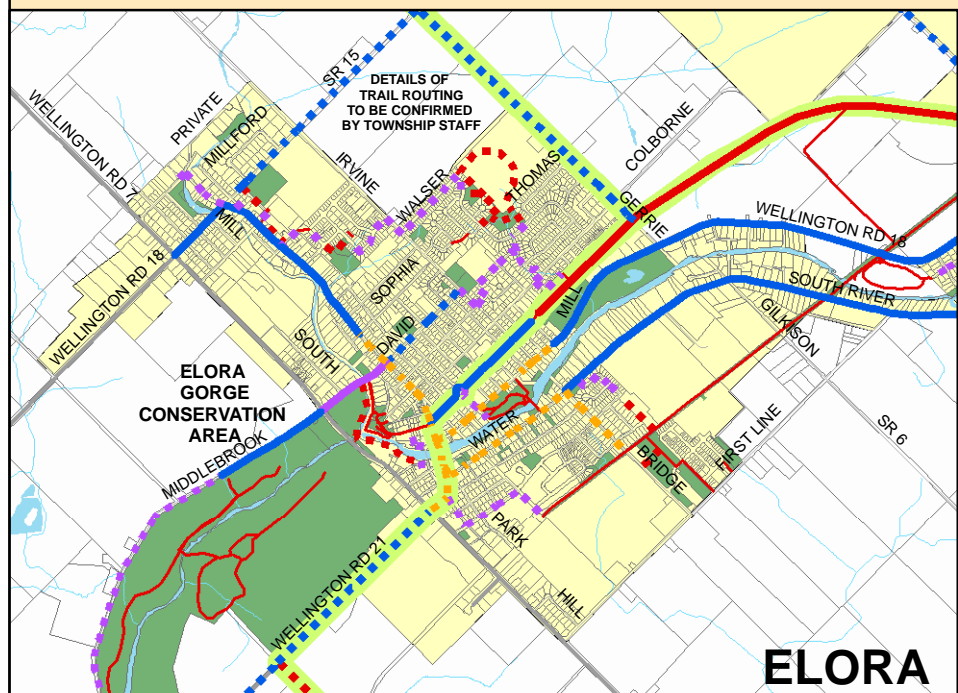
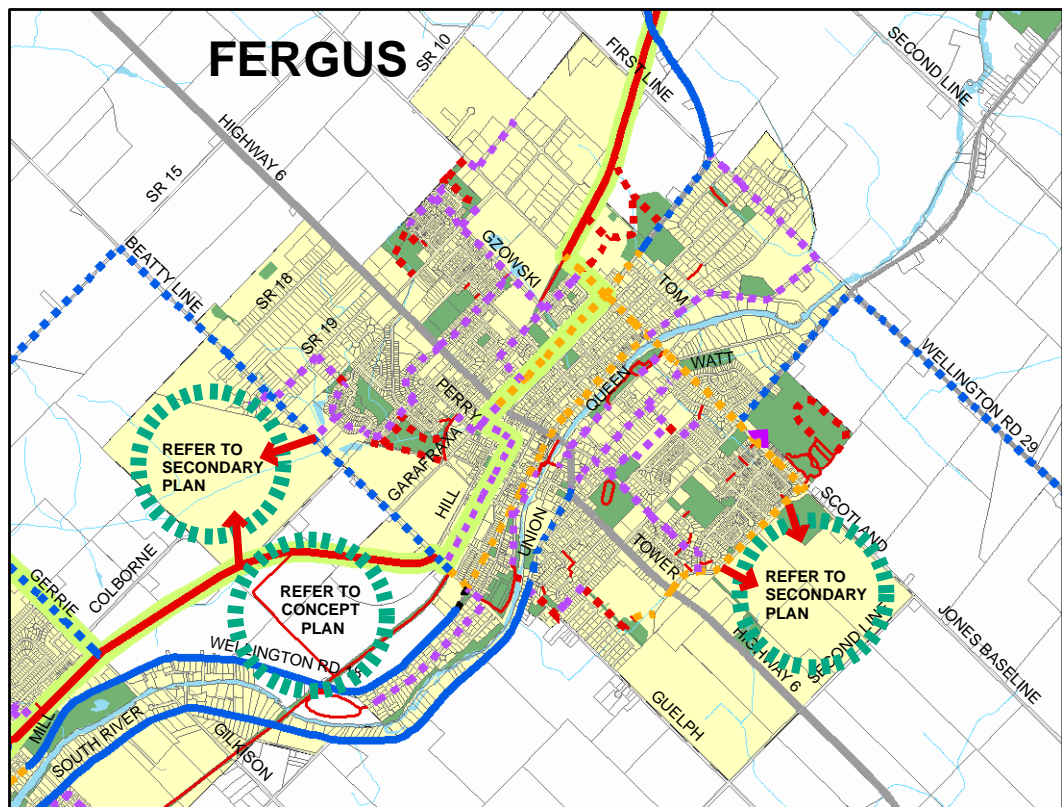
- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrow
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Connections to Adjacent Municipalities
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

NOTE: For details regarding connections to adjacent municipalities, please refer to Table 5.1.



SEPTEMBER 2012



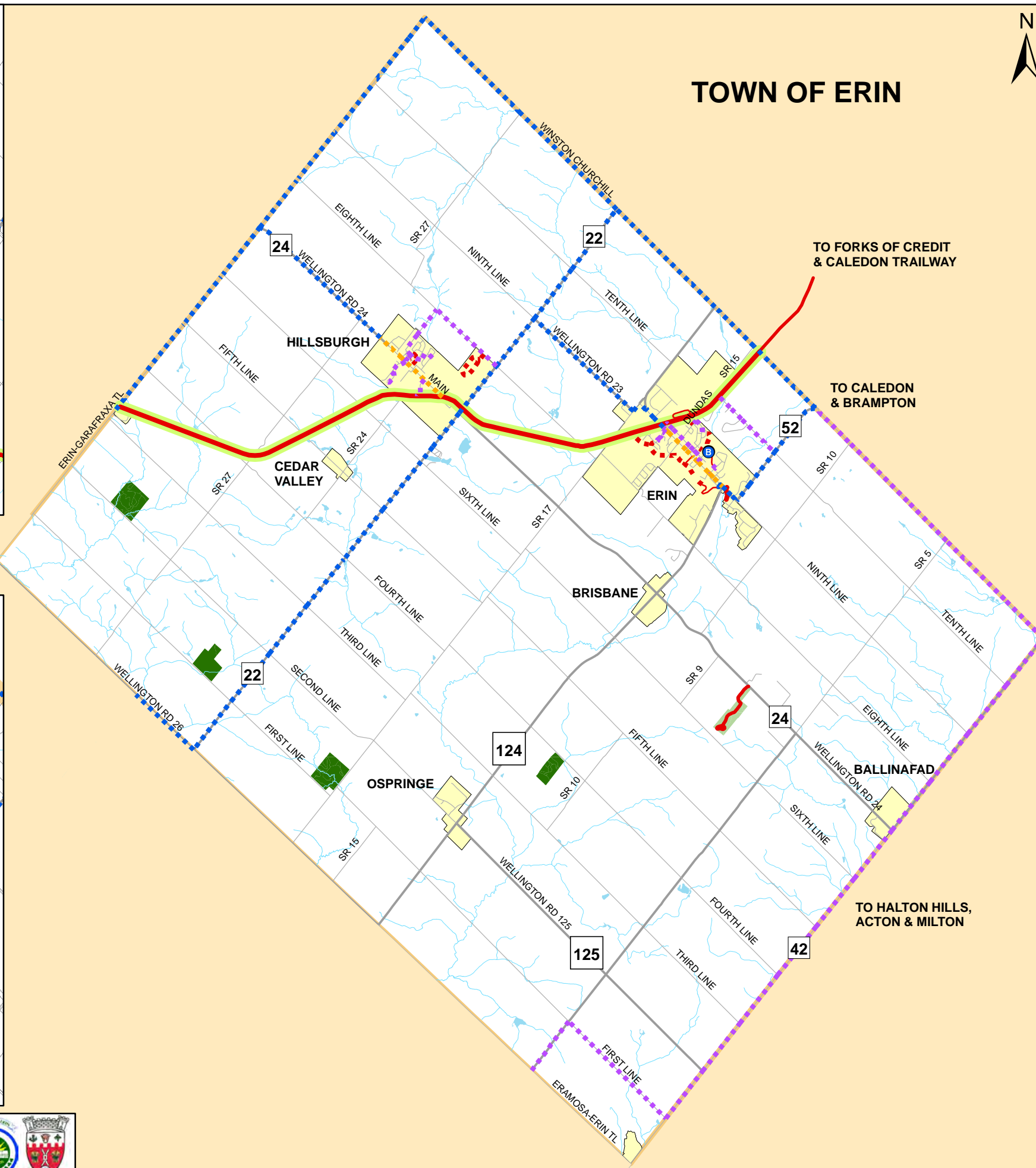
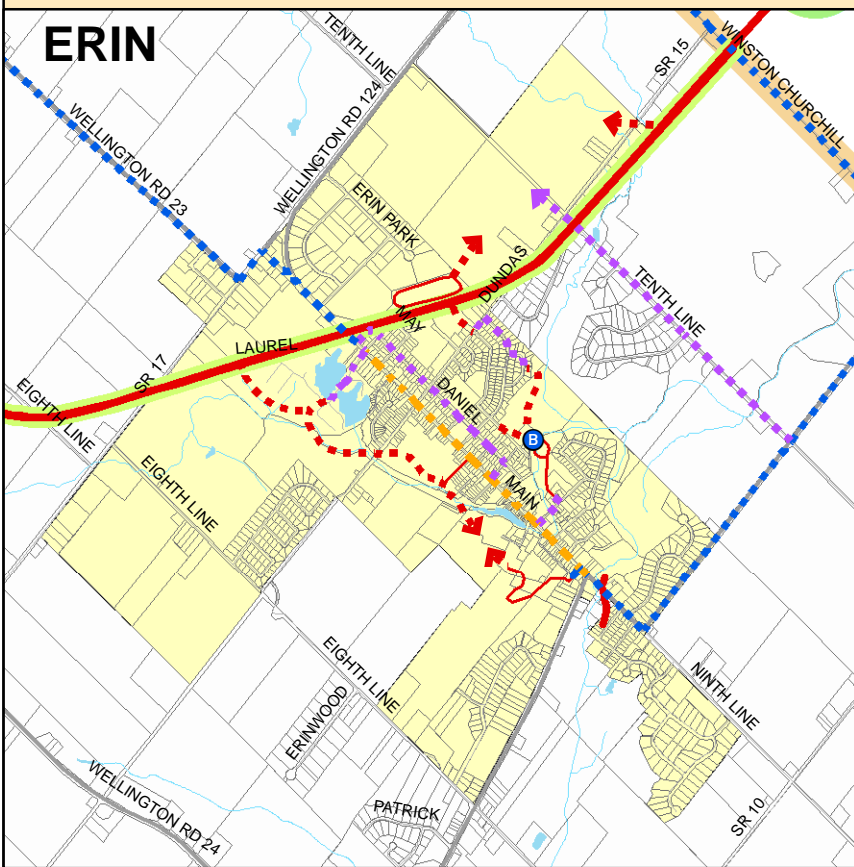
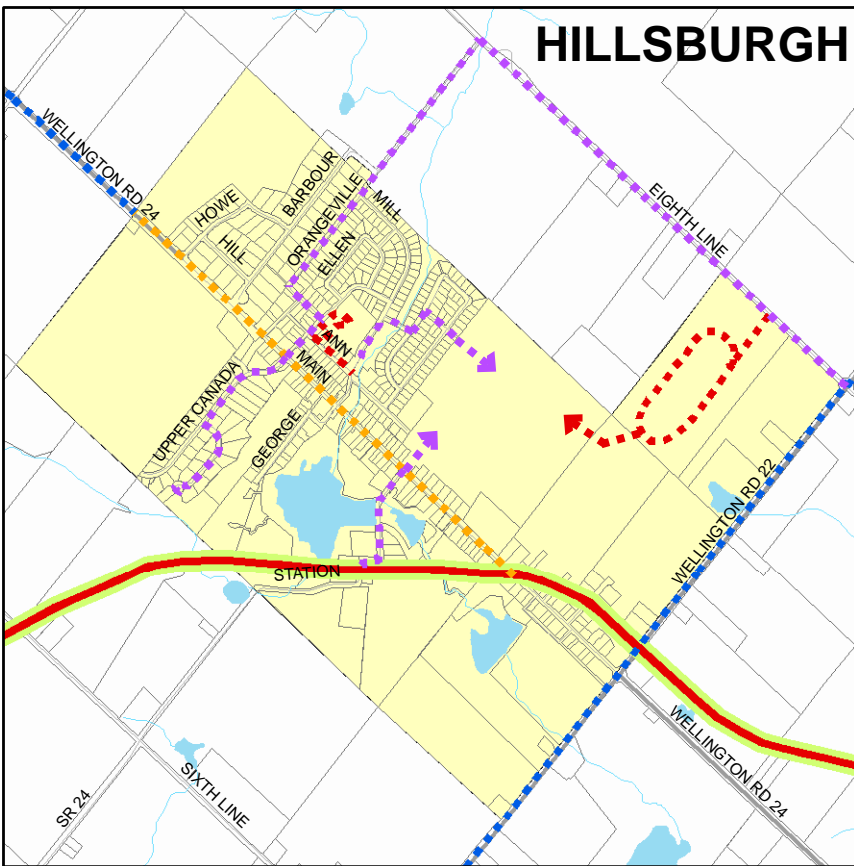


COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP EX.2 CENTRE WELLINGTON FACILITY TYPES (ENLARGEMENTS)

- Legend**
- Existing Spine Off-Road Route
 - Proposed Spine Off-Road Route
 - Existing Off-Road Secondary Route
 - Proposed Off-Road Secondary Route
 - Existing Signed Route
 - Proposed Signed Route
 - Existing Paved Shoulder
 - Proposed Paved Shoulder
 - Proposed Signed Route with Sharrow
 - Proposed Bike Lane
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - County Roads
 - Provincial Highway / Freeway
 - Streams
 - Lakes and Rivers
 - Parkland
 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

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COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

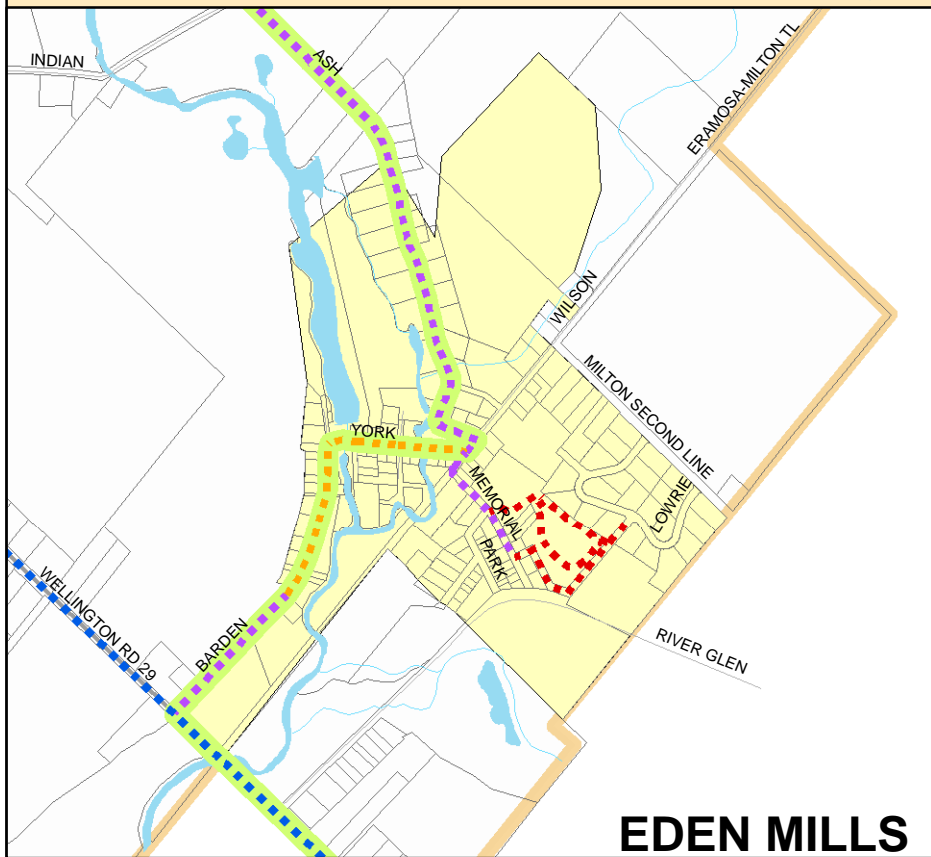
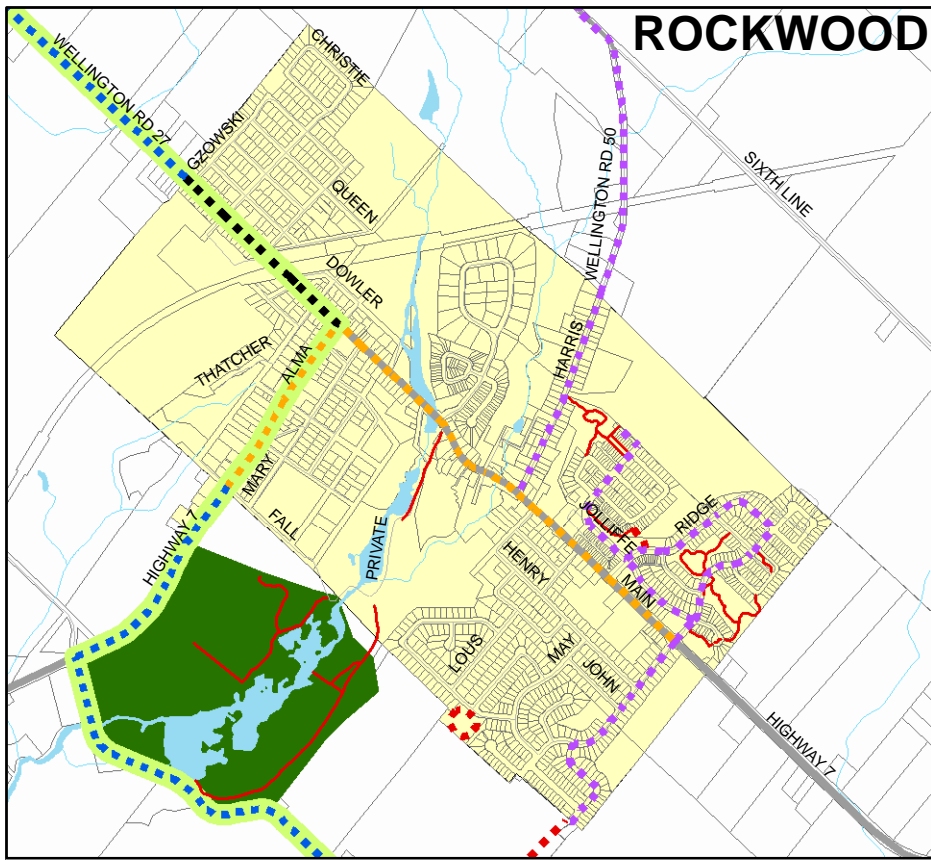
MAP EX.3 - ERIN NETWORK FACILITY TYPES (ENLARGEMENTS)

Legend

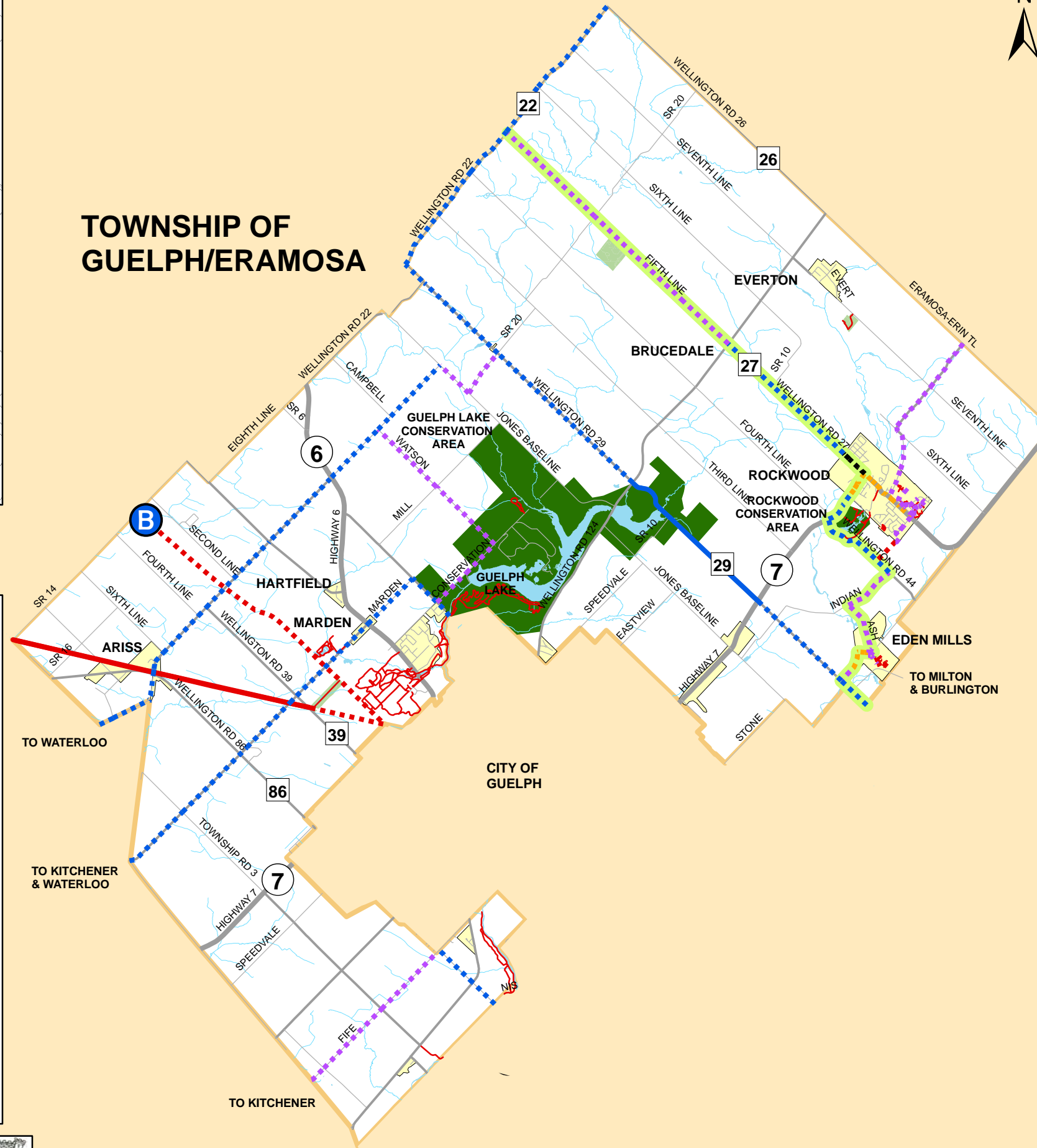
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- Existing Off-Road Secondary Route
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- Existing Signed Route
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- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
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TOWNSHIP OF GUELPH/ERAMOSA



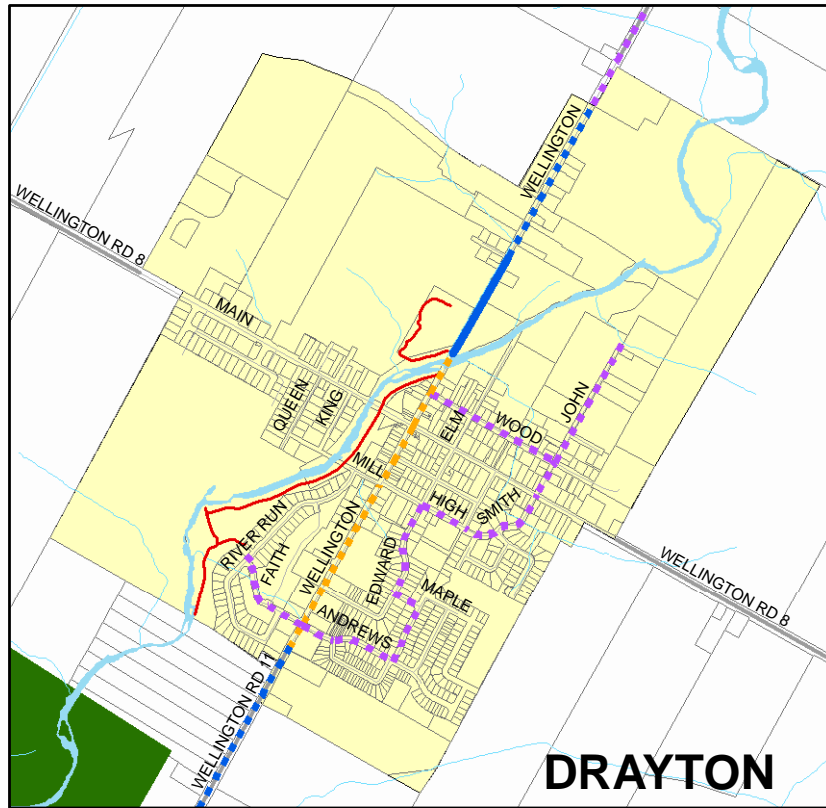
COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP EX.4 - GUELPH/ERAMOSA NETWORK FACILITY TYPES (ENLARGEMENTS)

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
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- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

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DRAYTON

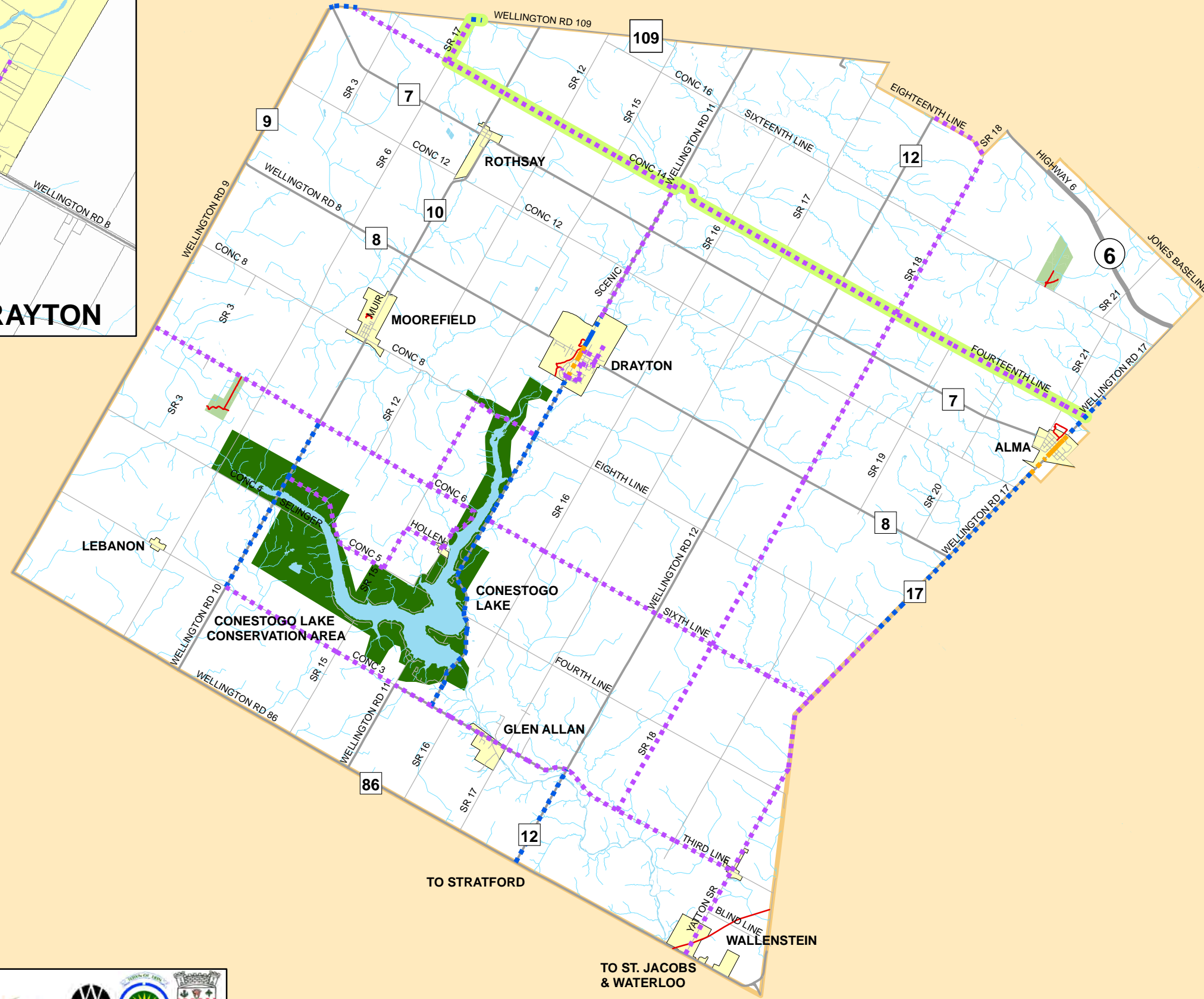
TOWNSHIP OF MAPLETON



COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP EX.5 - MAPLETON NETWORK FACILITY TYPES (ENLARGEMENTS)

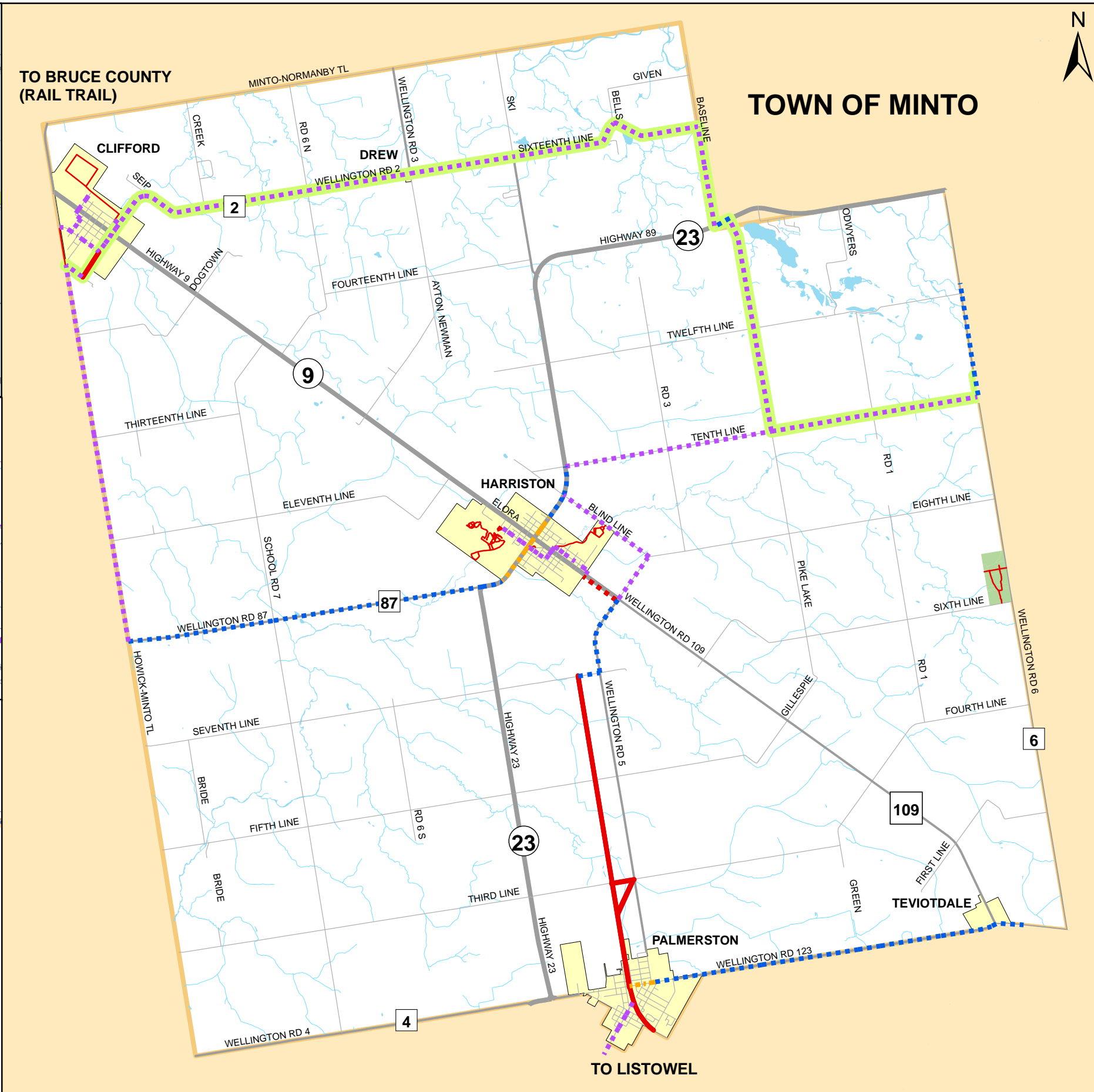
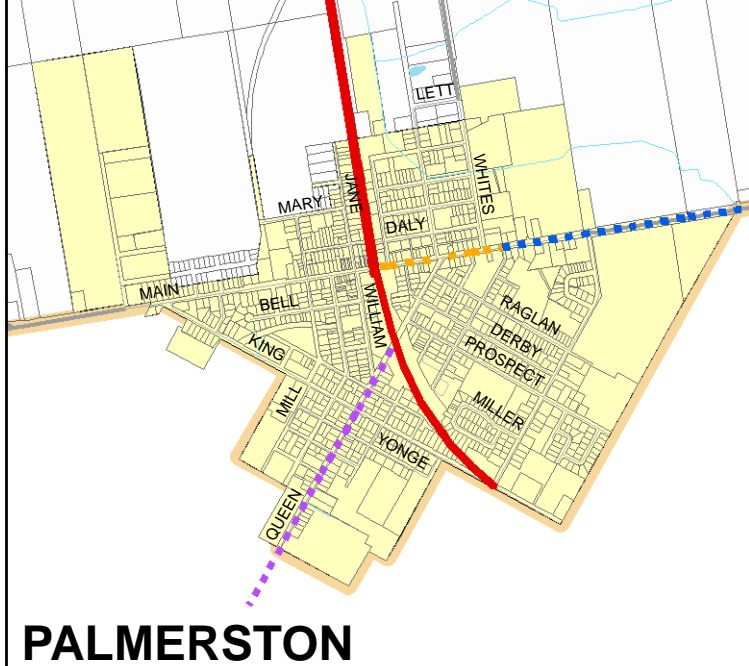
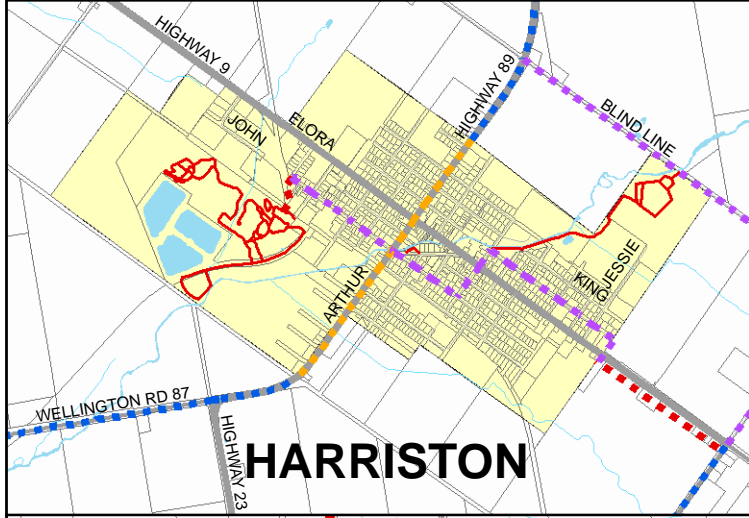
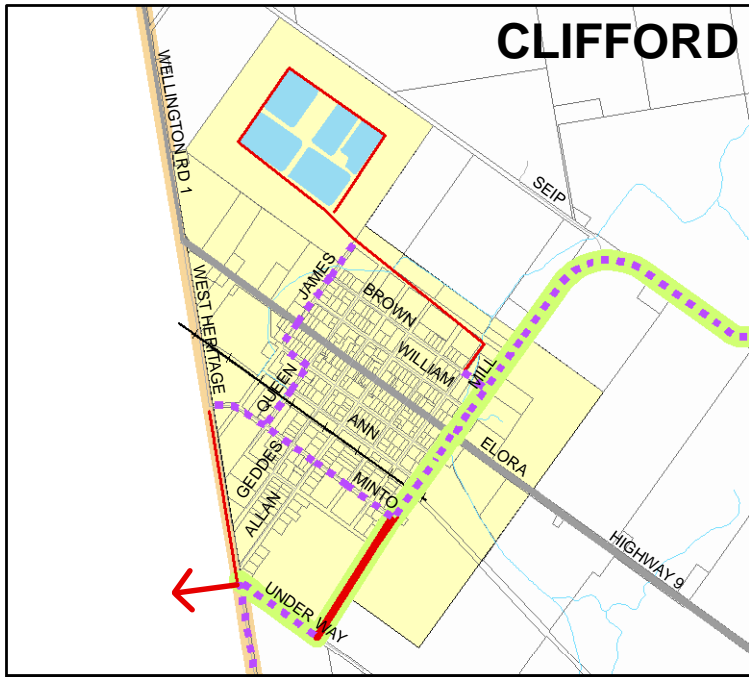
Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrow
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
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- Municipal Boundary



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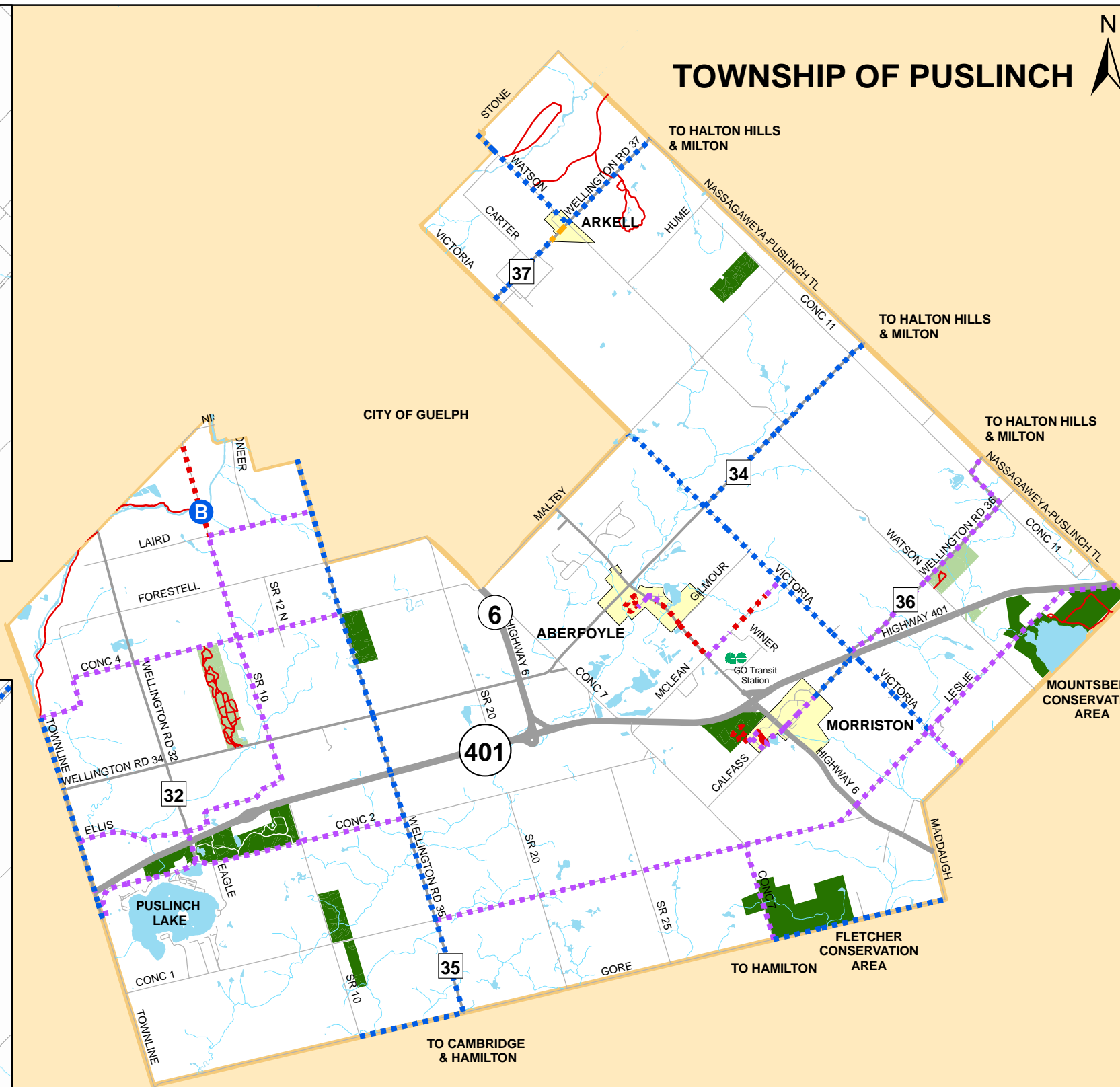
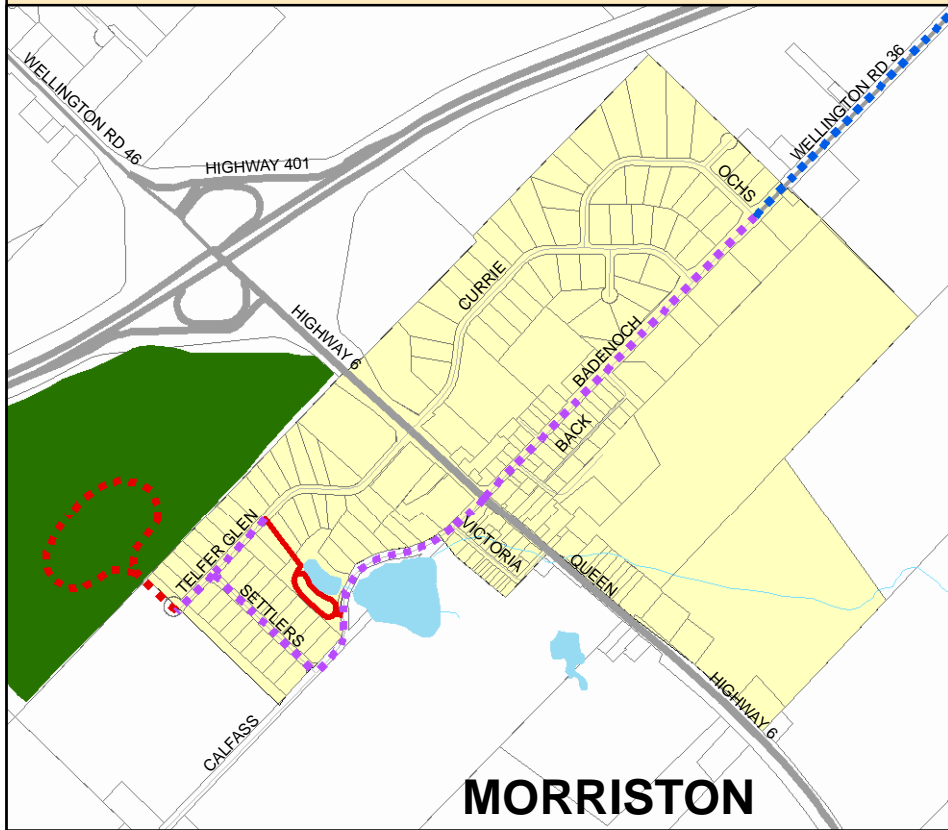
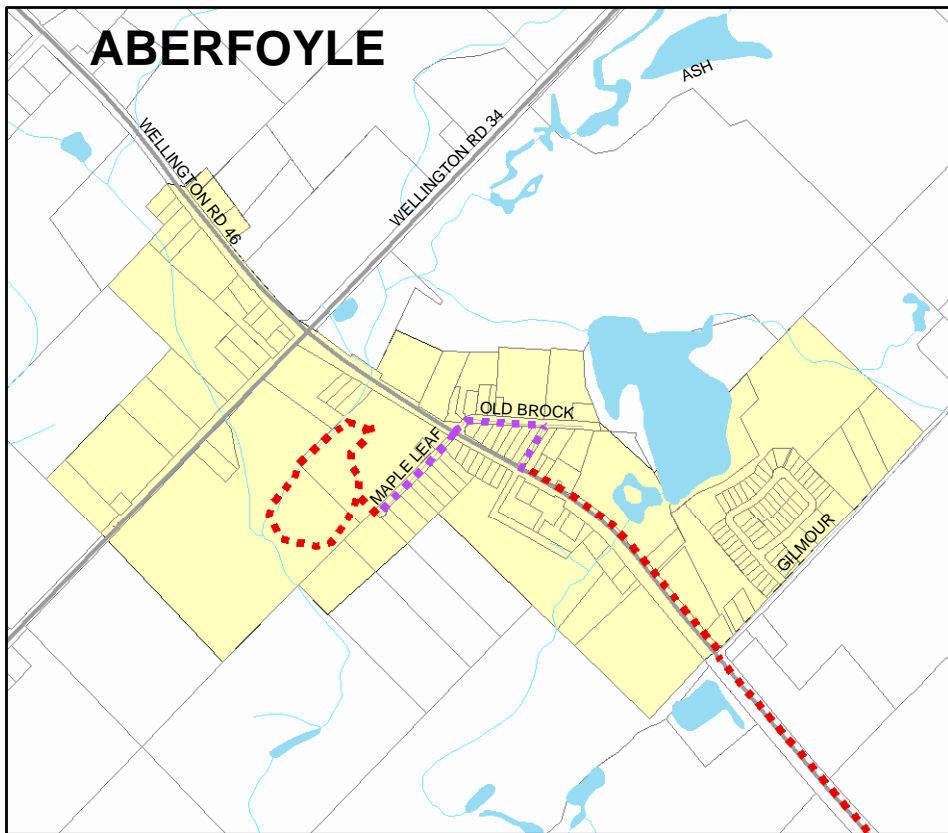


COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN
MAP EX.6 - MINTO NETWORK FACILITY TYPES (ENLARGEMENTS)

- Legend**
- Existing Spine Off-Road Route
 - Proposed Spine Off-Road Route
 - Existing Off-Road Secondary Route
 - Proposed Off-Road Secondary Route
 - Existing Signed Route
 - Proposed Signed Route
 - Existing Paved Shoulder
 - Proposed Paved Shoulder
 - Proposed Signed Route with Sharrows
 - Proposed Bike Lane
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - 26 County Roads
 - 6 Provincial Highway / Freeway
 - Streams
 - Lakes and Rivers
 - Parkland
 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

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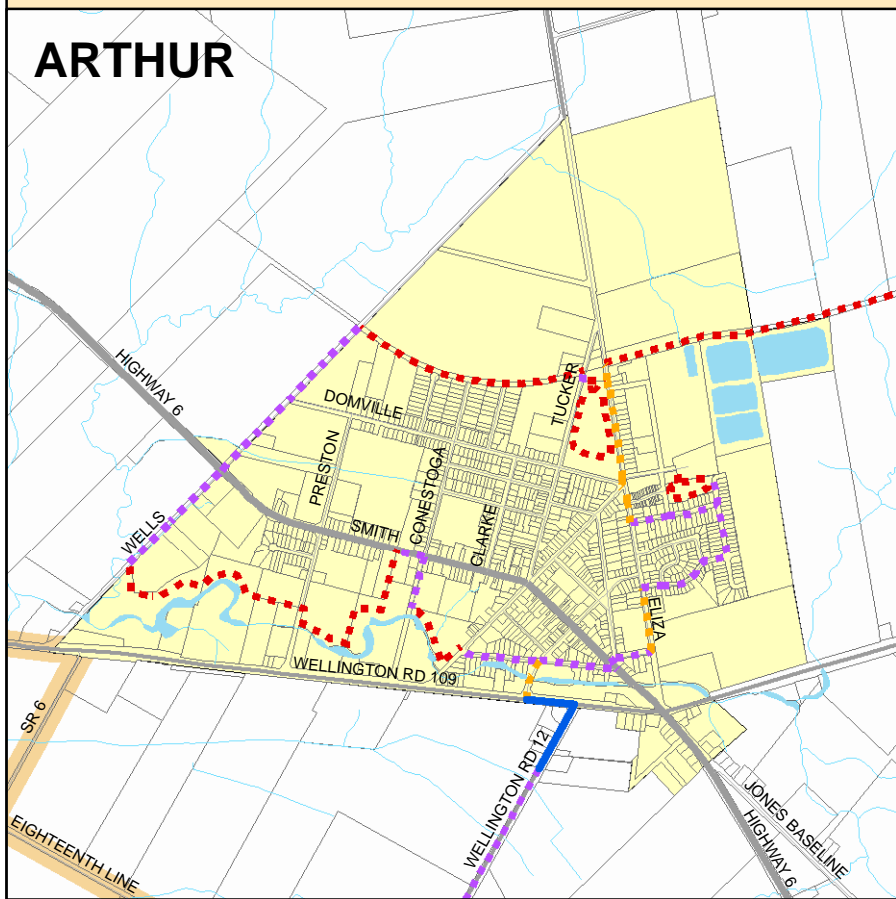
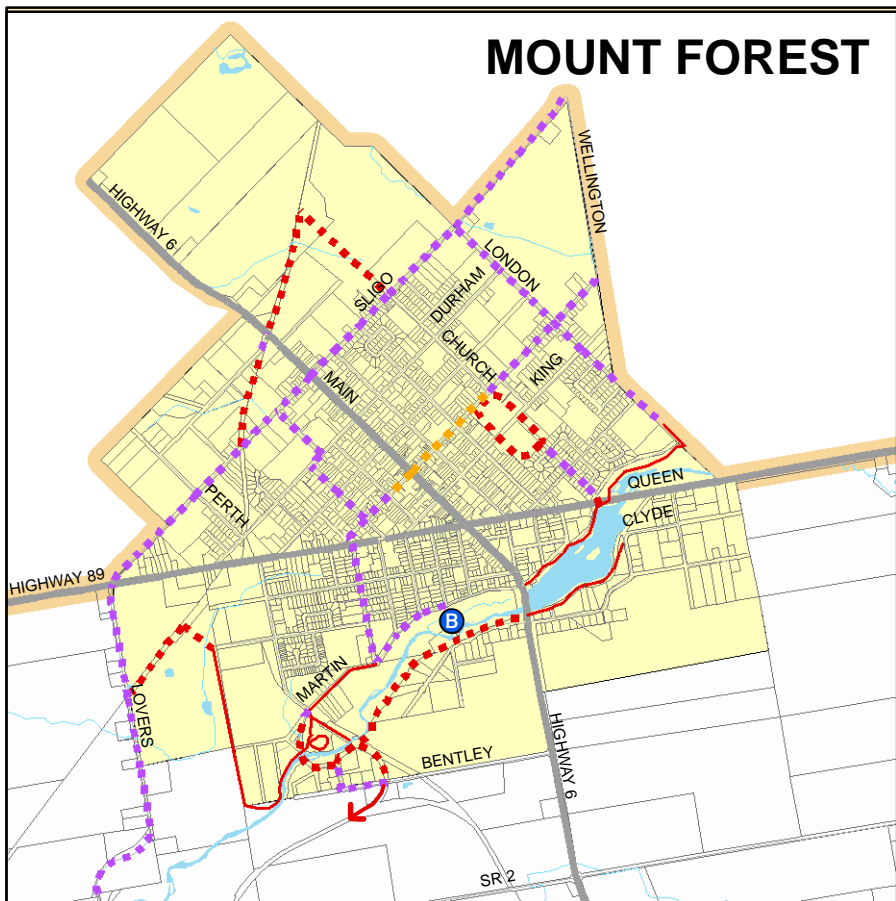
**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION
PLAN
MAP EX.7 - PUSLINCH
NETWORK FACILITY TYPES
(ENLARGEMENTS)**

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

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COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

MAP EX.8 - WELLINGTON NORTH FACILITY TYPES (ENLARGEMENTS)

- Legend**
- Existing Spine Off-Road Route
 - Proposed Spine Off-Road Route
 - Existing Off-Road Secondary Route
 - Proposed Off-Road Secondary Route
 - Existing Signed Route
 - Proposed Signed Route
 - Existing Paved Shoulder
 - Proposed Paved Shoulder
 - Proposed Signed Route with Sharrows
 - Proposed Bike Lane
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - County Roads
 - Provincial Highway / Freeway
 - Streams
 - Lakes and Rivers
 - Parkland
 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

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Table EX.1: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
8	Drayton	89 Line	Consulting Team
9	Wroxeter and Wingham	County Rd. 87	Consulting Team
10	Bruce County Rail Trail	Fordwich Rd. and Mud Lake Line	Huron County Transportation Demand Management Plan/Consulting Team/Bruce County Rail Trail (Bruce County Planning Department)
11	Durham	Grey County Rd 106	Consulting Team
12	Durham	Grey County Rd 106	Consulting Team
13	Flesherton and Dundalk	County Rd 16	Consulting Team/Southwestern Ontario Recreational Trails Map (http://www.ontariotrailmaps.ca/Sunshine-Country.page)
14	Shelburne and Grand Valley	County Rd 15	Consulting Team
15	Grand Valley	Upper Grand Trailway	Dufferin County Trails and Active Transportation Master Plan Study
16	Grand Valley	County Rd. 19	Dufferin County Trails and Active Transportation Master Plan Study
17	Hillsburgh and Caledon	Grand Valley Trail	Dufferin County Trails and Active Transportation Master Plan Study/Grand Valley Trail Association
18	Hillsburgh and Caledon Trailway	Elora Cataract Trailway/Trans Canada Trail	Dufferin County Trails and Active Transportation Master Plan Study
19	Belwood and Fergus	Elora Cataract Trailway/Trans Canada Trail	Dufferin County Trails and Active Transportation Master Plan Study
20	Belwood	Grand Valley Trail	Grand Valley Trail Association
21	Grand Valley	County Rd 24/25	Dufferin County Trails and Active Transportation Master Plan Study
22	Orangeville	Winston Churchill Blvd.	Dufferin County Trails and Active Transportation Master Plan Study
23	Alton	Highpoint Sideroad	Peel Region Active Transportation Plan (Draft)/Grand Valley Trail Association/Town of Caledon Trails Map
24	Forks of the Credit Provincial Park and Caledon Trailway	Elora Cataract Trailway	Peel Region Active Transportation Plan (Draft)/Town of Caledon Trails Map
25	Belfountain	County Rd. 52/Bush Street	Consulting Team
26	Terra Cotta, Caledon Trailway and Georgetown	Winston Churchill Blvd.	Town of Halton Hills Cycling Master Plan
27	Georgetown	Ninth Line	Town of Halton Hills Cycling Master Plan
28	Limehouse, Georgetown	Fifth Line	Town of Halton Hills Cycling Master Plan



Table EX.1: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
29	Limehouse, Milton	Hydro corridor	Town of Halton Hills Cycling Master Plan (this applies to sections of the corridor owned by the Town of Halton Hills)
30	Acton	Third Line/Churchill Rd.	Town of Halton Hills Cycling Master Plan
31	Acton	Dublin Line	Town of Halton Hills Cycling Master Plan
32	Guelph, Campbellville, Milton and Burlington	County Rd. 29 and 1 st Line Nassagaweya	Town of Milton Trails Master Plan
33	Eden Mills, Campbellville Milton and Burlington Guelph Radial Trail and Bruce Trail	Arkell Rd and County Rd. 29 and 1 st Line Nassagaweya,	Consulting Team/Town of Milton Trails Master Plan
34	Acton and Georgetown	County Rd 34 /Sideroad 20	Town of Milton Trails Master Plan
35	Georgetown and Milton	County Rd 36 /Concession Rd 11 /15 Sideroad	Town of Milton Trails Master Plan
36	Mountsberg Conservation Area and Burlington	Leslie Rd. West and Millborough Line	City of Hamilton Cycling Network Strategy
37	Burlington	Concession Rd. 9 and Centre Rd.	City of Hamilton Cycling Network Strategy
38	Hamilton and Lafarge Trail, Fletcher Creek Conservation Area and Valens Conservation Area (Hamilton Region Conservation Authority)	Concession 7	Consulting Team
39	Cambridge	Village Rd and Clyde Rd.	Region of Waterloo Cycling Master Plan
40	Cambridge, Irish Creek Wetland (GRCA)	Townline Rd.	Region of Waterloo Cycling Master Plan
41	Cambridge	Townline Rd.	Region of Waterloo Cycling Master Plan
42	Cambridge	Speed River Trail	Guelph Hiking Trail Club
43	Cambridge	Fife Rd. Township Rd 16 (Woolwich) Rd	Region of Waterloo Cycling Master Plan
44	Maryhill and Kitchener	County Rd. 30 and Maryhill Rd.	Consulting Team
45	Maryhill and Kitchener	County Rd. 51 and Crowsfoot Rd. (Woolwich Twp.)	Region of Waterloo Cycling Master Plan
46	Elmira	Kissing Bridge Trail/Trans Canada Trail	Region of Waterloo Cycling Master Plan



How Does The Network Relate to The Users and Geography of the County?

The core users of the network consist of two broad categories, namely **pedestrians** and **cyclists**. For the purposes of the Wellington County Active Transportation Plan the **pedestrian group** includes walkers, joggers/runners, hikers, dog-walkers, wheelchair users, parents pushing strollers and other small wheeled users such as skateboarders and in-line skaters. This group generally travels short distances ranging from several hundred metres to less than 10km, with only a small percentage of trips over 10km in length for a single outing. The **cyclist group** includes bicycle riders with a range of experience from novice and occasional recreational riders who travel short distances in and around urban areas and key attractions, to experienced cyclists that may travel over 100km in a single outing.

This plan recognizes that the majority of pedestrian trips will tend to be centred within or close to urban centres and in the vicinity of key recreational attractions (e.g. Belwood Lake). Similarly it is expected that a significant portion of all cycling trips will be close to urban centres and nearby key attractions, however cycling trips will also take place throughout the county.

With this in mind the county-wide Active Transportation network is envisioned as system that connects communities, provides links to important destinations and connects to major existing and planned trails and active transportation routes within each of the local municipalities. In the rural areas the county-wide network provides “grid” of routes that are regularly spaced, connect communities and avoid heavily traveled roads wherever possible. In urban areas the county-wide network provides a framework of active transportation routes that can serve as the foundation for local area networks. **As local municipalities continue to develop their own pedestrian, cycling and active transportation networks within the urban areas as part of local master plans, it is anticipated that these will connect seamlessly to the broader county-wide network routes ultimately creating a comprehensive network with a higher density of routes in the urban areas.**

The Active Transportation network is not a “one-size fits all” facility; instead there are different types of facilities in different locations to accommodate varying levels of use and the range of pedestrian and cyclist users. As noted above it is anticipated that there will be larger numbers of users in and around urban centres, and the range of skill/ability of users will be widest in these locations. To accommodate this range of users the Active Transportation network includes the following types of on and off-road routes:

- Off-road trails outside of road rights-of-way in both the urban and rural areas to accommodate pedestrians and cyclists, such as:
 - single track walking and hiking trails for pedestrians;
 - single track trails for hiking and cycling; and
 - multi-use trails for both pedestrian and cyclist user groups;



- Off-road multi-use trails within road rights-of-way, typically in the urban areas that are designed to accommodate both pedestrian and cycling user groups;
- On-road signed routes which include:
 - signed cycling routes on low volume urban roads with sidewalks for pedestrians;
 - signed cycling routes on low volume urban roads without sidewalks where pedestrians share the road with motor vehicles and cyclists; and
 - signed routes on low volume rural roads where cyclists share the road with motor vehicles and pedestrians walk on road shoulders.
- Paved shoulders typically in rural areas that can accommodate pedestrians (walking facing motor vehicle traffic) and cyclists (riding in the same direction as motor vehicle traffic); and
- Bicycle lanes typically in urban areas on higher volume roads, with accompanying sidewalks for pedestrians.

Further details regarding the design of the active transportation facilities are included in **Appendix A** of this report.

IMPLEMENTATION OF THE ACTIVE TRANSPORTATION NETWORK

The Wellington County's Active Transportation Plan is a blueprint which is intended to guide the decisions made and provide the tools and policies necessary to implement a County-wide active transportation strategy.

The Wellington County Active Transportation Plan is intended to complement and support existing and future local municipal AT and trail plans and initiatives. The proposed infrastructure improvements and additions require a clear implementation strategy that prioritizes routes for both new construction and rehabilitation. However, it is important to keep in mind that the Active Transportation Plan is not only an infrastructure plan. It also includes a number of recommendations and policies to be considered for adoption by the County in partnership with the local area municipalities and other key stakeholders such as Wellington-Dufferin-Guelph Public Health and WDG *in motion*. The proposed network is supported and complemented by a number of outreach initiatives and suggested policies and recommendations that can be used to encourage active transportation and trail development and use throughout Wellington County. The proposed implementation plan consists of several phases to be coordinated where possible, with the County and local plans for other capital infrastructure projects such as road improvements and utility installations. The Active Transportation Plan includes an implementation strategy to guide the County in improving active transportation infrastructure over the next 20+ years and beyond.

- **Short Term** (1 – 10 years);
- **Mid Term** (11 – 20 years); and
- **Long Term** (beyond 20 years).

When complete after the 20 plus year build-out the proposed Active Transportation network will include just over 1000km of facilities, with approximately 30% of the entire network being off-road and the remaining 70% being on-road. Table EX.2 provides a summary of the network by facility type and phase. Phasing is discussed in greater detail in Chapter 6 of this report.



Table EX.2: Network Summary- Facility Lengths (km) by Phase and by Facility Type ⁽¹⁾

	Existing	Short Term (Years 1-10)	Mid Term (Years 11-20)	Long Term (Beyond Year 20)	Total by Facility Type
Multi Use Trail (Spine Off-Road Route)	93.0	11.6	43.4	10.2	158.2
Secondary Off-Road Route ⁽²⁾	136.8	0	0	0	136.8
Signed Route	0.5	138.4	183.8	101.9	424.6
Signed Route with Sharrows	0	5.1	12.4	7.8	25.3
Paved Shoulder	27.0	43.4	93.9	102.2	266.5
Bike Lane	0	0	0.8	0	0.8
Total by Phase	257.3	198.5	334.3	222.1	
Grand Total					1012.2

Notes

(1) Facility lengths are measured to the nearest 0.1km

(2) Includes existing Secondary off-road trails only. No Secondary off-road trails are proposed in the Wellington County Active Transportation Plan. Proposed/future Secondary off-road trails are to be determined through local municipal Trail Master Plans

A number of other criteria were used to prioritize the implementation of routes in this plan. It is recommended that these should continue to be used in the future when annual network priorities are being reviewed and / or updated. These include:

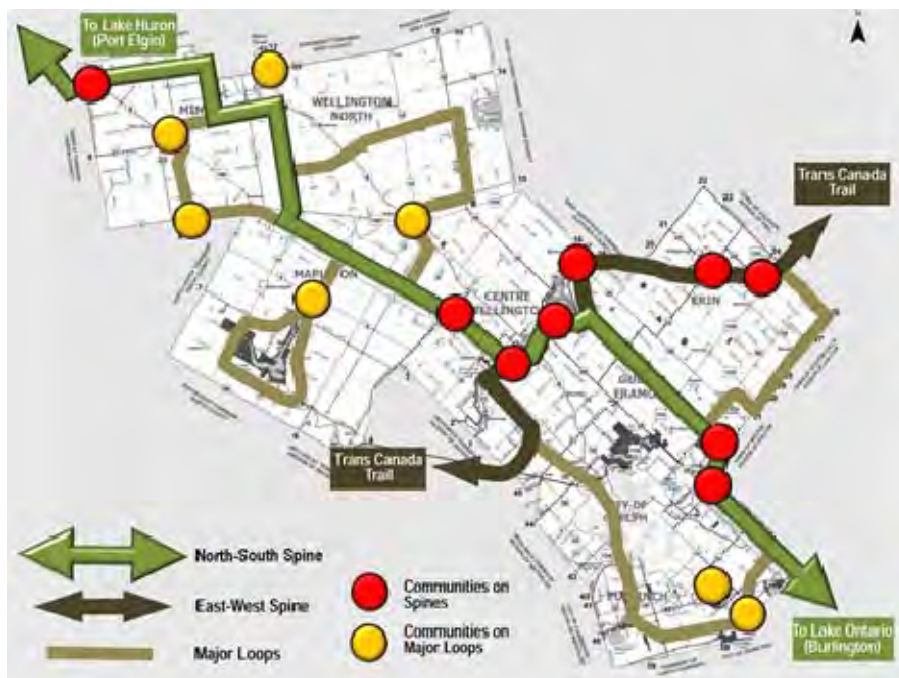
- Review the approved County and local Municipal capital projects forecasts that have been provided with the intent to maximize cost savings by working in tandem with planned capital road projects and implement AT facilities in conjunction with other capital infrastructure projects such as road rehabilitations and reconstructions, the construction of new roads and the construction of linear utilities such as underground gas lines, water supply lines and sewers
- Build demand by implementing and connecting a number of the key signed bike route segments in Phase 1, while ensuring a balanced approach to implementation across all municipalities in the County
- Close short gaps in the existing network with a focus on those gaps that when completed results in continuous routes and /or important links
- Create connections to regional and national trails such as the Elora Cataract Trail, Kissing Bridge Trail and Trans Canada Trail
- Work with local partners, encourage the implementation of new routes as part of new land development at the time of construction rather than retrofitting routes at a later date
- Develop on road bike lanes where they can be implemented through lane reallocations and repainting pavement markings
- Focus on areas where current Active Transportation volumes are highest, and/or where the highest demand is anticipated. For example routes that facilitate access to key destinations, especially those that have the potential to attract large numbers of “would-be” walkers and cyclists including those who would be traveling to schools in the urban centres, tourist destinations, community centres, and large employers
- Consider prioritizing routes based on input from the proposed Inter-Municipal Active Transportation Working Group, the Citizen’s Advisory Group and the public



- Focus on creating spine connections between urban centres within the County, by completing the East-West Spine Route and developing the North-South Spine Route as described below

The County-Wide Spine Routes

The development of the Spine and Major Loop Routes concept is suggested as a priority area of focus for the implementation of the Wellington County Active Transportation Plan that will not only provide opportunities for local residents to cycle on a variety of routes and better connect communities within the County, it will also provide local businesses the opportunity to enjoy economic benefits created by bicycle tourists that are interested in a longer distance route from the north shore of



Lake Ontario in the Burlington area to the east shore of Lake

Figure EX.1 – Concept of the North-South Spine and East-West Spine Routes

Huron at Port Elgin. The concept includes a north-south spine and an east-west spine. The east-west spine utilizes the Elora Cataract Trail and the northern section of the designated Trans Canada Trail route. A significant portion of this infrastructure is already in place. The north-south spine is primarily an on-road route utilizing both County and local roads, which apart from only a few short sections is on hard-surface roads. There are a few short sections that would require conversion from gravel surface to a hard surface. Figure EX.1 illustrates the concept and the details of the north-south spine and east-west spine routes.

In addition to infrastructure investment, the plan calls for program development and operations funding to support successful implementation and monitoring. To facilitate the implementation of the Active Transportation Plan it is recommended that the current Active Transportation Advisory Committee should be enhanced so that the communication and coordination that took place during the development of the Plan can continue into the future. Specifically, it is proposed that the County explore the potential for two groups of representatives to provide input and guide the future development of active transportation in Wellington County. These two groups include an Inter-Municipal Active Transportation Working Group and a Citizens' Advisory Group. Both of these groups would be administered by an Active Transportation Coordinator; a new position recommended as



part of the Active Transportation Plan. The structure and composition of these groups would be determined by the County in consultation with local Municipal partners.

Outreach, Enforcement & Education

A successful active transportation network is one that is actively and properly used. To this end, a complete strategy to promote and facilitate walking and cycling needs to address the “Five E’s”, which include:

- Engineering:** The way in which walking and cycling facilities and amenities are planned, designed, constructed and maintained;
- Education:** Informing and educating users of the active transportation system;
- Encouragement:** Promoting walking, cycling and the use of the active transportation network;
- Enforcement:** Ensuring that users of the active transportation network adhere to applicable rules and regulations;
- Evaluation:** Monitoring the success of facilities and programs and making necessary adjustments and improvements

Public outreach will be an important element in the implementation of the Active Transportation Master Plan for the County of Wellington. Outreach involves social marketing, raising public awareness for pedestrian and cycling initiatives in the County and these can be delivered through a number of initiatives such as education, encouragement and enforcement. The successful implementation of the Master Plan must involve public outreach as it will help both cyclists, pedestrians, motorists etc. better understand their relationship and roles when using the network, and will help to communicate and promote the benefits of cycling and walking to the residents as well as visitors of Wellington County. The outreach strategy presented in this plan is built on current initiatives in place at the County-wide level as well as additional potential programs and initiatives which could be explored in the future for implementation at the County or local municipal level. These initiatives may involve partnerships with local community groups, agencies, Wellington-Dufferin-Guelph Public Health or WDG *in motion*.



Funding and the Active Transportation Master Plan

Funding the plan is essential if the benefits are to be realized. The Active Transportation Plan recommends the provision of funding and staff resources on an annual basis. It establishes a principle of partnering with local municipalities, Wellington-Dufferin-Guelph Public Health, WDG *in motion*, and other partners to implement elements of the Plan. A cost estimate associated with implementation of the Active Transportation Network is presented in Table EX.3.

Table EX.3: Network Implementation Costs By Phase			
Short Term- Years 1-10			
Facility Type		Length (km)	Cost
Short Term (Years 1-10)	Multi Use Trail (Spine Off-Road Route)	11.6	\$1,740,000
	Signed Route	138.4	\$55,360
	Signed Route with Sharrows	5.1	\$35,700
	Paved Shoulder	43.4	\$2,387,000
	Bike Lane	0	\$0
Subtotal Short Term		198.5	\$4,218,060
Mid Term Year- Years 11-20			
Facility Type		Length (km)	Cost
Mid Term (Years 11-20)	Multi Use Trail (Spine Off-Road Route)	43.4	\$6,510,000
	Signed Route	183.8	\$73,520
	Signed Route with Sharrows	12.4	\$86,800
	Paved Shoulder	93.9	\$5,164,500
	Bike Lane	0.8	\$160,000
Subtotal Mid Term		334.3	\$11,994,820
Long Term Year- Beyond Year 20			
Facility Type		Length (km)	Cost
Long Term (Beyond Years 20)	Multi Use Trail (Spine Off-Road Route)	10.2	\$1,530,000
	Signed Route	101.9	\$40,760
	Signed Route with Sharrows	7.8	\$54,600
	Paved Shoulder	102.2	\$5,621,000
	Bike Lane	0	\$0
Subtotal Long Term		222.1	\$7,246,360
Signing of Existing Facilities ⁽¹⁾		120.5	\$48,200
Grand Total-All Phases		875.4	\$23,507,440

(1) Includes an allowance for signing of existing facilities other than the 136.8km of existing Secondary Trails

It has been developed based on averages obtained from recent construction projects from across Ontario. As each network segment becomes a priority for construction, a more detailed assessment as part of the design process will be required to determine site specific conditions and design details. Additional details regarding the long term proposed investment in active transportation and trails can be found in Chapter 6 of this report.

Active Transportation facilities in the network can generally be categorized according to whether they are on or

off-road and according to the ownership of the right-of-way through which they pass. Table EX.4 proposes a cost-sharing



program for the implementation of the designated Active Transportation network. The County and local municipalities should review the details of the cost sharing arrangement for the various scenarios as outlined and refine them as necessary.

Table EX.4 Potential Cost Sharing Program for Facility Construction		
	DESCRIPTION	PROPOSED COST SHARE
Scenario 1	On-road facility on a County Road	100% County, 0% Local Contribution
Scenario 2	Off-road facility within a County road right-of-way	100% County, 0% Local Contribution
Scenario 3	On-road facility on a Local road	50% County, 50% Local Contribution
Scenario 4	Off-road facility within a Local right-of-way	50% County, 50% Local Contribution
Scenario 5	North-South or East-West Spine Off-road facility within or outside of a road right-of-way	100% County, 0% Local Contribution
Scenario 6	North-South or East-West Spine On-road facility on a County or Local Road	100% County, 0% Local Contribution
Scenario 7	Off-road facility outside a road right-of-way (other than the North-South or East West Spine)	0% County, 100% Local Contribution

To assist the County in funding the recommendations in this plan, the County is encouraged to seek out other sources of revenue from its partners which may include future funding alternatives and opportunities from the Province of Ontario and the Federal Government. Other potential sources of funding are outlined in Chapter 6 of this report.

SUMMARY OF PLAN RECOMMENDATIONS

There are numerous benefits that emphasize why Active Transportation in Wellington County is a sound investment. Chapter 2 of this report details the various benefits of walking and cycling in terms of health and fitness benefits; transportation benefits; environmental benefits; economic benefits and tourism benefits. The County's investment in the Active Transportation Plan can be expected to yield benefits in all of these areas. In addition the costs can be justified as part of the cost of providing a more sustainable, balanced and efficient transportation system in Wellington County. The public and stakeholder input received during the preparation of the Plan indicates strong support for improving pedestrian and cycling facilities and programs to promote these activities in the County.



The Active Transportation Plan includes thirty seven key recommendations related to planning, design, implementation and management of the active transportation network and associated programs and promotional initiatives.

They are summarized in the following table, Table EX.5, EX.6 and EX.7.

Table EX.5 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-1	The next update to the County Official Plan should include policies related to Active Transportation, specifically: (a) Overarching policies in the Transportation Section of the Official Plan that reference pedestrian, cycling and other forms of active travel as suggested in Section 4.1 of the Wellington County Active Transportation Plan ; and (b) References to the Wellington County Active Transportation Plan as the guiding document for detailed policies and guidelines related to Active Transportation in Wellington County.	4-1	X			County of Wellington	Existing Resources	N/A
4-2	Explore land use planning initiatives and policy development such as mixed land use, higher density urban areas and pedestrian and cyclist friendly streetscapes to promote / facilitate an increased quality of life and liveability within the communities of Wellington County.	4-4		X		County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health

Table EX.5 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-3	Strive to continually improve connectivity for pedestrian and bicycle travel through local neighbourhoods, between communities, across the County and to neighbouring municipalities.	4-4		X		County of Wellington	Existing Resources	Local Municipalities Bordering Counties and Municipalities
4-4	Build upon the existing Safe Routes to School Program throughout the County in collaboration with the WDG Active and Safe Routes to School Committee	4-4		X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health
4-5	The County and local municipalities should consider adopting a Pedestrian Charter similar to the Town of Minto to help facilitate and promote the development of a walkable and pedestrian friendly environment throughout the County.	4-4		X		County of Wellington	Existing Resources	Local Municipalities
4-6	Staff review the Development Charges Bylaw for the County as well as the local municipalities to ensure that it includes sufficient language / clauses to enable the use of Development Charge funds to build new, and improve existing AT routes and trail facilities in locations where it can be demonstrated that the need is the result of County or municipal growth.	4-6	X			County of Wellington	Existing Resources	Local Municipalities

Table EX.5 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-7	The County and local municipalities should develop/refine policies and processes for working with the development community to ensure that Active Transportation facilities are planned, designed and constructed as part of the development process.	4-7	X	X		County of Wellington	Existing Resources	Local Municipalities Local Developers
4-8	Staff will review the suggested strategies for ongoing public participation related to implementing Active Transportation facilities in existing established areas and prepare a process that is appropriate for the County of Wellington and the local municipalities.	4-9	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health
4-9	Where proposed Active Transportation facilities identified in the Active Transportation network are within the study area of an Environmental Assessment (EA) for other municipal infrastructure projects, the Active Transportation facility or trail shall form an integral component of these projects for review and implementation.	4-9	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table EX.5 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-10	<p>The County and local municipalities should:</p> <p>a) Thoroughly examine the potential to use unopened road allowances as potential Active Transportation routes prior to disposing of them/selling them to adjacent land owners;</p> <p>b) Thoroughly examine the potential to use abandoned railway corridors as potential Active Transportation routes prior to declaring no interest in purchasing or leasing them; and</p> <p>c) Consider and investigate the potential to utilize utility corridors in urban and rural areas as Active Transportation routes.</p>	4-16	X			County of Wellington	To be Determined	Local Municipalities
4-11	<p>The County and local municipal partners should develop an acquisition strategy for proposed Active Transportation routes on privately owned lands as illustrated in the recommended Network Map using techniques as described in Appendix C of the Active Transportation Plan.</p>	4-17	X			County of Wellington	Existing Resources	Local Municipalities Conservation Authorities

Table EX.6 – Chapter 5 – The Active Transportation Network

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
5-1	The design standards and guidelines prepared as part of the Wellington County Active Transportation Plan are the guiding document regarding the construction of cycling and trail facilities throughout the County and are intended to inform and support the details provided in other documents used for implementation.	5-7	X	X	X	County of Wellington	Existing Resources	Local Municipalities
5-2	Staff responsible for the design and construction of Active Transportation facilities should remain current regarding best industry design practices.	5-7	X	X	X	County of Wellington	Existing Resources	Local Municipalities
5-3	Local area municipalities should develop local trail master plans to complement and connect seamlessly with the county-wide active transportation network. This will allow each municipality to respond to their unique trail needs and priorities at a local level.	5-7		X	X	Local Municipalities	To be Determined	County of Wellington
5-4	The active transportation network as identified in the Wellington County Active Transportation Plan should be adopted by the County and local municipalities and consideration should be given to including it as a schedule in future updates of the County and local municipal Official Plans (where local Official Plans exist).	5-20	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table EX.6 – Chapter 5 – The Active Transportation Network

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
5-5	Recognize that the Active Transportation network will change over time as new opportunities offered by unopened road allowances, hydro rights-of-way, existing abandoned rail corridors, open green-space and future roadway improvements become available. To respond to new opportunities changes to the network can be approved at the Director level without the need for an Official Plan Amendment.	5-20	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-1	The County should adopt the 20+ year active transportation network implementation plan and use it to guide the implementation of the network over time.	6-2	X	X	X	County of Wellington	To be Determined- Subject to Annual Budget Deliberations	N/A
6-2	The County should take the lead in establishing an Inter-Municipal Active Transportation Working Group including but not limited to staff representatives from the County, local municipalities, Wellington-Dufferin-Guelph Public Health and other key agencies as determined.	6-2	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health Municipal Councillors OPP Wellington-Dufferin-Guelph Public Health Conservation Authorities Bordering Counties & Municipalities

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-3	The County should take the lead in establishing an Active Transportation Citizen's Advisory Committee including but not limited to representatives from local advocacy groups, citizens-at-large, local businesses and other key groups as determined.	6-2	X			County of Wellington	Existing Resources	Local Municipalities Local Stakeholders & Interest Groups Citizens At Large & Local Businesses School Boards & Representatives
6-4	The County should coordinate active transportation network implementation with the County's Engineering Services Department Five-Year Road Rehabilitation.	6-2	X			County of Wellington	To be Determined- Subject to Annual Budget Deliberations	County Engineering Services Department
6-5	The County should explore the development of the role of an Active Transportation Coordinator, who would be responsible for the "championing" of AT related issues, initiatives and programming throughout the County. This role could be a new full-time (e.g. 1 FTE) position at the County, or a shared position between the County and Wellington-Dufferin-Guelph Public Health (e.g. 1/2 FTE for each organization).	6-4	X	X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-6	The Active Transportation Coordinator would be responsible for the implementation and follow-up of Wellington's Active Transportation Plan at the County level and provide updates on the progress of the study when necessary to local municipalities, stakeholders and interest groups etc..	6-4	X	X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health
6-7	The Inter-Municipal AT Working Group, County and Local Municipal staff should review the proposed five-step process tool for guiding the implementation of active transportation network facilities in Wellington County and adapt it as necessary.	6-6	X			County of Wellington	Existing Resources	Inter-Municipal Working Group
6-8	The Active Transportation Plan should be reviewed and given consideration when County Roads (or local municipal roads as identified as part of the AT Network) and other capital infrastructure projects are identified and scheduled.	6-6	X			County of Wellington	Existing Resources	Local Municipalities
6-9	As part of demonstrating leadership the County and local municipalities should provide bicycle parking facilities at public buildings under their ownership.	6-16	X			Inter-Municipal Working Group	Existing Resources	County of Wellington Local Municipalities

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-10	The County in partnership with local municipalities and other local partners should investigate the potential to develop a bicycle parking program whereby bicycle racks would be installed in locations where there is a demonstrated need for bicycle parking facilities.	6-16	X			County of Wellington	Existing Resources	Local Municipalities Local Agencies and Businesses
6-11	The County and Local Municipalities should review and revise their annual maintenance budgets to accommodate the maintenance of Active Transportation Infrastructure. These budgets should be increased over time to correspond with the increase in the number of kilometres of Active Transportation facilities.	6-17	X	X	X	County of Wellington	To be Determined	Local Municipalities

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-12	Wellington-Dufferin-Guelph Public Health and the County and Local Municipal partners should consider the implementation of cycling and pedestrian/trail education programs to educate residents on walking and cycling. This should include a strong focus on educating children and youth on the use of sustainable modes of transportation so they may be more inclined to choose active modes of transportation when they are adults Initiatives may include enhancements of existing programs and/or the development of new ones.	6-21	X	X	X	Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington
6-13	The Design Guidelines identified in Wellington's Active Transportation Plan Appendix A should be considered by Wellington-Dufferin-Guelph Public Health, the County and Local Municipalities as active transportation educational materials are developed.	6-21	X	X		County of Wellington	To be Determined	Local Municipalities Wellington-Dufferin-Guelph Public Health
6-14	The County in partnership with local municipalities and Wellington Dufferin-Guelph Public Health should develop and distribute hard copy and electronic information on the Active Transportation routes (e.g. newsletters, mapping and promotional materials etc.).	6-21	X	X		County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-15	Community-Based Social Marketing (CBSM) techniques should be explored as a potential method of delivery for marketing and promotional efforts related to the Active Transportation Plan.	6-24	X			Wellington-Dufferin-Guelph Public Health	To be Determined	Local Municipalities County of Wellington
6-16	The County, local municipal partners and Wellington-Dufferin-Guelph Public Health should work with Wellington County OPP to develop a safe cycling campaign modeled after the "Safely Sharing Halton's Roadway" campaign	6-26	X			Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington Wellington County OPP
6-17	Enforcement activities of the OPP should be supplemented by local By-Law enforcement officers for issues relating to sidewalk cycling, misuse of bicycle and pedestrian facilities and misuse of trails etc.	6-26		X		Local Municipalities	To be Determined	County of Wellington Wellington County OPP
6-18	The County and local municipalities should adopt the proposed network Phasing Plan as the guide for implementing the Active Transportation network.	6-28	X			County of Wellington	To be Determined – Subject to Annual Budget Deliberations	Local Municipalities
6-19	The County and local municipal partners should review and refine the proposed Active Transportation Seed Fund and develop a terms of reference for the application process.	6-30	X			County of Wellington	To be Determined	Local Municipalities

Table EX.7 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-20	In addition to capital funding the County and local partners should explore other outside partnership, cost-sharing and funding opportunities for the implementation of the Active Transportation Network.	6-31	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health
6-21	The County and local partners should review the performance measures and embark on a program to developing base line data on Active Transportation in Wellington County.	6-33	X			Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington Wellington-Dufferin-Guelph Public Health



1.0 WHAT IS ACTIVE TRANSPORTATION (AT)?

Wellington County in association with the seven local area municipalities and Wellington-Dufferin-Guelph (*WDG*) *in motion* have committed to developing and implementing a county-wide Active Transportation Plan. The plan is a long-term strategy to create a pedestrian and cycling supportive environment that will encourage both utilitarian and recreational travel by walking and cycling while promoting the importance of active lifestyles for residents and tourists. An important part of the plan is an Active Transportation system that will provide residents and visitors with a network of on-road and off-road trails and active transportation corridors connecting the County's communities and connecting our communities to other communities. An equally important part of the plan is the promotion of Active Transportation. Promotion includes education and encouragement initiatives to raise awareness of the numerous health, environmental and economic benefits of Active Transportation, all of which are needed to bring about a "cultural shift" and get residents to make incremental changes in the way they move about Wellington County as part of their everyday life.

1.1 ACTIVE TRANSPORTATION IN WELLINGTON COUNTY

The Public Health Agency of Canada defines Active Transportation (AT) as:

"Any form of human-powered transportation – walking, cycling, using a wheelchair, in-line skating or skateboarding."

In Wellington County, Active Transportation includes Active Recreation, Active Destination Oriented Trips and Active Commuting.

Involves:

- Use of an Active Transportation mode of exercise for recreation pursuits, such as hiking or cycling.

Involves:

- Trips to and from school, shops, visiting friends; and
- Running errands.

Involves:

- Journeys to and from work;
- Attending meetings; or
- Delivery of materials.

There is a growing need and demand for Wellington County to make the necessary connections to its neighbours at the appropriate connections while facilitating the necessary internal connections to its own communities.



1.2 COUNTY & LOCAL MUNICIPAL HISTORY OF ACTIVE TRANSPORTATION AND TRAILS

The concept of Active Transportation in Wellington County is relatively new. Interest in, and the development of trails and trail related initiatives have been taking place for many years, primarily through local groups and local initiatives. The Wellington County Active Transportation Plan recognizes and commends these initiatives and attempts to bring many of them together under a common framework for moving forward into the future at a County-wide level. Some of the key highlights are described below.

WELLINGTON COUNTY

2007

Initiated in 2007, *WDG in motion* has been a successful partnership between local municipalities and the Wellington-Dufferin-Guelph Health Unit which undertakes studies and initiatives which works to promote active and healthy living and active transportation and active living to the residents of the County.

2010

In 2010, the County developed an AT Sub-Committee made up of representatives from each of the seven municipalities; Wellington-Dufferin-Guelph Public Health, Wellington County, Wellington County Road Supervisors Association, the Ontario Ministry of Transportation and *WDG in motion*. The committee has worked diligently to support the County in its efforts to initiate and develop the Active Transportation Plan as well as future projects to educate the public on the importance of active living throughout the County.

In November 2010 the County enlisted the services of 8-80 Cities to undertake presentations and workshops in each of the 7 municipalities across the county as part of the Liveable Community Project. The purpose of the workshops was to openly discuss how to create more walkable and bikeable communities with better parks and public spaces in Wellington County. One of the key recommendations that came from these discussions was that the County should create and implement an Active Transportation Master Plan to guide decision making, and that the seven area municipalities should also create and implement local Active Transportation plans as part of an overall, integrated strategy. A County-wide plan would set out the framework for this integration and the local plans would fit within the framework as well identify and address local policy issues and priorities.

"The plan provides the County with a long-term strategy to develop an Active Transportation system that will ultimately provide residents and visitors with a safe network of on-road and off-road trails and active transportation corridors connecting the County's communities."

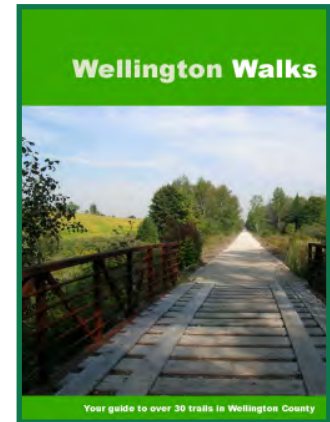


2011

Currently the County owns/leases and operates approximately 16km of trails. In 2011 the County developed a 5-year Trail Plan which identifies trail priorities and provides a strategy for maintaining, upgrading and promoting County trails between 2011 and 2015. The plan also identifies future trail priorities, in particular the Trans Canada Trail link between Elora and Guelph which was endorsed in principle by County Council in 1998.

2011

There are currently a number of other trails and cycling routes found throughout the County, however, many are not connected due to the separation caused by expanses of rural countryside. In 2011, the County published the Wellington Walks trail guide which documents the trails found throughout the County. The guide identifies 43 trail routes which highlight conservation areas, County Forests, naturally significant areas, key urban centres as well as destination points.



LOCAL MUNICIPALITIES

In addition to trail work at the County level each of the seven area municipalities have been working on trail and active transportation related initiatives based on local interests, priorities and available resources. The following provides a brief history of the local initiatives.

TOWNSHIP OF CENTRE WELLINGTON

1994

The Township provides support for the development of the Elora-Cataract Trailway which is a partnership between the Grand River Conservation Authority, Credit Valley Conservation and the Elora-Cataract Trailway Association. Centre Wellington is home to 26km of the 47km long trailway.



2007

The Township develops a Parks, Recreation & Culture Advisory Committee which provides advice to Council and the Director of Parks & Recreation on related matters. They are directly involved in the provision and development of trail and AT related opportunities.

2009

The Township develops its Parks, Recreation and Culture Master Plan a 10 year strategy articulating the planning and development needs and priorities associated with recreation programs, facilities, culture, parks, trails and open space.

2011

The Township initiates and undertakes the development of a Trail Master Plan in coordination with the County's Active Transportation Plan. The plan builds on the success of the Elora Cataract Trailway currently found within the Township.



TOWN OF ERIN

1993

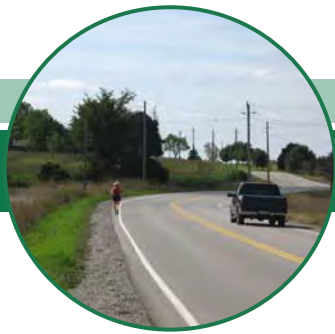
The Town provides support for the development of the Elora-Cataract Trailway which is a partnership between the Grand River Conservation Authority, Credit Valley Conservation and the Elora-Cataract Trailway Association. The Township of Erin is home to 18km of the 47km long trailway.

2004

The Town of Erin develops a new Official Plan which includes policies relating to a more sustainable transportation system and "encouraging the development of safe and efficient pathways and trails in Town which promote walking / biking and reduced dependency on motor vehicles."

2011

Marks the opening of the Mill History in Erin Village Walking Trail system located at Woollen Mill Lane developed by the Town of Erin Recreation and Culture Committee in association with WeCare of Credit Valley Conservation.



TOWNSHIP OF GUELPH ERAMOSA

1995

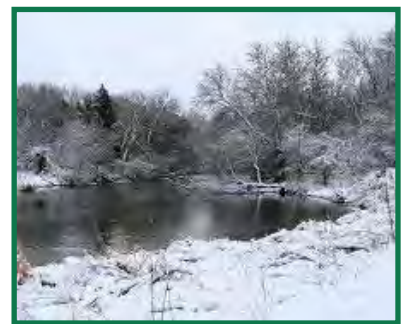
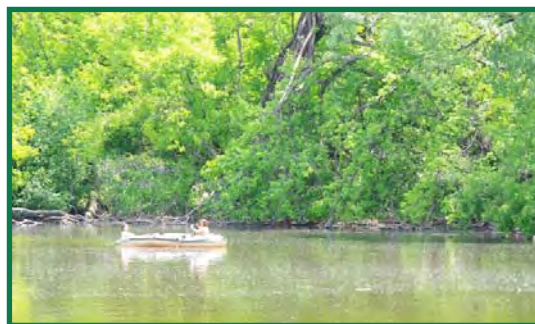
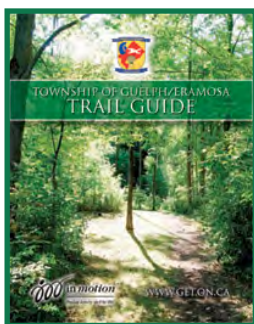
Eramosa Heritage Committee develops a set of Guided Walking Tour Books which are locally developed and published to highlight key attractions within Guelph Eramosa using existing walking and hiking trails.

2007

The Township develops its first Trails / Environment Committee which is tasked to update the current trail map and assist with municipally-owned trail enhancement and maintenance led by the Manager of Parks and Recreation.

2009

The Township develops and publishes the "Township of Guelph / Eramosa Trail Guide". The guide provides a description of the different trails found throughout the Township as well as key information on trail etiquette and user references.



TOWNSHIP OF MAPLETON

2000

The Township of Mapleton developed their 4H Horseback Trail Riding Club which uses local trails throughout the Township to undertake equestrian activities.



2011

The Township of Mapleton initiates the development of their Parks, Recreation and Culture Master Plan dealing with Leisure and Recreation Facilities throughout the Township.



TOWN OF MINTO

1999

The Palmerston Trail Association is formed and develops the White's Junction Trail. The White's Junction Trail runs along the former CN rail line north of Palmerston providing access to key natural areas and rare species

2001

The Town of Minto opens the Harriston Greenway Trail and develops the Harriston Greenway Trail Committee. The Greenway Trail links six community parks, former CN and CP rail lines, cemetery and busy properties along the Maitland River.

2006

The Town of Minto Council signs the International Walking Charter for Walking and urges local residents to also sign the document in support.



TOWNSHIP OF PUSLINCH

1966

Conservation Halton develops Mountsberg Conservation Area. Today Mountsberg Conservation Area supports a number of trails including the Lakeshore Lookout Trail which follows the shoreline of the Mountsberg Reservoir south of Highway 401.

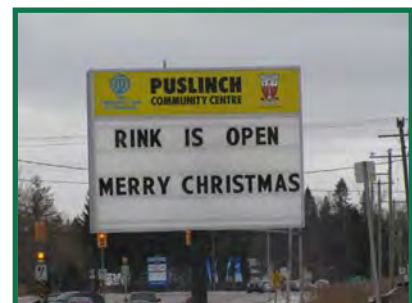
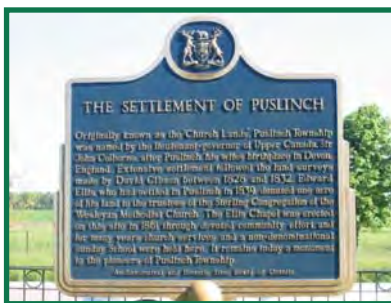


1974

The Township of Puslinch in association with the Guelph Hiking Trail club completed the Starkey Hill Trail off Arkell Road in honour of the Starkey family, one of the early settlers and community leaders. The trail displays the highest point in Puslinch and is popular for hiking and birding.

2008

The Township publishes the Township of Puslinch Design Guidelines as developed by the County of Wellington for the design of key urban and rural areas throughout the Township. Specific reference is made to creating a pedestrian friendly environment where possible.



TOWNSHIP OF WELLINGTON NORTH

1952

The Grand River Conservation Authority created the Luther Marsh Wildlife Management Area. Today it includes 17km of trails that accommodate hikers and cyclists. The area is a destination for recreational trail enthusiasts interested in observing local wildlife.

2009

The Township in association with the Arthur Historical Society develop a walking tour of the Community & in association with *WDG in motion* and Active 2010 develop a Mount Forest Walking Tour and Group to promote healthy living and activity.

2010

The Township of Wellington North in association with the Grand River Conservation Authority develops the Butter Tart Trail and Trail Map for cycling trails of the most scenic areas within the Township.

"We are working on a plan to support these types of 'active transportation' in your municipality and across Wellington County so that you can walk, run or bike to the local grocery store, school or work!"



1.3 WHY UNDERTAKE AN ACTIVE TRANSPORTATION STUDY

There is a growing demand for active transportation (pedestrian and cycling) facilities and initiatives throughout Ontario and across North America for both utilitarian/commuter and recreational purposes. Initiatives addressing this growing demand are supported on a federal, provincial, regional, county and local municipal level through the development and implementation of a variety of policies and strategies. The growing awareness of the negative effects that a lack of physical activity has on human health, coupled with the widely recognized benefits of reducing motor-vehicle use and increasing multi-modal transportation, has contributed to a growing demand for active transportation options in both urban and rural communities across Ontario. Wellington County and the local area municipalities acknowledge the importance of future investment in active transportation facilities and opportunities.

The Wellington County Official Plan and Five Year Trails Plan are two current policies that support the development of active transportation (pedestrian and cycling) activities and initiatives. Each of these policies emphasizes the provision and development of pedestrian and cycling facilities and initiatives. In addition, several of the local area municipalities have developed policies that make reference to the pedestrian and cyclist environment, including:

Township of Centre Wellington:

- Township of Centre Wellington Parks, Recreation & Culture Master Plan (2009);
- Township of Centre Wellington Official Plan (2010);
- Township of Centre Wellington Zoning By-law;
- Township of Centre Wellington Strategic Plan.

Town of Erin:

- Town of Erin Official Plan (2008); and
- Town of Erin Development Charges.

Township of Guelph / Eramosa:

- Township DC Background Study; and
- Township Off-road Vehicle Bylaws.

Township of Mapleton:

- Township of Mapleton Site Plan Control By-law.

Township of Wellington North:

- Township of North Wellington Municipal Service Standards; and
- Township of North Wellington Winter Road Maintenance Standards.

Town of Minto:

- Town of Minto Sidewalk Policy;
- Town of Minto Strategic Plan (2008);
- Town of Minto Leisure Study Report; and
- Town of Minto International Charter for Walking.

Township of Puslinch:

- Township of Puslinch Design Guidelines (2010).



Policies and plans at the national, provincial and local level are documented in Chapter 3 of the report. The Wellington County Active Transportation Plan is designed to build upon these key policies and initiatives. In addition many of Wellington County's neighbours have developed or are currently developing trail, cycling and / or active transportation master plans and there is a need for the County plan to make seamless connections to the networks being developed by surrounding municipalities. Surrounding municipal plans include the:

- Town of Halton Hills Cycling Master Plan (2010) and the Town of Halton Hills Trails Master Plan (currently underway);
- Halton Region Active Transportation Plan (currently underway);
- Town of Milton Trails Master Plan (2007);
- Region of Waterloo Cycling Master Plan (2004) and the Region of Waterloo Active Transportation Plan (currently underway);
- City of Cambridge Trail Master Plan (2010);
- The City of Cambridge Bikeway Network Master Plan (2008);
- Town of Caledon Trail Master Plan Update (draft 2010);
- Region of Peel Active Transportation Plan (2012);
- Dufferin County Active Transportation and Trails Master Plan (2010);
- City of Hamilton Cycling Master Plan (2009);
- City of Guelph Bicycle Friendly Guelph Initiative;
- City of Guelph Trails Master Plan; and
- City of Guelph Trans Canada Trail Updated Report.

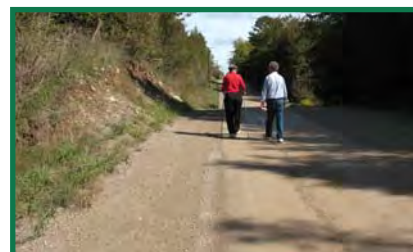
1.4 STUDY VISION & OBJECTIVES

The following objectives that support the vision of the County's Active Transportation Plan were prepared and finalized by the Study's Active Transportation Committee.

- Examine the current status of active transportation and trails in the county;
- Recommend a network of active transportation routes throughout the county and connecting to neighbouring municipalities;
- Provide recommendations on Official Plan policy;
- Illustrate and describe guidelines and standards for the construction of active transportation facilities;
- Recommend education and promotion programs related to active transportation; and
- Identify costs and priorities as part of a phased action plan.

Vision

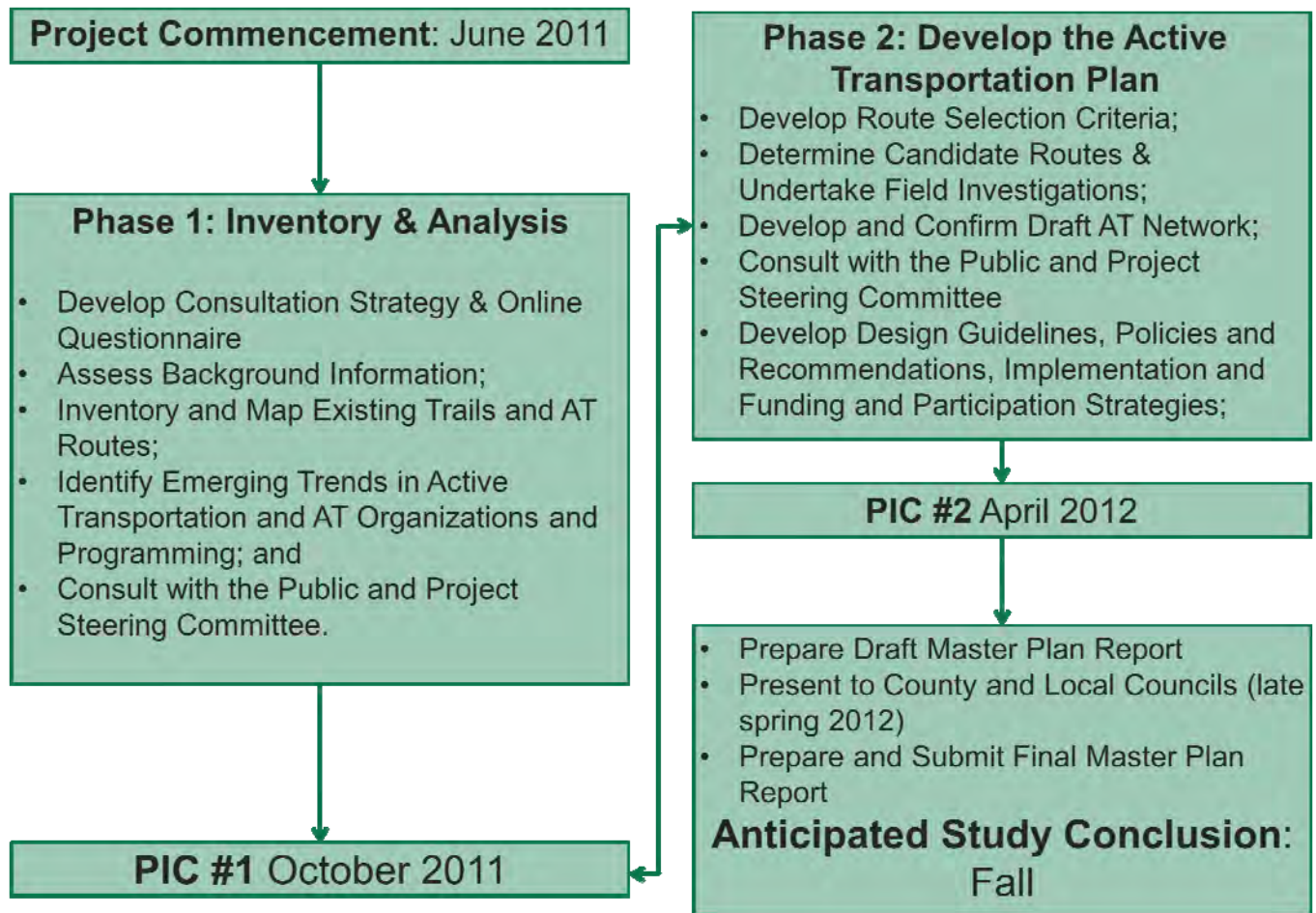
"Create and improve opportunities throughout the County for active recreation and active transportation."





1.5 STUDY PROCESS AND REPORT ORGANIZATION

Wellington County's Active Transportation Plan was initiated in June 2011 by Wellington County in association with local municipal partners and *WDG in motion*. A consultant team led by The MMM Group was retained by the County to develop the plan. A Project Steering Committee consisting of staff representatives from the County, the seven local area municipalities, MTO and County Road Superintendent, the City of Guelph, and *WDG in motion*, MTO and Roads Superintendent met on a regular basis to guide the process and decision-making related to the development of the AT Plan, and reflect the active transportation related planning initiatives of Wellington County as well as the local municipalities. This approach was based on the need to integrate the existing local municipal active transportation, pedestrian and cycling networks and policies, recommend a coordinated policy and implementation and maintenance strategy that the County and local municipalities could adopt to achieve the common goal of improving conditions for active transportation into the future. The study approach that led to the development of the County's AT Plan included the following phases:





A key component of the plan was the development of an integrated active transportation network. The network approach and process involved a number of steps which were used to establish a recommended active transportation network for the Active Transportation Plan. The network development approach included the following steps:

An Inventory of Existing Conditions: to compile and digitally map existing or previously planned active transportation facilities (pedestrian and cycling) in Wellington County. These included both on and off-road facilities, in order to establish a base condition.

A Route Selection Process: this included developing a set of route selection principles and supportive qualitative and quantitative criteria for determining the preferred network and facility types.

Finalizing the Recommended Route Network: this involved receiving and evaluating comments and suggestions provided by the project steering committee, finalizing the alignments for the route network and recommendations regarding appropriate facility types, developing an opinion of cost for implementation and determining implementation priorities.

The Wellington County Active Transportation Plan has been designed to be a living document that is flexible and capable of evolving over time. It is intended to maintain and enhance existing programs and infrastructure, while guiding the development and implementation of new active transportation facilities and programs. Implementation of the AT Plan is aimed at encouraging people to leave their cars at home and use non-motorized modes of transportation for recreation and utilitarian purposes throughout the Wellington County. The Active Transportation Plan report includes the following chapters:

Chapter 1 provides the background behind development of the Active Transportation Master Plan as well as an overview of how active transportation is defined in the context of the study.

Chapter 2 provides information on the current need and demand for active transportation facilities within the Wellington County and the local municipalities which has driven the development of the plan.

Chapter 3 addresses the existing active transportation conditions within the County and the existing system in place. This chapter also addresses the Federal, Provincial, County and local municipal policies that affect active transportation activities in Wellington County.





Chapter 4 details the future planning considerations and techniques which could be applied / undertaken to further emphasize the presence of active transportation within the County.

Chapter 5 outlines the approach used to develop the active transportation network as well as the final proposed active transportation network with associated facility types.

Chapter 6 outlines the proposed Implementation Strategy. It defines the role of the County as well as its local municipalities in implementing the County's Active Transportation Plan. It also recommends the timeline and costs associated with implementing the plan.

Chapter 7 provides a summary of recommendations as well as a proposed timeline, resources required and potential partnership opportunities to be explored during implementation.



2.0 ESTABLISHING THE NEED FOR AN ACTIVE TRANSPORTATION MASTER PLAN

2.1 INCREASING COUNTY DEMAND

Over the past 10 years Wellington County has been experiencing an increasing demand for active transportation facilities, initiatives and programs which promote healthy living and lifestyles. Since the development of *WDG in motion* in 2007, the connection between the development of AT facilities and initiatives and overall quality of life has prompted a renewed interest in Active Transportation throughout the County.

Public opinion research consisting of statistically valid data collected from Canadians including Wellington County as part of the National Active Transportation Survey (2004), as well as the *WDG in motion* Physical Activity Survey Report (2008) was collected and reviewed. The results of these surveys demonstrate the increasing demand for active transportation (cycling and pedestrian) facilities within and surrounding Wellington County.

National Active Transportation Survey (2004)

Key findings identified based on responses from the survey:

- Most Canadians (78%) walk as a leisure or recreational activity;
- Few walk to work (70% never do) and less than ¼ walk to a transit stop (58% never do);
- 60% of Canadian adults own or use a bicycle and 82% of those cycle for leisure or recreation. Very few cycle to work (76% never do);
- About 1/3 sometimes walk to visit friends or family, or to shop and do errands, or to leisure / recreation activities (52% never do). About ¼ sometimes cycle to visit friends or family and few do so for errands, to shop or to get to public transit;

Completed by: Canadian Fitness and Lifestyle Research Institute on behalf of "Go for Green"

Sample Size: 1,640 Canadians aged 15 or older

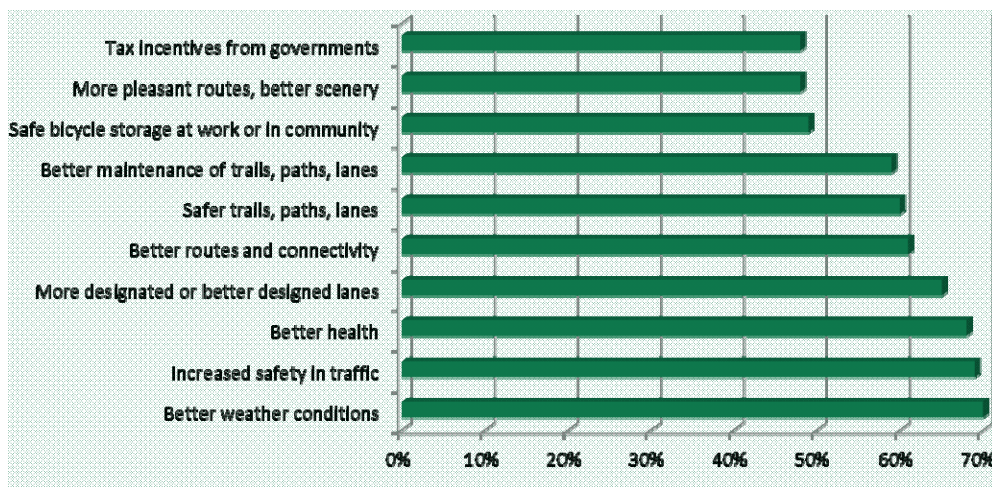
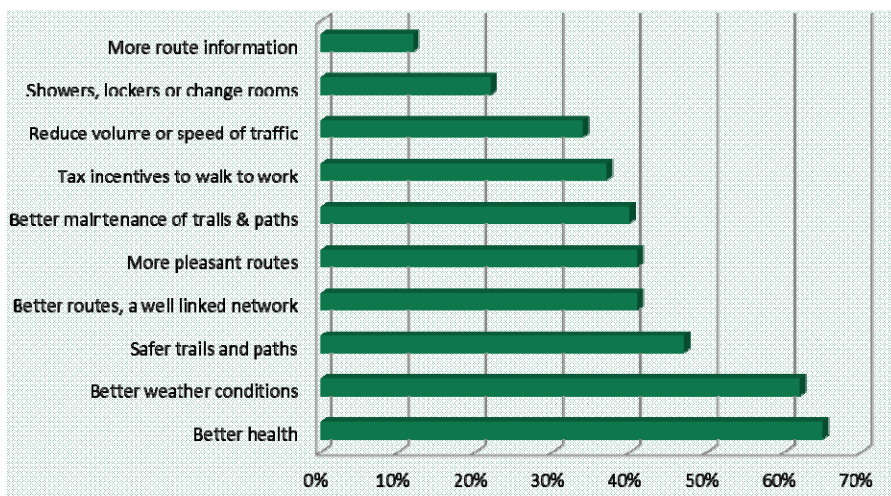
Study Purpose: to examine opportunities and participation in active transportation and commuting (walking and cycling) in adults and school-aged children as a follow-up to the 1998 survey.



- About 27% of adults work at home to telecommute, however, 62% travel to work by car most of the time;
- 45% of adults have changed the amount they walked compared to the previous year. Of those 61% walk more;
- 39% of adults have changed the amount they cycled compared to the previous year. Of those, 50% cycle more; and
- 15% of adults would like to cycle much more and 59% would like to cycle more.

The top four reasons factors that would encourage people to walk more often.

1. Better personal health (65%);
2. Better weather conditions (62%);
3. Safer trails and paths (47%); and
4. Better routes and a well-linked network (41%).



The top four factors that would encourage people to cycle more often.

1. Better weather conditions (70%);
2. Increased safety in traffic (69%);
3. Better health (68%);
4. More or better designed lanes (65%).

"45% of adults have changed the amount they walked compared to the previous year. Of those 61% walk more." National Active Transportation Survey, (2004)



Wellington-Dufferin-Guelph *in motion* Physical Activity Survey Report (2008)

The Physical Activity Survey Report was designed to capture information on the physical activity level of adults including the different types, frequency and duration of light, moderate and vigorous activities they participated in. Some of the key findings include;

- 73.7% of males and 71.4% of females in Wellington County exercise regularly;
- 85.7% of males and 87.9% of females who do not regularly exercise intend to begin regular exercise in the next six months;
- Approximately two thirds of male residents in Wellington (71.9%) and approximately three quarters of female residents (82.8%) have recently seen, heard or read an advertising message promoting the benefits of physical activity;
- Approximately one quarter of the residents in Wellington County (male: 28.1% and female: 20.6%) are less physically active than they were two years ago; and
- A little less than one third of residents in Wellington County (male: 25.2% and female: 32.8%) are more physically active than they were two years ago.

Completed by: *in motion* Wellington-Dufferin-Guelph Public Health and Harry Cummings & Associates

Sample Size: 8,589 randomly selected households of which 1,159 completed the survey.

Study Purpose: was designed to capture information on the physical activity levels of adults including the different types, frequency and duration of light, moderate and vigorous activities they participated in.

The most popular light, moderate and vigorous physical activities by Wellington County Residents		
Activity Level	Male	Female
Light	Walking followed by gardening	Walking followed by gardening
Moderate	Bicycling followed by fast walking	Bicycling followed by fast walking
Vigorous	Jogging followed by hockey and swimming	Jogging followed by aerobics



"Approximately two thirds of male residents in Wellington (71.9%) and three quarters of female residents (82.8%) have recently seen, heard or read an advertising message promoting the benefits of physical activity." Physical Activity Survey Report (2008)



Guelph-Wellington Transportation Survey (2005)

The 1996 and 2001 census data was used to generate trends on travel habits by Wellington County residents and reveal some potential areas to focus active transportation priorities and achieve significant “wins” in terms of modal shift. Some of the key results included:

- A 50% increase in the daily per capita trip rate from 1.9 (1996) to 3.05 (2001);
- An increasing number of households with more than one car;
- An increasing in the use of the car for all travel purposes and declining shares of other modes;
- An increase number of people working in Kitchener-Waterloo-Cambridge and GTA areas; and
- An increase in the number of people commuting from Kitchener-Waterloo-Cambridge to jobs in Guelph.

Completed by: Paradigm Transportation Solutions Limited, GSP Group & TSH Consulting

Sample Size: the City of Guelph and Wellington County

Study Purpose: to assess long term transportation needs in the Guelph-Wellington in addition to identifying transportation system improvements.

***Transportation Demand Management (TDM):** is a collective description for the policies and practical steps that are undertaken to discourage single occupancy car use and encourage ridesharing and alternatives modes such as walking, cycling and transit.*

Significant emphasis was placed on the development of transportation demand management (TDM) initiatives which include but are not limited to recommendations to explore the enhancement of pedestrian and cycling facilities and pedestrian trails and walkways throughout the County. Some of the challenges identified and potential strategies to overcome these challenges are listed below.

Walking and Cycling

Potential Barriers:

- Unpredictable weather conditions as well as the winter climate can limit cycling as an option for people;
- Lack of facilities at employment location s(i.e. secure parking, storage, showers); and
- Level of comfort and education about safe cycling options.

Recommendations for Consideration:

- The promotion of secure bicycle storage and additional facilities;
- The improvement of cycling route and network connectivity (i.e. through a grid system) in all new communities; and
- Promotion of mixed use urban form and higher density.

Pedestrian Trails and Walkways

Potential Barriers:

- Lack of compact, mixed use urban form;
- Weather conditions are unfavourable in the winter and sometimes unpredictable;
- Issues with existing walking infrastructure i.e. wider sidewalks and improved crosswalks.
- Widening of sidewalks could increase road ROW or narrowing of on-street parking and travel lanes.

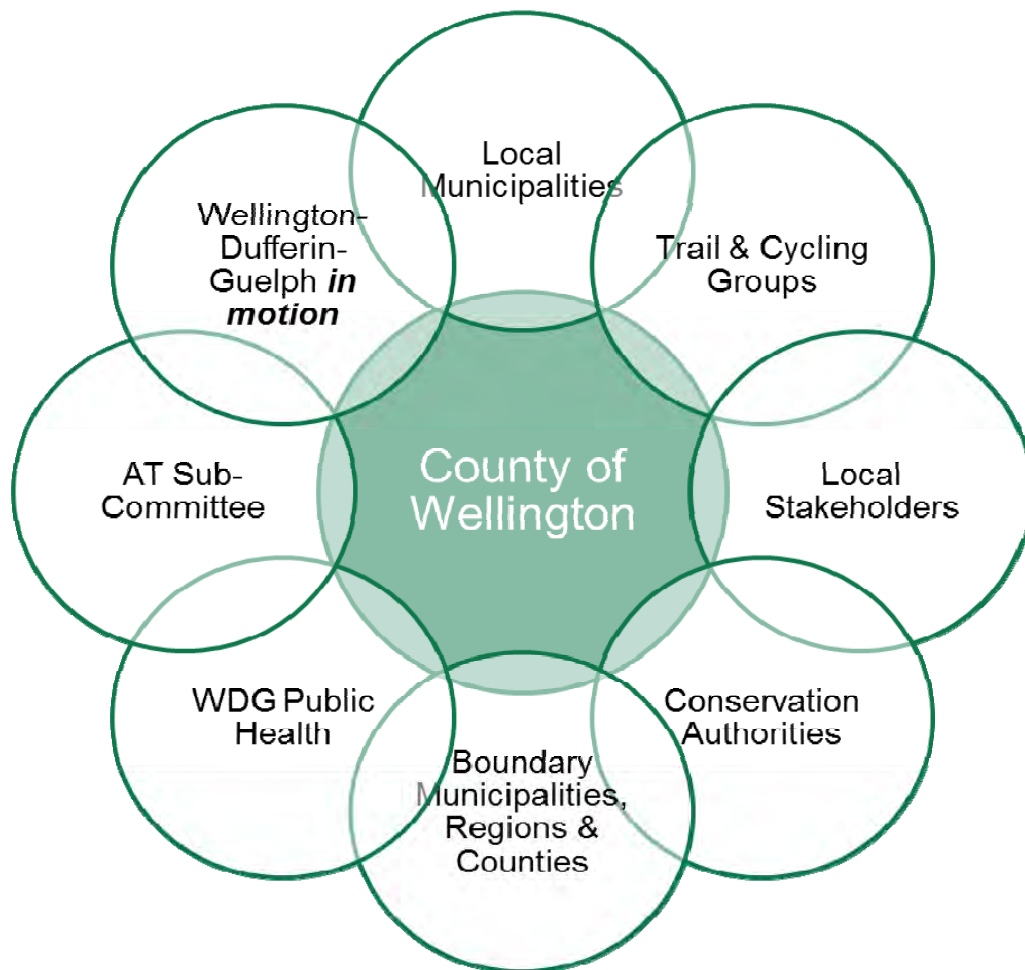
Recommendations for Consideration:

- Improvements to the existing sidewalks and walking trails to include better physical infrastructure as well as improved maintenance;
- Improvements to create pedestrian-oriented streetscapes;
- Better connectivity between existing and new communities to accommodate a number of transportation modes.



2.2 FACILITATING COORDINATION

One of the key objectives of the AT Master Plan is to develop and maintain ongoing dialogue and coordination between the County, local municipal partners WDG *inmotion*, Wellington-Dufferin-Guelph Public Health, key agencies and local active transportation related committees and interest groups.



2.3 COMMUNITY BENEFITS AND IMPACTS

Active Transportation activities provide significant health and fitness, transportation, environmental, economic and tourism benefits. Municipalities in southern Ontario and throughout North America are implementing initiatives to promote and encourage active transportation as a viable alternative to the private automobile for short-distance trips and as a method of promoting a more active and healthy lifestyle.



Health and Fitness

“Walking and cycling provide an enjoyable, convenient and affordable means of exercise and recreation. Research suggests that the most effective fitness routines are moderate in intensity, individualized and incorporated into our daily activities. In addition, studies have shown that people who use active transportation are, on average, more physically fit, less obese and have a reduced risk of cardiovascular disease.” (Reynolds et al. “Active Transportation in Urban Areas: Exploring Health Benefits and Risks”, National Collaborating Centre for Environmental Health, June 2010)

Key Facts & Information:

- In 2001, approximately \$2.8 billion was spent on health care due to physical inactivity in Canada, which could be reduced by \$280 million if physical activity was increased by 10% (Business Case for AT, Go for Green, 2004)
- Improved cycling facilities lead to increased bicycle use. Increased physical activity such as walking, cycling and other trail related activities can help reduce the risk of coronary heart disease, premature death, high blood pressure, obesity, adult-onset diabetes, depression and various types of cancer.
- The most visible is the sharp rise in obesity across Canada in recent years. Almost half of Canadians ages 12 and over report being physically inactive and 26% of youth between the ages of 2 and 17 years old are overweight or obese (Statistics Canada 2005).
- The proportion of overweight and obese adolescents aged 12-17 doubled from 14% to 29% between 1979 and 2004, and today only 12% of children and youth get adequate levels of physical activity.
- Exploring different modes of active transportation can enhance one’s mental outlook and well-being, improve self-image, social relationships and increase self-reliance by instilling a sense of independence and freedom.
- A recent report from the World Health Organizations (WHO) concluded that a significant shift from private motorized vehicles to walking, cycling and public transit could also:
 - Reduced cardiovascular and respiratory disease from air pollution;
 - Reduced traffic related injuries
 - Reduced noise and noise-related stress; and
 - Reduced chronic diseases such as type 2 diabetes, heart disease and cancers that are associated with physical inactivity.

Initiatives to Achieve these Benefits:

- Making strategic investments in infrastructure and outreach initiatives to support active transportation in daily commuting habits.
- Provide educational information and promotion at the County and local municipal level at schools, businesses, community centres etc.
- Improving active transportation methods such as walking and cycling and reducing automobile traffic through the implementation of AT facilities and programming can help make communities more liveable by creating an environment that is pleasant and safe with reduced noise and pollution.
- Include health and equity costs into cost-benefit assessments that are directed at transportation projects and planning (WHO).



Transportation

“Walking and cycling are both popular recreational activities and a means of transportation that are efficient, affordable and accessible. They are the most energy efficient modes of transportation that generate no pollution. The transportation benefits of walking, cycling and other active transportation modes include reduced road congestion and maintenance costs, less costly infrastructure, increased road safety and decreased user costs.” (Reynolds et al. “Active Transportation in Urban Areas: Exploring Health Benefits and Risks”, National Collaborating Centre for Environmental Health, June 2010)

Key Facts & Information:

- Active Transportation modes provide no emissions during use and have low lifecycle greenhouse gas emissions.
- For distances up to 10 km in urban areas, cycling can be the fastest of all modes from door to door.
- Surveys show that 66% of Canadians would like to cycle more than they presently do. Seven in ten Canadians say they would cycle to work if there “were a dedicated lane which would take them to their workplace in less than 30 minutes at a comfortable pace”.
- Congestion costs in Ontario were estimated to be \$6.4 billion annually and could grow by an additional \$7 billion annually by 2021 without increased investment in alternative modes of transportation.
- It has been estimated that due to rising gasoline prices, more than 10 million cars – mostly belonging to low income families – will disappear in the US in the next five years, and a similar trend is expected in Canada (CIBC World Markets, 2008)
- Reduced car use can significantly decrease the number of parking spaces required at places of employment, retail areas, downtown cores, community centres etc.
- An emphasis on walking, cycling and other active transportation modes can result in a reduction in roadway costs. Bicycles are lightweight vehicles that take up little space and cause little wear and tear on a road surface.
- Connected and continuous active transportation routes, in particular walking routes can have a significant benefit for those sectors of the population who may not have access to a car (e.g. youth and seniors etc.). In Wellington County approximately 1/3 of the population can be classified as older adult (age 50+) and this proportion is increasing, so investing in active transportation today is investing in the future.

Case Study: Portland Oregon, Davis California & Boulder, Colorado

There is strong evidence that given complete networks of high-quality cycling routes, a significant number of people will cycle. With between 10% and 20% of trips by bicycle, these communities have the highest levels of bicycle usage in North America. This high level of cycling is facilitated by mature networks, which include bike lanes on almost all of their arterial roads and extensive off-road commuter bicycle paths. Residents can simply get on their bicycles with confidence knowing there will always be a safe route to their destination (British Columbia Cycling Coalition Budget Submission, 2007).

Paved Shoulders as a Solution?

The U.S. Federal Highway Administration reports that paved shoulders on two-lane, rural roads have been shown to reduce run-off-the-road, head-on and sideswipe collisions by 30% to 40%. In addition, many municipalities have found that paved shoulders reduce maintenance costs related to shoulder deterioration, grading and snow removal.



Environment

“Active Transportation activities are energy-efficient, non-polluting modes of travel. Short distance motor vehicle trips are the least fuel efficient and generate the most pollution per kilometre. These trips have the greatest potential of being replaced by walking or cycling trips and integrated walking-transit and cycling-transit trips.”

Key Facts & Information:

- Reducing the number of motor vehicles on the road decreases the number of pollutants released into the atmosphere by motor vehicles.
- WHO report estimates that 40 to 50 percent of Canada’s urban emissions of greenhouse gases could be avoided for less than US\$200 per tonne, if aggressive land use policies were implemented.
- Motor vehicles, roads and parking facilities are major sources of water pollution and hydrologic disruptions due to such factors as road de-icing, air pollution settlement, roadside herbicides, road construction along shorelines, and increased impervious surfaces.
- Motor vehicles generate various types of unwanted noise that cause disturbance and discomfort to residents including engine acceleration, tire/road contact, braking, horns and vehicle theft alarms. Bicycles make little noise, and are not disruptive to communities from a noise perspective.

Initiatives to Achieve these Benefits:

- Aggressive land use policies could include: reduced travel demand, shift people from motorized vehicles to walking, cycling and transit and emphasize more densely built and energy efficient housing.
- Making communities less auto-dependant by providing infrastructure for alternative transportation modes, such as walking, cycling and public transit.
- Throughout the County, local municipalities could incorporate active transportation reviews in their planning policy to address cycling and pedestrian connectivity and safety for planning applications.
- A literature and best practices review suggests that the number of cyclists and associated benefits increases when:
 - Neighbourhoods and communities accommodate a cycling network that includes bike lanes & off-road cycling or multi-use trails;
 - Roads with speeds over 60km/h have separated lanes or wider paved shoulders that are part of the road, not sidewalk, infrastructure;
 - Roads with speeds between 50-60 km/h have marked bicycle lanes;
 - Roads with speeds under 40 km/h are shared;
 - Priority is given to cyclists in intersections;
 - Residents have access to trip end facilities such as secure long-term bicycle parking (e.g. lockers), secure short-term bicycle parking (e.g. bicycle racks), and showers in commercial buildings; and
 - All streets, roadways, and designated bike routes are maintained to be free of deterrents to bicycling (such as potholes, debris, and overgrown landscaping).



Economic

“Active transportation provides benefits to the local economy during both construction and operation. The construction of these active transportation facilities results in direct benefits such as jobs, including the supply and installation of materials. Following construction, benefits emerge in the form of expenditures by active transportation facility users.”

Key Facts & Information:

- As outlined in the Go for Green March 2004 Report “The Economic Benefits of Walking and Cycling”, economic benefits of active transportation include but are not limited to:
 - Reduction in road construction, repair and maintenance costs;
 - Reduction in costs due to air pollutants and greenhouse gas emissions;
 - Reduction in health care costs due to increased physical activity and reduced respiratory and cardiac disease;
 - Reduction in fuel, repair and maintenance costs to users;
 - Reduction of costs due to increased road safety;
 - Reduction in external costs due to traffic congestion;
 - Reduction in parking subsidies;
 - Reduction of costs due to air pollution;
 - Reduction of costs due to water pollution;
 - The positive economic impact of bicycle tourism;
 - The positive economic impact of bicycle sales and manufacturing;
 - Increased property values along greenways and trails; and
 - Increased productivity and reduction of sick days and injuries in the workplace.
- Trails systems can have varied levels of attraction for tourists. They can be travel destinations in themselves, encouraging visitors to extend their stay in the area or enhancing business and pleasure visits.
- Bicycle manufacture, sales and repairs, as well as bicycle tourism, recreation and delivery services contribute to the economy with little to no public investment or subsidy. In 2002, Canadian households spend an average of \$42 on bicycles, parts and accessories for a total of approximately \$500 million.

Case Study Examples:

- The Adanac Bikeway in Vancouver was completed in 1993 and bicycle volumes increased 225% during the period from 1992 to 1996;
- Trails in New Brunswick employ around 1500 people for an average of six months per year;
- 70% of Bruce Trail users cite the trail as the main reason for visiting the area, and they spend an average of about \$20.00 per user per visit within a 10 km corridor on either side of the trail;
- Annual expenditures linked to La Route Verte rose to \$95.4 million in 2000, representing 2,000 jobs and \$15.1 million and \$11.9 million for the governments of Quebec and Canada, respectively; and
- In 2002, Quebec hosted 190,000 bicycle tourists who spend an average of \$112 per day and an average of 6.5 nights compared to \$52 per day and an average of 3.1 nights spent by other tourists.



Tourism

"It has been shown that there is a growing demand for cycling and eco-tourism throughout Southern Ontario and North America. The demand stems from an increasing desire to explore new areas through an active mode of transportation and experience one's natural surroundings."

Key Facts & Information:

- The demand for cycle tourism stems from an increasing desire to explore new areas through an active mode of transportation and experience one's natural surroundings with significant impact of the City, Town, County or Region's economy.
- In the United States, studies have shown that trails and greenways have been able to stimulate tourism and recreation-related spending and that trail and greenway systems have become the central focus of tourist activities in some communities.
- On two rural multi-purpose trails in Iowa and Florida, the expenditures were US \$9.31M and US \$11.02M respectively. For an Urban multi-purpose trail in California, the expenditure was US \$3.97M. Expenditures include food, maintenance, beverages, lodging related costs accrued over time.
- Though tourism benefits from AT and Trail facilities prove to provide an injection into the local economy there are also a wide range of social, environmental and health benefits associated with AT and trail tourism. As people become increasingly more aware of the benefits to trail use and pedestrian and cycling activities there tends to be a continuous increase in the number of cycling tourists who will provide further benefits to their communities and the communities to which they visit.

Case Study: Victoria Transport Policy

A study completed for Victoria Transport Policy shows that walking and cycling facility improvements and promotion programs have a direct impact on economic development by increasing shopping opportunities and tourism activities. More specifically, "one study estimates that rail trails in Australia provide an average of \$51 to the regional economy per cycle tourist per day (Beeton, 2003)". A number of studies show a direct correlation between the implementation of well-planned, non-motorized transportation improvements and an increase in local tourism economies.



Source: AP Madison A-48



Source: AP Brandon T-19



Source: AP Colin D-11



3.0 THE CURRENT STATUS OF ACTIVE TRANSPORTATION

This chapter provides a review of existing active transportation in the County and local municipalities. It provides details regarding existing trails and routes as well as policy at the local, county, provincial and national level that supports the development of active transportation and trail facilities in Wellington County.

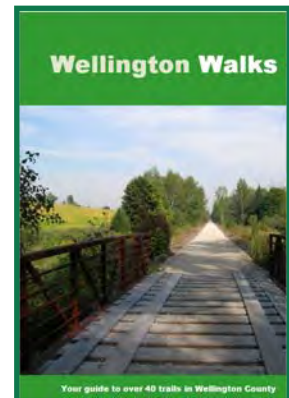
3.1 WELLINGTON COUNTY AND IT'S EXISTING AT SYSTEM

Although Wellington County and its local municipalities have demonstrated increasing success with regard to active transportation and trail development in the past 10 years, there remains a great amount of potential and opportunity to further develop and enhance active transportation and trails in relation to the unique characteristics of the County and its local municipalities. The following provides a brief summary of key existing trail and active transportation facilities found throughout the County.

3.1.1 Existing Active Transportation & Trail Facilities

Although there are very few on-road active transportation facilities yet in the County, there are over 40 documented trail routes which connect areas of natural significance, destination points, heritage areas and both urban and rural points of interest. In 2011 the "Wellington Walks" guide was produced, it contains a compilation of mapping of the existing trails along with descriptions and details of individual trail routes.

"Although Wellington County and its local municipalities have demonstrated increasing success with regard to active transportation and trail development in the past 10 years, there remains a great amount of potential and opportunity to further develop and enhance active transportation and trails in relation to the unique characteristics of the County and its local municipalities."



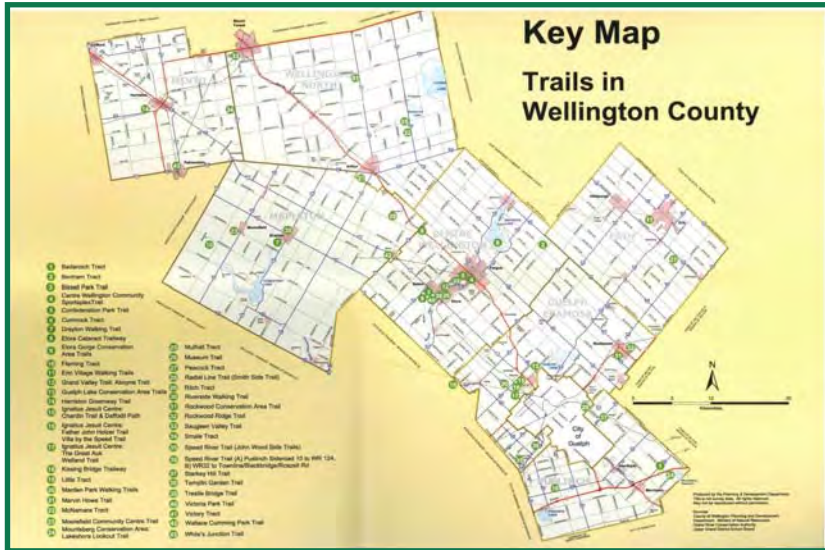


Figure 3.1 is an illustration of all the trails found within Wellington County based on the local municipalities in which they are located.

TOWNSHIP OF CENTRE WELLINGTON

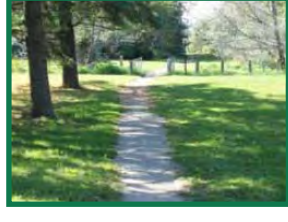
- Bissell Park Trail:** The Bissell Park Trail in Elora provides direct access to the Grand River and a pedestrian bridge crossing of the river to connect neighbourhoods on the south side of the river to the main urban area in the town.
- Centre Wellington Community Sportsplex Trail:** Located behind the Sports Complex in Fergus, this trail provides direct access to the urban centre while maintaining a rural feel. This trail also has public parking at the access point adjacent to the Complex.
- Confederation Park Trail:** This trail is located in Fergus and runs along the Grand River. The primary trail is flat which provides users within easy walking course but also provides them with additional route options which provides access to shady cedars with a wide range of trail services. This trail provides users with access to significant natural areas.
- Elora Gorge Conservation Area Trails:** boasting a 22 metre deep gorge and other natural features, this trailway provides users with a connection to Elora's urban areas. The trail also provides users with additional recreational activities such as swimming, tubing, kayaking, fishing, playgrounds and other walking trails.



*Distance: 0.95km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Gravel / Asphalt / Boardwalk*



*Distance: 0.95km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Gravel / Boardwalk*



*Distance: 0.7km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Gravel*



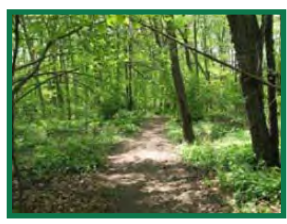
*Distance: 3
Difficulty Level: Easy
Trail Use: Walking, biking
Trail Surface: Natural Surface / Stone Dust / Pavement*



- Elora Cataract Trailway:** The trailway was originally the route of the Credit Valley Railway. The trail now is managed by the Grand River and Credit Valley Conservation authorities in collaboration with community groups and the Elora Cataract Trailway Association. The trail is approximately 47km in length and connects several towns, villages and hamlets in the east part of the County. East of Erin Township the Elora Cataract Trail terminates at Forks of the Credit Provincial Park. It also forms part of the designated Trans Canada Trail route in Wellington County
- Grand Valley Trail:** The trail was initiated in 1972 and extends 275 km following the Grand River Valley. The trail is a 'marked footpath' with the 30km of blazed trail found in the Wellington County. West of Wellington County the Grand Valley Trail is synonymous with the Walter Bean Trail through Waterloo, Kitchener and Cambridge.
- Museum Trail:** The trail is 1.2 km long and provides a connection between the Trestle Bridge Trail and the Elora Cataract Trailway. The trail connects a number of facilities within a complex of County facilities known as Wellington Place.
- Templin Garden Trail:** This trail is located along the river's edge in downtown Fergus. Themed gardens and viewpoints over the Grand River as well as a pedestrian bridge connection to the Fergus Market are key features.
- Trestle Bridge Trail:** A 3.5 km long trail connects Fergus and Elora. One half of the trail is owned by the County with the other half owned by the Township. One of the main attractions of the trail is a 90m long bridge constructed on the former railway trestle that is elevated high above the river below.
- Victoria Park Trail:** The trail provides users with access to view points over the river gorge. "Lovers Leap" is one of the viewpoints that is a favorite of residents and tourists.



*Distance: 47km
 Difficulty Level: Easy
 Trail Use: Walking, biking, cross country skiing, horseback riding, snowmobiling
 Trail Surface: Stone Dust*



*Distance: 1km
 Difficulty Level: Easy
 Trail Use: Walking
 Trail Surface: Natural Surface*



*Distance: 1 km
 Difficulty Level: Easy
 Trail Use: Walking
 Trail Surface: Natural Surface / Grass*



*Distance: 0.5 km
 Difficulty Level: Easy
 Trail Use: Walking
 Trail Surface: Natural Surface / Cobblestone*



*Distance: 3.5 km
 Difficulty Level: Easy
 Trail Use: Walking, biking, cross country skiing
 Trail Surface: Stone Dust*



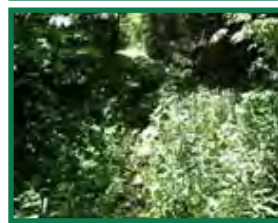
*Distance: 0.5 km
 Difficulty Level: Easy
 Trail Use: Walking
 Trail Surface: Natural Surface*



- **Benham Tract:** Purchased in 1952, the tract is located on a rehabilitation gravel pit and accommodates several side trails. The terrain is challenging but had significant scenery. The Speed River wetland crosses the eastern half of the property
- **Cumnock Tract:** The trail was purchased in 1964 and divided into two parcels by Highway 6. The trail which is located in the west parcel is non-groomed with a cold water stream. The trail on the east parcel is suitable for all walking levels.



*Distance: 2km
Difficulty Level: Difficult
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 0.5 or 1.5 km
Difficulty Level: Easy to Difficult
Trail Use: Walking
Trail Surface: Natural Surface*

TOWN OF ERIN

- **Erin Village Walking Trails:** the trail includes historical interpretive signage and highlights key industries including Mundell's Planning Mill, McMillan's Grist Mill and the Woolen Mill Ruin. The trail also connects key areas of natural significance while attracting people to local shops and retail.
- **Peacock Tract:** The trail is located within a second growth forest and rolling terrain. At the end of the trail is a loop which is found within an upland forest which is part of "Brisbane Woods" in and ESA and an ANSI.



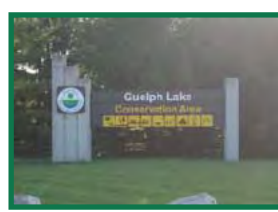
*Distance: 5 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Gravel / Concrete*



*Distance: 2km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*

TOWNSHIP OF GUELPH ERAMOSA

- **Guelph Lake Conservation Area Trails:** The trail connects the Township of Guelph / Eramosa to the Guelph Lake Conservation Area. Within the conservation area there are a number of internal hiking trails which access key natural areas.
- **Ignatius Jesuit Centre Walking Paths:** The centre is 240 hectares with the trail and path located on the west side of Highway 6. There are 4 intricate trail systems which are maintained by the centre. These trails highlight key natural areas e.g. Marden Creek and South Wetland Complex.
- **Kissing Bridge Trailway:** This is a multi-use recreational trail which is being developed in collaboration with trail groups. The trail boasts a number of attractions including rural landscapes, villages and towns. 28km of the trail is registered as part of the Trans Canada Trail.



*Distance: 3.5 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Gravel*



*Distance: 3 km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural*



*Distance: 45 km
Difficulty Level: Easy
Trail Use: Walking, biking, skiing, snowmobiling
Trail Surface: Stone dust / Gravel*



- Marden Park Walking Trails:** Marden Park is a 27 hectare park which is secluded but also accessible to the urban area. Significant features include sports fields, natural areas, picnic shelters, ball diamonds, trout stream, community centre and county library branch.
- Speed River Trail (John Wood Side Trails):** the trail provides a link between Guelph and Cambridge following the Speed River. The trail is marked with orange blazes off the main trail. The full system combined creates two loops. The trail was developed in 2008 in collaboration with the landowner, Woodland Properties.
- Speed River Trail (A) Puslinch Sideroad 10 to WR 124, (B) WR32 to Townline / Blackbridge / Roszell Rd.:** The trail was developed by the Guelph Hiking Trail Club in 1973. The trail provides links between Guelph and Cambridge following the Speed River. The trail is marked by orange blazes to direct users throughout the route.
- Rockwood Conservation Area Trail:** This trail offers a number of recreational activities found within a conservation area e.g. camping, canoeing, kayaking, swimming etc. The trail leads to a number of natural features and heritage areas.
- Rockwood Ridge Trail:** The residential community within the area is one of the first in the County which promotes “new urbanism” design principles which promotes walkable neighbourhoods and contains a range of housing types and trail facilities. The trails are well-integrated with other features such as the stormwater management ponds, parks and open spaces.



*Distance: 2.5 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 2-4 km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: A - 4 km
B - 5 km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 3 km
Difficulty Level: Easy
Trail Use: Walking, biking, cross country skiing
Trail Surface: Natural Surface / Pavement*



*Distance: 2 km
Difficulty Level: Easy
Trail Use: Walking, biking, cross country skiing
Trail Surface: Stone Dust*

TOWNSHIP OF MAPLETON

- Moorefield Community Centre Trail:** The trail is located next to the ball diamonds and is a key destination for a walk throughout the community. The trail is short in distance, however, the terrain is varied along the route.
- Riverside Walking Trail:** The trail is located in Drayton and runs along the Conestogo River. The trail provides access to key natural areas including the river and surrounding natural areas.



*Distance: 0.5 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 0.5 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



- Drayton Walking Trail:** This trail provides direct access to the Conestogo River. The trail provides a route for a number of users including users who walk, cycle or run. There are a number of trail amenities located along the route including rest areas which provide views of the surrounding natural areas.
- Wallace Cumming Park Trail:** The trail is located in Alma and was developed based on a partnership between the Township and the local optimist club. The trail is used primarily for walking or biking.
- Ritch Tract:** The trail was acquired in 1942 the tract was acquired by the County and is an ESA. A side trail system will take you out of the forest to a municipal drain to the left. If you follow it to the right, it takes all trail users to wetlands and beaver ponds.
- Fleming Tract:** the trail was acquired in 1973 and crosses over a number of municipal drains and an old farm. At the end of the trail to the west there is a hardwood bus and active gravel pit.



*Distance: 1 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface / Stone Dust*



*Distance: 1.5 km
Difficulty Level: Easy
Trail Use: Walking or biking
Trail Surface: Stone Dust*



*Distance: 2km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 2 km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*

TOWN OF MINTO

- Harriston Greenway Trail:** The trail provides a key connection through Harriston. Some of the trails are located outside of the main centre of the Town. The trail provides connections to downtown retail within the Town core.
- White's Junction Trail:** is a loop trail which follows the former CN railway line from Palmerston north to Seventh Line. Currently the Town is exploring the development of additional trail connections to the downtown core. The trail connects retail areas, park spaces and natural areas, heritage areas as well as connections to rural areas.
- Smale Tract:** The trail was acquired in 1959 and is part of a reforested area within the Township. Users can loop back to the parking lot via 6th Line and Wellington Road 6 which provides connections to rural agricultural view with forested walks.



*Distance: 4 km
Difficulty Level: Easy with moderate sections
Trail Use: Walking
Trail Surface: Natural Surface / Stone Dust*



*Distance: 7 km
Difficulty Level: Easy
Trail Use: Walking, Biking, Cross Country Skiing
Trail Surface: Natural Surface / Cinder*



*Distance: 1.5km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



TOWNSHIP OF PUSLINCH

- Starkey Hill Trail:** Is a trail built by the Guelph Hiking Trail Club. This is the highest point in Puslinch and offers more challenging hikes for users with a significant view point of the countryside. Users also have the opportunity to view wildlife including many species of birds.
- Radial line Trail (Smith Wide Trail):** A regional trail maintained by the Guelph Hiking Trail Club which follows portions of an abandoned railway line to connect to the Bruce Trail. There are a number of side trails including the Smith Wide Trail a 4 km loop trail marked with blue blazes. The trail connects key natural areas e.g. Eramosa Valley.
- Mountsberg Conservation Area:** Lakeshore Lookout Trail: The trail connects the conservation area which is a natural environment park protected and managed by Conservation Halton. Within the conservation area the Lakeshore Lookout Trail is located in Wellington County. This trail follows the shoreline of the Mountsberg reservoir accessible by hikers.
- Fletcher Creek Conservation Area:** A series of natural surface trails in this significant wetland and woodland habitat provides users with the opportunity to observe some of the diverse flora and fauna found in the area. Very near Fletcher Creek Conservation Area is the connection point to the Lafarge Trail which when completed will provide a trail connection to the trails in Dundas valley and along the Hamilton Bay waterfront.
- Badenoch Tract:** Located in a former settlement in the Township the tract was purchased in 1945 by the County and is a small trail which loops into a reforested area. The trail displays the provincially significant Moffat and Badenoch swamp. The trail is an ESA.
- Little Tract:** The tract was donated to the County and is one of the most significant and diverse natural areas in the County. A number of plants and animals can be found within the area. The Little Tract trail is an extensive trail system and provides an access to the County's green Legacy tree nursery.



*Distance: 4 km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 3km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 5km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: 1km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface*



*Distance: up to 8km
Difficulty Level: Easy to moderate
Trail Use: Walking
Trail Surface: Natural Surface*



- Puslinch Tract Conservation Area:** This property was purchased by the GRCA in 1999 from the Ministry of Natural Resources. It is 107ha in size and is designated as a passive use conservation area, used primarily for hiking, cross-country skiing bird watching and other passive recreational activities. The 2004 master plan for the property recognizes that there are a number of ad hoc trails, and management strategies include developing an appropriately designated system and working with existing users to reduce trail conflicts and impacts.



Distance: not available
Difficulty Level: Easy to Moderate
Trail Use: Walking, biking and hiking
Trail Surface: Natural Surface

TOWNSHIP OF WELLINGTON NORTH

- Saugeen Valley Trail:** The trail runs along the river in Mount Forest and connects three parks within the township including Angus Smith, Campbell deVore and Murphy. The trail boasts a wide range of landscapes and natural features such as reforested areas and wetland areas.



Distance: 2-5km
Difficulty Level: Moderate
Trail Use: Walking, biking, cross country skiing
Trail Surface: Natural Surface

- Arthur Trail Loop:** The local trail group in Arthur is currently working to develop plans for a walking trail loop through the urban area that connects neighbourhoods, public green spaces and the downtown core. Portions of the loop are on privately-owned lands and the group is currently in discussions with landowners regarding access.

- Mulhall Tract:** The trail was purchased in 1951 by the County and is located within a conifers plantation which was established in 1951. The trail is not groomed and is home to several different species of mammals including White Tailed Deer.



Distance: 1.5km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface

- McNamara Tract:** The trail was acquired by the County in 1947 and traverses over a rustic landscape. The start of the trail runs westward along the edge of the farm field before turning north into the treed area. The trail crosses over white pine plantations, hardwood bush and along the edge of a wetland.



Distance: 1.5km
Difficulty Level: Moderate
Trail Use: Walking
Trail Surface: Natural Surface

- Victory Tract:** The trail is located adjacent to a tract owned by the GRCA. The tract contains well groomed trails between the two tracts which creates a 3km long trail. The site is well used in the winter for cross-country skiing as well as hiking in the summer. The trails are bisected by the Provincially Significant Clare Creek wetland.



Distance: 1.5km
Difficulty Level: Easy
Trail Use: Walking
Trail Surface: Natural Surface



3.2 CURRENT AT RELATED POLICIES AND INITIATIVES

This section identifies and discusses key policies at the local, county, provincial and national level that influence active transportation. They help to establish a base to build upon for the Active Transportation Plan. Local policies are presented first, followed by County, provincial and national policies.

3.2.1 Local Municipalities

Only two of the local municipalities have their own Official Plan- the Town of Erin and the Township of Centre Wellington (applies to the urban areas of Fergus and Elora). The other municipalities rely on the County Official plan, which is discussed in section 3.2.3 below. However, as indicated below each local municipality has the capability to support the County's active transportation initiatives through a variety of policies, regulations and community support.

TOWN OF ERIN

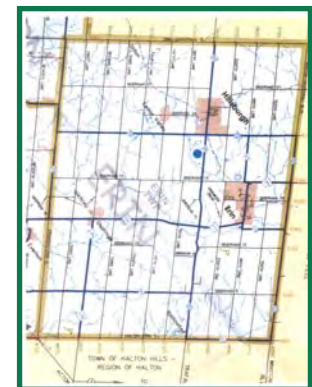
Town Official Plan: The Town of Erin has a number of policies that support pedestrian and cycling activities as well as the promotion of corridors for active modes including encourage safe and efficient transportation. There is also support for walking trails (section 4.12.2 (f)), as well as support for lands that can be used as corridors for biking and walking. More specifically:

Policy 3.8.9 Pedestrian Traffic – It shall be the policy of the Town that pedestrian traffic be encouraged and that the overall transportation system accommodate the safe movement of people who choose to walk.”

Town Zoning By-law: Trails have been included as permitted uses in both the Official Plan and the Town’s Zoning By-law, related to recreation and conservation uses, further supporting active transportation.

Town Development Charges By-law: The Development Charges By-law considers trails to be an outdoor recreational use and is listed under the services that are 90% eligible.

Committee Involvement: The Town of Erin has three potential advisory committees that could promote the use of active modes of transportation in the community as well as add support to the development of the County’s Active Transportation Master Plan. These committees are: Environmental Advisory Committee, Recreation and Culture Advisory Committee and Economic Development Committee.





TOWN OF MINTO

Minto considers walking and cycling, as well as the development of a trail network and sidewalks as important components of the sustainable development of the Town.

Walk21 International Walking Charter: All members of council have signed the Walk 21 International Walking Charter and the Town is encouraging all residents to sign it as well.

The Sustainable Community Guidelines: Used to promote connectivity, acceptable walking and cycling distances within communities, safety and street design supportive of walking and cycling. Trails, improved connections and dedicated budgets for maintenance are woven through numerous Town documents including the Strategic Plan and the Leisure Study.

Committee Involvement: There are a number of committees that could provide input as well as promote the further development of an active transportation network. These include: The three village revitalization committees (Clifford, Harriston and Palmerston); The Economic Development and Planning Committee; the Parks and Recreation Advisory Committee; the Tourism, Arts and Culture Committee and The Walkable Communities Committee.



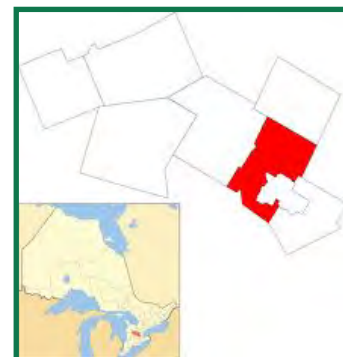
TOWNSHIP OF GUELPH ERAMOSA

The Township support trails within the community.

Township Zoning By-law: Trails are included in the definition of Recreational Uses, enabling trail development in zones where recreational uses are permitted. The municipality has a By-law that regulates where off-road vehicles, all-terrain vehicles and snow vehicles can travel. It prohibits their use between 11 pm and 7 am and bans them from operating on sidewalks, medians, parks and highways. It does not limit their use on trails unless defined as a park or located within one.

The Development Charges By-law: includes park trails as an outdoor recreation use and specifically includes trail construction on the Charleston property, the Sara Ranson Woodlot and Trails property and trails to be constructed in conjunction with the development of the Highway 7 / Seaton, Max Storey and Hampson Storm Water Management Ponds.

Assistance with the promotion and development of AT and trails within the Township





TOWNSHIP OF MAPLETON

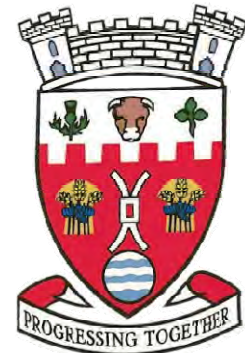
Committee Involvement: The Parks, Culture and Recreation Committee for the Township could be a possible champion and supporter of active transportation within the municipality as well as being a liaison for the County's plan.



TOWNSHIP OF PUSLINCH

The Township supports the development of infrastructure related active transportation including trails on private property (mainly in condominium plans) as well as passive recreation uses in golf course zones which include the development of trails. Further promotion of active transportation and trail development could be through the recreation committee.

Township Design Guidelines: The Township has completed a Design Guidelines which includes improving and developing pedestrian environments and developing streetscapes that will contribute to more pedestrian friendly places.



TOWNSHIP OF WELLINGTON NORTH

The Township Zoning By-Law: includes trails (recreation and snowmobile trails) within the definition of a Place of Recreation. As well, under the Agriculture Zone permitted uses include recreational trails operated by a public agency. Walking trails are included as permitted uses under the Mount Forest exception zones - special provisions. Servicing standards include providing sidewalks in urban areas and maintaining those in Mount Forest and Arthur during the winter months.

Committee Involvement: Two potential Standing Committees of Council could provide support for active transportation within the Township. These are the Recreation and Culture Standing Committee and the Economic Development Standing Committee.





TOWNSHIP OF CENTRE WELLINGTON

Township Official Plan: The Official Plan only applies to the Elora and Fergus Urban Centre (which includes Salem). The remainder of the Township is governed by the policies of Wellington County Official Plan.

The Official Plan contains a number of policies encouraging the development of trails, improving the connections to existing trails and connecting parks and open space through green space corridors. The vision includes reference to the expansion and diversification of trailways and parks.

The Parks, Recreation and Culture Master Plan: is a key document for the promotion of trails and active transportation in the Township. Under "Action Plans", it is recommended that a Trails Master Plan should be developed. The Township should also continue to work with the Elora Cataract Trailway Association to finalize connections through the urban areas of Fergus and Elora. Other recommended actions include having trail networks incorporated into future development, particularly to connect to the existing networks in Elora and Fergus. Parking at trailheads, multi-seasonal facilities and the development of waterfront trails are also actions to be pursued.

The Township Zoning By-law: section 4.39.4, trails that have been created or developed by a public authority are to be permitted in any zone and can include a number of amenities such as parking, shelters, signage and lighting.

The Development Charges By-law: includes trails that have been developed within a park or that connect parks as a 90% eligible service.



Source: Temika M-18





3.2.2 Local Organizations

There are limited organizations within the various communities that are dedicated to the development of active transportation infrastructure and promotion. However, there is great potential for political leadership and citizen involvement. Below are community organizations that could potentially be involved in development and implementing the active transportation plan.

ERIN

- Hillsburgh Snow Roamers Inc. - Snowmobile Club

MINTO

- Palmerston Trail Association: The Palmerston Trail Association owns and operates almost 10 km of trails and abandoned rail lines in Minto.
- Harriston Greenway Trail Committee: The Harriston Greenway Trail Committee is responsible for overseeing the Harriston Greenway Trail, a community project enhancing the Maitland River Corridor with native tree and shrub plantings and making Minto's natural scenery accessible with hiking trails
- Snow Kings Snowmobile Club

GUELPH ERAMOSA

- Guelph Hiking Trails Club
- Eden Mills Millpond Conservation Association Incorporation.
- GORBA – Guelph Off-Road Biking Association
- Guelph Nordic Ski Club

MAPLETON

- 4H Horseback Trail Riding Club

PUSLINCH

- Guelph Hiking Trails Club
- Friends of Mill Creek
- Puslinch Lake Conservation Association

WELLINGTON NORTH

- Arthur Historical Society

CENTRE WELLINGTON

- Cycling Club
- Friends of the Grand River
- Snowmobile Club Inc.
- Elora Cataract Trailway Association – Manages the Elora Cataract Trailway, in cooperation with the Credit Valley and Grand River Conservation Authorities (who own and operate the Trailway).

WELLINGTON COUNTY

- Kissing Bridge Trailway Advisory Board





3.2.3 County of Wellington

COUNTY OF WELLINGTON OFFICIAL PLAN (2011)

Trails are permitted uses within recreational areas governed by the County. The County's Official Plan (February 24, 2011) strongly supports environmentally responsible and convenient transportation through encouraging pedestrian and cycling facilities as a means for travel and for recreation. There are a number of pedestrian and cycling policies within the Official Plan.



Section 12.2 outlines specific pedestrian facilities that are to be included in future development work and plans. These include building sidewalks in all new developments within the urban centres and incorporating pedestrian friendly facilities such as pedestrian crossings, curb cuts, etc. into community design practices.

The Official Plan also includes policies pertaining to promoting healthy active communities through facilities that are safe and will meet the needs of pedestrians and facilitate non-motorized movement.

Section 12.3 includes studying the potential for bicycle infrastructure on urban streets and examining geometric design practices which may impede cycling on roads.

OPA 65: PLACES TO GROW OFFICIAL PLAN AMENDMENT

OPA 65 is intended to amend the existing Official Plan to bring it into conformity with the Places to Grow Act, 2005. New policies pertaining to active transportation and trails include:

- Provide linkages between intensification areas and adjacent neighbourhoods, including dedicated space for cyclists; and
- Encourage mixed-use and pedestrian-friendly development in appropriate locations.





WELLINGTON COUNTY FIVE YEAR TRAIL PLAN 2011-2015

The County owns/leases and operates approximately 16 kilometres of trails. It is their intention to develop priorities for maintaining, improving and promoting the County's trails.

Priority Projects:

- Kissing Bridge Trailway
- Trestle Bridge Trail
- Museum Trail and
- Aboyne Trail

A series of projects have been identified as well as a maintenance budget and a need to promote the trails within the County.



ROADS COMMITTEE – FEBRUARY 9, 2010

Paved shoulders were on the agenda and the concept was debated with a number of pros and cons brought forward. However, the meeting did result in one significant action item that was listed on page 6 of the minutes.

It was recommended that the County establish a Bicycle Advisory Committee to consider active transportation within the County.

3.2.4 Grand River Conservation Authority

The Grand River Conservation Authority owns and operates four multi-use trails throughout the watershed that are built on abandoned railway corridors. In Wellington County the Elora Cataract Trailway starts in Elora and links Fergus, Belwood and Cataract at the Forks of Credit Provincial Park in the Town of Caledon.



3.2.5 Provincial Policies

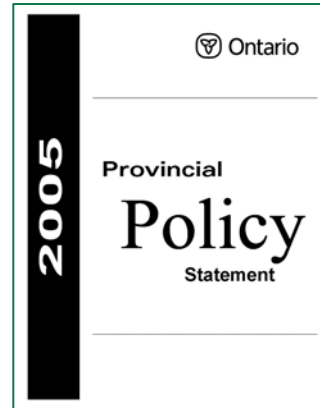
The following section summarizes the key provincial policies that impact active transportation. These policies focus on pedestrian, cycling trail, transit and alternative modes of transportation as they relate to:

- Land use and development;
- Bicycle and trail networks;
- Transit, coordination and enforcement;
- Maintenance;
- Transportation efficiency; and
- The contribution that alternative modes of transportation can play in the Transportation Demand Management (TDM) strategies.



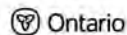
PROVINCIAL POLICY STATEMENT

The Provincial Policy Statement (PPS) sets the foundation for regulating land use and development within the Province and supports provincial goals. The PPS provides for appropriate development and protects resources of provincial interest. The vision of the land use planning system in the PPS is that the "long-term prosperity and social well-being of Ontarians depend on maintaining strong communities, a clean healthy environment and a strong economy." The PPS promotes transportation choices that facilitate pedestrian and cycling mobility and other modes of travel.



Planning and Conservation Land Statute Law Amendment Act, 2006 Bill 51

December 8, 2006
Ministry of Municipal Affairs and Housing



BILL 51 – PLAN REFORM

Bill 51 includes reforms to the Planning Act, and provides the legislative framework for land use planning in Ontario. Bill 51 includes changes to the planning process that are intended to support intensification, sustainable development and protection of green space by giving municipalities greater powers, flexibility and tools to use land, resources and infrastructure more efficiently.

Bill 51 is consistent with Ontario's recent policy shift towards sustainable land use development and planning. For instance, Bill 51 permits municipalities to require environmentally sustainable design for both individual buildings and entire neighbourhoods. It also adds sustainable development as a provincial interest in the Provincial Policy Statement.

MUNICIPAL ACT, 2001

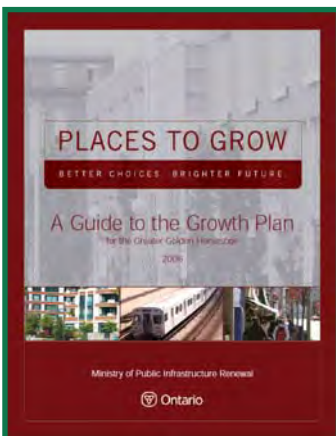
The Municipal Act, 2001 gives municipalities a broad new flexibility to deal with local circumstances, and to react quickly to local, economic, environmental or social changes. It recognizes municipalities as responsible and accountable governments with respect to matters within their jurisdictions.





HIGHWAY TRAFFIC ACT

Bicycles are recognized as a vehicle, as defined in the Highway Traffic Act (HTA), which can operate on public roadways with the same rights and responsibilities as motor vehicles. However, bicycles are not permitted on controlled access freeways such as the 400 series highways and or any roadway designated by municipal bylaws. The Highway Traffic Act contains a number of policies relating to bicycles, including bicycle lanes on municipal roadways, vehicles interacting with bicycles, bicycles being overtaken, and regulating or prohibiting bicycles on highways.



PLACES TO GROW ACT, 2005 / THE GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE

The Places to Grow Act, 2005 is a plan that will shape the way in which communities within the Greater Golden Horseshoe will grow. The Growth Plan for the Greater Golden Horseshoe was adopted in June 2006 under the provisions of the Act. The Act implements the Province's vision for developing stronger communities and managing the growth within those communities. The Province requires municipalities to take into consideration the policies and directives of the Growth Plan in their planning activities.



The Growth Plan integrates and builds upon other key provincial initiatives including the PPS, and municipal official plans must be in conformity with the Growth Plan. With respect to pedestrians and cycling, the Growth Plan envisions that "an integrated transportation network will allow people choices for easy travel both within and between urban centres throughout the region. Public transit will be fast, convenient and affordable. Automobiles, while still a significant means of transport, will be only one of a variety of effective and well used choices for transportation. Walking and cycling will be practical elements of our urban transportation systems. A healthy, natural environment with clean air, land and water will characterize the Greater Golden Horseshoe." The Growth Plan provides broad-level policies that direct more sustainable growth and development in the Greater Golden Horseshoe and specific targets for implementation among municipalities.

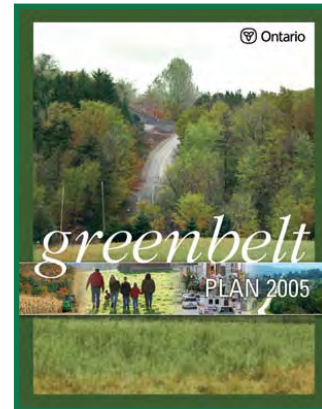


GREENBELT PLAN

Ontario's Greenbelt Plan complements the Growth Plan for the Greater Golden Horseshoe by providing clear direction regarding locations and features that should be protected from growth in Ontario. It builds upon the policy framework established in the Provincial Policy Statement, and includes the lands and builds upon the ecological protection provided by the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan. The vision of the greenbelt presented in the Plan is to provide for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses. The Culture, Recreation and Tourism goals for Ontario provided by the Greenbelt Plan related to cycling and pedestrian movement include:

- Provision of a wide range of publicly accessible built and natural settings for recreation including facilities, parklands, open space areas, trails and water based shoreline uses that support hiking, angling and other recreational activities; and
- Enabling continued opportunities for sustainable tourism development.

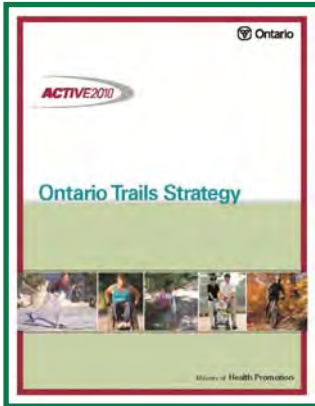
Please note that the greenbelt plan pertains to areas within the Township of Erin to the west as well as the Township of Puslinch to the south of the County.



ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT, 2005

The Accessibility for Ontarians with Disabilities Act was passed on June 13, 2005 and is a provincially legislated policy which calls on the business community, public sector, not-for-profit sector and people with disabilities or their representatives to develop, implement and enforce mandatory standards. This policy makes Ontario the first jurisdiction in Canada to develop, implement and enforce accessibility standards and applies to both private and public sectors. These accessibility standards are the rules that business in Ontario should follow to identify, remove and prevent barriers to accessibility. The first standard to come into effect is the Accessibility Standards for Customer Service, however, Ontario is developing additional standards in the following area: built environment, employment, information and communications and transportation.





MINISTRY OF HEALTH PROMOTION

The Ministry of Health Promotion has been designated a lead ministry for trails in Ontario and has the responsibility for the coordination of recreational trail issues, policy development and planning. The Ministry of Health Promotion has drafted a vision for Ontario's trails as:

"A world class system of trails that capture the uniqueness and beauty of Ontario's vast open spaces and natural and built cultural/heritage resources. People and places are connected through quality, diverse, safe, accessible and environmentally sensitive urban, rural and wilderness experience trails for recreational enjoyment, active living and tourism development."

THE ONTARIO TRAILS STRATEGY

The Provincial government has developed the Ontario Trails Strategy in response to the popularity of trail activities and infrastructure, the desire of trail organizations for government leadership, the need to protect provincial investment in trails and the significant trail issues or challenges that confront the future of Ontario's trails. The Ontario Trails Strategy is a long-term plan that will establish a strategic direction for government and stakeholders on the planning, management, promotion and use of trails, toward a healthier and more prosperous Ontario. Developed in collaboration with other ministries and a wide range of stakeholders in the community, the strategy supports continued cooperation among governments and the not-for-profit and private sectors.

There are five strategic directions that comprise the Ontario Trails Strategy:

- Improving collaboration among stakeholders;
- Enhancing the sustainability of Ontario's trails;
- Enhancing the trail experience;
- Educating Ontarians about trails; and
- Fostering better health and a strong economy through trails.

A number of goals and strategies have also been identified to support each of the five strategic directions. The Ontario Trails Strategy recommends that trail organizations should develop common standards to guide the development and use of trails. This will help the trail system evolve to meet the particular needs of new users. Trail organizations also need more effective tools and better ways of distributing information to more Ontarians. As these challenges require coordination at all levels, the provincial government and the public, not-for-profit and private sectors will continue to collaborate on priorities, roles and responsibilities, timeframes, and methods to strengthen and enhance existing and future trails in Ontario.



3.2.6 Federal

TRANSPORT CANADA

The 2005 “Strategies for Sustainable Transportation Planning: A Review of Practices and Options” released by Transport Canada provides a foundation on which to build guidelines for incorporating sustainable transportation principles into municipal transportation plans. Some of these principles include the creation of policies related to walking and cycling that can be used to develop effective and implementable transportation plans that promote sustainable transportation on a federal level. Some relevant strategies that can be introduced into local plans are listed below:

- Integration with Land Use Planning
- Encourage desirable land use form and design (e.g. compact, mixed-use, pedestrian/bike-friendly) through transportation plan policies
- Environmental Health
- Identify strategies to mitigate the air quality impacts of transportation activities
- Identify strategies to mitigate the noise impacts of transportation activities
- Identify ways that transportation systems influence the achievement of the community's economic and social objectives. Provide support in the plan's strategic directions
- Recognize the importance of ensuring access to trails and cycling facilities for disabled and low-income persons, recent immigrants, youth and the elderly. Set goals and objectives for reducing the need to travel, improving transit mobility, and preserving minimum levels of service on roadways. Identify related strategies to encourage ridership
- Address the transportation needs of persons with disabilities, notably with regards to public transit service and barrier free design in public rights-of-way and include strategies, policies, facilities and services to make transit operations more accessible and sustainable
- Recognize the public health impacts of transportation activity arising through road safety, pollution and physical activity levels. Identify effective strategies to strengthen positive impacts and lesson negative ones
- Recognize the impact of transportation-related death and injury on quality of life and the economy. Set goals and objectives for multi-modal road safety. Identify effective road safety strategies.





3.2.7 Federation of Canadian Municipalities

FCM has recently developed the Communities in Motion: Bringing Active Transportation to Life initiative. This document is a key resource for all Canadian municipalities with the goals of promoting active transportation options, eliminating barriers to different travel mode choices and following a new path to promote active transportation modes such as walking and cycling, as part of everyday life. The document outlines and promotes the inclusion of potential facilities such as off-road options. It notes that “some pedestrians and cyclists stick to city streets to reduce travel time and distance. Others, however, prefer less stressful off-road routes that let them connect with nature. Lit trails improve safety and security, wayfinding systems help people get where they’re going, bike ramps let cyclists get up and down staircases with ease, and dedicated bridges help everyone cross waterways, ravines and railway lines.

Off-road routes are also important for recreation, and many communities are expanding their trails systems to boost tourism.”

The Federation of Canadian Municipalities (FCM) considers itself the national voice of municipal government since 1901. The organization fosters sustainable communities enjoying a high quality of life by promoting strong, effective and accountable municipal government.

There are currently more than 1,775 members as the organization represents the interest of municipalities on policy and program matters that fall within federal jurisdiction. Members include Canada’s largest cities, small urban and rural communities, and 18 provincial and territorial municipal associations.

3.2.8 Other Agencies Supporting Trails and Active Transportation at the National and Provincial Level

TRANS CANADA TRAIL ASSOCIATION

The Trans Canada Trail is a non-profit, registered charity. Its mission is to promote and assist in the development and use of the Trail in every province and territory. They also provide funding to local trail builders to support the development of trails. Today, more than 16,500 kilometres of trail have been developed. When completed, the Trail will stretch 22,000 kilometres from the Atlantic to the Pacific to the Arctic Oceans, linking 1,000 communities and all Canadians.



THE ONTARIO TRAILS COUNCIL

The Ontario Trails Council (OTC), a not for profit organization, promotes the development of trails in Ontario. The Trillium Trail Network (TTN) is an initiative of the OTC and represents an opportunity for trails to link together between regions and communities in Ontario. The TTN consists of OTC member trails registering their trail as a network member. Trillium Trail Network (TTN) is designed to be a province-wide network of trails; overall, the TTN works to:





- Make Ontario a more attractive place to live and visit;
- Promote trail travel and tourism;
- Increase the number of trails available for use;
- Improve trail management as TTN trails will work to implement accepted trail standards;
- Promote ecological conservation;
- Provide access to local history and community culture; and
- Promote accessibility and use to disabled persons.

SHARE THE ROAD COALITION

With cycling a burgeoning mode of transportation across the globe, and communities looking to enhance the health and wellbeing of their citizens, Share the Road Coalition is developing partnerships with like-minded stakeholders across Ontario and has focused on developing partnerships geared to building a Bicycle Friendly Ontario. Share the Road Cycling Coalition is a provincial cycling advocacy organization created to unite cycling organizations from across Ontario and work with and on behalf of municipalities to enhance their ability to make their communities more bicycle-friendly. The organization's mandate is province-wide with a specific focus on developing public policy at the provincial level in order to provide the kind of legislative, programmatic and funding instruments such as exist in other Canadian provinces notably Quebec and British Columbia.

Since its inception, the Coalition has focused on outreach work with a view to building partnerships with active transportation stakeholders such as: cycling advocates, local cycling clubs, organizations and municipal advisory groups, municipal leaders and officials, law enforcement, planners, provincial politicians and officials, public health professionals, and funders. By uniting Ontarians who share a common set of objectives Share the Road Coalition is committed to leveraging the resources of those who have those common interests, with the objective of making Ontario the most bicycle friendly jurisdiction in the world.







4.0 PLANNING FOR ACTIVE TRANSPORTATION

4.1 ACTIVE TRANSPORTATION AND THE OFFICIAL PLAN

<p>Recommendation 4-1:</p>	<p>The next update to the County Official Plan should include policies related to Active Transportation, specifically:</p> <p>(a) overarching policies in the Transportation Section of the Official Plan that reference pedestrian, cycling and other forms of active travel as suggested in Section 4.1 of the Wellington County Active Transportation Plan; and</p> <p>(b) references to the Wellington County Active Transportation Plan as the guiding document for detailed policies and guidelines related to Active Transportation in Wellington County.</p>	<p>Short-term</p>
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As part of the development of the Wellington County Active Transportation Plan a review of the current County Official Plan (approved by all 7 municipalities) was undertaken and suggestions for policy revisions have been proposed. It is recommended that these suggestions be considered during the next update of the County Official Plan. Based on this review and consultation with the AT Subcommittee, two general recommendations were made:

- That Official Plan policy wording related to Active Transportation be included in the **Transportation Section** (current Section 12) of the Official Plan; and
- That policy wording in the Official Plan related to Active Transportation be broad and overarching, and include references to the Wellington County Active Transportation Plan as the detailed guiding document regarding Active Transportation in Wellington County.

The following section provides the current policies in the Official Plan -Sections 12.1 (Transportation General), 12.2 (Pedestrian Facilities) and Section 12.3 (Cycling). Additional suggestions for consideration as part of the next Official Plan update are included and underlined.



Section 12.1: Transportation-General

The transportation system in Wellington County involves the movement of people and goods throughout the county and to outside areas. The system may include:

- active transportation (including pedestrians and cycling)
- public transit
- roadways
- utility lines
- airports

The Official Plan for the County of Wellington was adopted and published in February 2011. The County provides planning services for the local municipalities with the exception of the urban area of Centre Wellington (Elora and Fergus), and Town of Erin. As such policies in the County Official Plan apply to the Town of Minto, Townships of Mapleton, Wellington North, Centre Wellington (rural area only), Guelph-Eramosa and Puslinch.

Section 12.2: Active Transportation (New Section)

12.2 Active Transportation

12.2.1 General

Active transportation consists of human-powered forms of travel and recreation such as walking, cycling, manual wheelchairs, canoeing, skiing and snowshoeing. The County in partnership with the local municipalities and Public Health has prepared a County-wide Active Transportation Plan (September 2012) to provide a framework for the design, development and operation of an active transportation network and facilities. This plan may be periodically updated to meet the active transportation needs in Wellington.

The County will encourage an interconnected active transportation network that accesses and/or links urban and rural communities, schools, downtown areas, industrial areas, parks, recreation facilities and other key destinations within the County and the local municipalities. The following policies will be supported in Wellington County.

- a) Consider the provision of active transportation routes and facilities in the review of all development applications and road construction projects.
- b) To promote forms of development that encourage the integration of paths and trails, cycling routes, walking and the incorporation of natural features and other pedestrian friendly elements.
- c) The active transportation network should include appropriate amenities such as bicycle racks, benches, trash receptacles, signage (including wayfinding and information kiosks).
- d) The establishment of trees, shrubs, hedges, plantings or other ground cover, permeable paving materials, street furniture, curb ramps, waste and recycling containers, bicycle parking facilities that are associated with the active transportation network and are considered to be "sustainable design elements" for the purposes of the Planning Act, which means that these items may be required to be installed by a landowner within a municipal right-of-way as a condition of site plan approval.



Section 12.2.2 Pedestrian Facilities (Section 12.2 in the current Official Plan)

Pedestrian facilities will be encouraged both as a means of travel and for recreation. The following policies will be supported in Wellington.

- a) *Sidewalks will be required in all new developments in all urban centres and will be encouraged in hamlets whenever practical;*
- b) *Schools and convenience commercial uses are encouraged in locations central to residential neighbourhoods; higher density residential uses will be encouraged near "main street" areas to allow people to have walking access to a variety of services;*
- c) *Pedestrian friendly facilities such as pedestrian crossings, signalized intersections, curb cuts, pedestrian bridges and lighting will be incorporated into community design practices to encourage walking;*
- d) *Pedestrian trails, particularly those which re-use abandoned railway right of ways will be encouraged.*

Section 12.2.3 Cycling (Section 12.3 in the current Official Plan)

Cycling facilities will be encouraged both as a means of travel and for recreation. The following policies will be encouraged in Wellington County:

- a) *Undertake studies to determine the potential to provide bicycle lanes on roadways in urban centres;*
- b) *Examine geometric and operational design practices which impede cycling on roadways;*
- c) *Review zoning by-laws to provide bicycle parking standards for uses such as apartments, shopping facilities and commercial destinations, industrial uses and community facilities;*
- d) *Support the development of recreational trails that allow for cycling;*
- e) *Provide linkage between intensification areas and adjacent neighbourhoods, including dedicated land space for bicyclists on the major street network where practical and feasible.*



4.2 COMMUNITY PLANNING AND DESIGN STRATEGIES TO SUPPORT ACTIVE TRANSPORTATION

Recommendation 4-2:	Explore land use planning initiatives and policy development such as mixed land use, higher density urban areas and pedestrian and cyclist friendly streetscapes to promote / facilitate an increased quality of life and liveability within the communities of Wellington County.	Medium-term
Recommendation 4-3:	Strive to continually improve connectivity for pedestrian and bicycle travel through local neighbourhoods, between communities, across the County and to neighbouring municipalities.	Medium-term
Recommendation 4-4:	Build upon the existing Safe Routes to School Program throughout the County in collaboration with the WDG Safe Routes to School Committee.	Medium-term
Recommendation 4-5:	The County and local municipalities should consider adopting a Pedestrian Charter similar to the Town of Minto to help facilitate and promote the development of a walkable and pedestrian friendly environment throughout the County.	Medium-term

The design of a community can determine how and when people engage in active transportation and recreation alternatives. There is a significant amount of research that links the layout and design of communities to an increase in health, social interaction, safety and economic development for the community as well as its residents. One of the key documents which identifies this is the “Shaping Active, Healthy Communities” report completed by the Heart and Stroke Foundation. This document provides governments at all levels with a “built environment toolkit” which can be used to guide a change in the design and development of communities to promote AT and AT related benefits.

The following are some strategies that can be considered in an effort to make communities more pedestrian, cycling and Active Transportation friendly.

4.2.1 Land Use Planning

Community land use planning deals with the layout and arrangement of housing, businesses and amenities within a community. Land use planning can support active living when housing, businesses and amenities are arranged in a way that promotes vibrant communities. Vibrant communities are easily accessible by walking, cycling and other active transportation methods. This can be achieved through a number of strategies and a few of these include:



- Mixing housing with other land uses decreases the distance between people's residences and their destinations of choice, thus making it more likely for them to walk or bike to their destination;
- Encouraging higher-density urban areas and situate amenities and destinations within walking distance from the residences. This can also benefit local businesses as people in walkable communities will be encouraged to shop in their own area; and
- Conveniently locating schools and other amenities enable children to safely and securely walk or bicycle to their schools as well as key destinations. This may also provide a higher level of comfort for parents.

4.2.2 Active Living Infrastructure

Integrating active living infrastructure such as parks, trails, sidewalks, street lighting and bike racks into community design can encourage and support an increase in physical activity by making active transportation and recreation visible and accessible to residents. Some strategies can include:

- Making streetscapes appealing to pedestrians and cyclists through effective design with good lighting, well-maintained sidewalks, bike paths, signage, crosswalks and improved aesthetics. Well-designed pedestrian and cyclist-friendly streetscapes encourage high levels of use and result in vibrant atmospheres. More appealing streets also attract people creating an "eyes on the street" result and may also contribute to a reduction in some types of crime;
- Designing streets that are safer for pedestrians and cyclists include features such as narrower streets, bicycle lanes, sidewalks, landscaping, parallel parking and traffic calming measures. These in turn help to increase cyclist and pedestrian activity; and
- Providing recreational facilities, parks, trails and safe places to play outside can result in a higher physical activity level for all age groups, particularly children and youth.

4.2.3 Transportation Planning

A "pedestrian first" approach to transportation planning can promote walking, cycling and other active modes of travel. Some strategies include:

- Increasing pedestrian and cycling connectivity means that walking and cycling routes are continuous and in many cases connect with key destinations. Features which emphasize this concept include continuous sidewalks, shorter blocks, grid-like street layouts, pedestrian connectors and accessible links to public transit;
- Creating safe routes to school. This can include well-marked and safe crossings, crossing guards, safe bicycle parking, traffic-calming measures around schools to reduce the number of vehicles entering the school zone during morning drop-off and afternoon pick-up times, and "walking school buses" which go to and from the school along a



designated route. These types of initiatives can increase the safety of walking and biking routes to school and help children get the physical activity they need; and

- Improving public transit through encouragement includes locating stops close to major residential nodes, providing frequent service and ensuring ease of connection to key destinations throughout the community. In some cases users of public transit achieve their daily requirement of 30 minutes of physical activity by walking to and from the transit stops.

As an alternative means of promoting and educating people on alternative transportation options through transportation planning, the County and Local Municipalities should explore the development and adoption of a “Pedestrian Charter”, similar to what the Town of Minto has adopted. A pedestrian charter can be used to facilitate and promote the need for walkable communities throughout the County and is an important measure of the quality of the public realm, health and vitality. Pedestrian Charters are becoming increasingly more popular throughout North America with the first one being established in Toronto followed by those developed in Waterloo, Kitchener, Sudbury, Burlington, Montreal and a growing number of other communities throughout Ontario.

4.3 ACTIVE TRANSPORTATION AND NEW DEVELOPMENT

4.3.1 Active Transportation and Development Charges

<p>Recommendation 4-6:</p>	<p>Staff review the Development Charges Bylaw for the County as well as the local municipalities to ensure that it includes sufficient language / clauses to enable the use of Development Charge funds to build new, and improve existing AT routes and trail facilities in locations where it can be demonstrated that the need is the result of County or municipal growth.</p>	<p>Short-term</p>
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Definition: The Development Charges (DC) Bylaw for the County of Wellington enables the County to collect a fee from a development proponent based on a set amount per new development unit. These fees are used by the County to offset the cost of providing public infrastructure to meet the needs of communities throughout the County as it grows.

It is important to note that there are some municipalities within the County of Wellington who have developed their own Development Charges Bylaw. These municipalities include:

- The Township of Centre Wellington;
- The Town of Minto;
- The Town of North Wellington; and
- The Town of Erin.



Those municipalities who have not created a Development Charges Bylaw are guided by the Bylaw for the County and all rules and regulations found therein. The Development Charges By-laws for the municipalities in the County of Wellington are responsible for the allocation of funds to more specific community services and infrastructure such as parks and recreation areas as well as sidewalk and on road facilities / road improvements. Development Charge funds can be applied to projects which provide the community, municipality and County with new public infrastructure which supports growth.

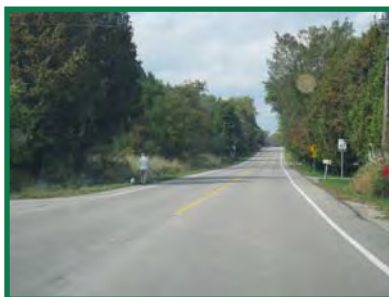
4.3.2 Working With the Development Community

<p>Recommendation 4-7:</p>	<p>The County and local municipalities should develop/refine policies and processes for working with the development community to ensure that Active Transportation facilities are planned, designed and constructed as part of the development process.</p>	<p>Short to Medium-term</p>
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The planning of active transportation and trail facilities is a critical component of the land development process.

Developers should be expected to work through an iterative process with County and local municipal staff beginning early in the planning stages to create an appropriate active transportation network within their development area that reflects the intent of the Active Transportation Plan.

Key Consideration: Active Transportation and trail facilities are key components of both the urban and rural fabric and are also significant recreation and transportation assets.





Many developers understand and acknowledge the value of integrating active transportation and trail facilities into their projects and in many cases use them as selling features for their neighbourhoods. Using the Wellington County Active Transportation Plan as a vehicle to provide the development community with information about the network, desired connections and design guidelines / standards will help to improve communication among all parties involved. New developments will need to contain connections to the County-wide network and connections to local area networks that are reflective of density, variety, hierarchy and character of active transportation facilities in the County Plan as well as local municipal trail and active transportation plans.

Wherever possible, active transportation and trail facilities should be constructed prior to or at the same time other community infrastructure and homes are being built. When facility installation is deferred until homes are built there can be conflict when residents adjacent to planned AT or trail routes claim that they were not aware of plans for construction even if this intention has been clearly indicated in municipal planning documents. Developers should be encouraged to be pro-active about notifying prospective buyers where pathways are to be located at the time they are selling lots. Providing information at sales offices, including information in sales packages and erecting signs in locations where pathways are to be constructed may help to alleviate difficulties at a later date.

What factors should be considered when integrating active transportation and trail facilities in new development areas:

- Topography;
- Drainage;
- Slopes;
- Soil Conditions;
- Plant and Animal Communities;
- Microclimate and human comfort;
- Historic / Cultural Resources;
- Public Education Opportunities; and
- Significant Views and Vistas.

To achieve this objective the following strategies should be explored and appropriate policies developed:

- a. Requiring developers to prepare and submit for review an Active Transportation concept/layout plan and typical details for facilities within the boundaries of the plan of subdivision. The concept plan would be reviewed by the municipal development review team and refined by the developer prior to the approval of the Draft Plan of Subdivision. The concept/layout plan will be consistent with the approved Active Transportation Plan and Official Plan Schedule.
- b. Prior to the Plan of Subdivision approval and registration of the applicable phase of a subdivision, requiring the developer to prepare and submit detailed design drawings, specifications and a cost estimate for pathway construction, to the satisfaction of the municipal development review team.
- c. As part of Development Agreements (Conditions of Approval) require the developer to:
 - construct active transportation and trail facilities within the boundaries of the applicable stage of the subdivision as part of the installation of other infrastructure such as utilities and roadways



- provide a notice to home purchasers of the proposal to construct an active transportation facility or trail including identification of the pathway on plans displayed in a sales office, and a clause in agreements of purchase and sale and/or lease.

Key Consideration: Where the County plans to develop AT facilities or Trails within new communities / new development areas, no additional consultation is anticipated above and beyond what is being undertaken as part of what has been specified for the subdivision planning and approvals process related to the subject lands.

4.4 ONGOING PUBLIC PARTICIPATION AND CONSULTATION

Recommendation 4-8:	Staff will review the suggested strategies for ongoing public participation related to implementing Active Transportation facilities in existing established areas and prepare a process that is appropriate for the County of Wellington and the local municipalities.	Short-term
Recommendation 4-9:	Where proposed Active Transportation facilities identified in the Active Transportation network are within the study area of an Environmental Assessment (EA) for other municipal infrastructure projects, the Active Transportation facility or trail shall form an integral component of these projects for review and implementation.	Short-term ongoing

4.4.1 Retro-fitting Active Transportation and Trail Facilities in Established Neighbourhoods

It can be very challenging to upgrade existing Active Transportation facilities and implement new routes in established neighbourhoods, even if the intent to do so has been clearly documented in strategic plans such as the Active Transportation Plan or local municipal AT/trail plans. Even with extensive consultation at the master plan stage it can be difficult to obtain public opinion related to route segments until a project reaches the implementation stage when adjacent land owners who perceive themselves as being directly affected become concerned and involved. Real and perceived concerns over increased pedestrian and cyclist traffic, access to rear yards, invasion of privacy, and a perception that there may be an increased potential for vandalism and theft are often cited as key concerns.

Key Consideration: One aspect of a consultation program to overcome this challenge is to engage residents in an open, public consultation process in the earliest possible stages of the project. In some cases, the most vocal opponent can become the greatest supporter if the process provides an effective avenue for modifications and to address concerns.



This applies not only to urban areas within the County but also rural areas, particularly where trails outside of road rights-of-way are being planned. Where new AT or Trail facilities are being implemented or significant improvements are being made to the existing routes, differing levels of consultation may be required to advance the project through the detailed design and implementation stages.

The level of consultation required for individual projects will depend on the project location, design approvals required, scope / complexity, and whether the project is identified in the Wellington County Active Transportation Plan, local AT or trail plans, or other planning policies such as Secondary Plans. The following outlines potential levels of consultation which could be explored in further detail.

Some Keys to Success:

- Notifying adjacent landowners early in the process and taking the time to understand and respond to their concerns;
- Encouraging their participation in the design process through events such as local design workshops to determine route layout, design, materials and privacy features, as well as site meetings to examine and refine proposed layouts;
- Emphasizing the benefits of the active transportation routes for their neighbourhood, the community, including themselves and their children; and
- Emphasizing successful examples and effective solutions where similar problems were overcome.

1. Notification of Construction

- For Active Transportation projects located entirely on County or municipally owned lands that do not abut residential or commercial properties, have all necessary planning and design approvals in place and have been tendered for construction, a public notice of the intention to proceed with construction should be published on the County and local municipal website as well as local newspaper(s). The notification should:
 - Briefly explain the project;
 - Note it was approved by Council through the Active Transportation Plan;
 - Identify the expected construction start and end dates;
 - Provide a contact name and number for questions.
- It is suggested that the notice be published at least 30 days in advance of project start up to address questions that may arise
- If a significant issue or concern is raised by residents or area property owners, staff in consultation with Councillors, may select to schedule a local neighbourhood meeting. This process would use existing in-house resources.



2. Local Neighbourhood Meeting

- A local Councillor and / or staff may select to host a neighbourhood information meeting for an Active Transportation project that has been approved through the County of Wellington Active Transportation Plan and is in the final design and approvals stage (not yet tendered), if the local Councillor or staff are of the opinion that additional consultation with the public is warranted to address comments received and / or to present the recommended AT facility alignment and draft design details. This meeting may also serve to present proposed changes or solutions to the alignment or design form that was previously presented to area residents. This process would typically use existing in-house resources.
- Outcomes of the meeting may include a number of directions, such as:
 - Finalize and/or revise detailed design based on direction agreed to at the meeting, secure outstanding approvals, tender project, issue notification of construction and proceed to construction;
 - Revise design and report to area residents at a second neighbourhood meeting (see item 3 below); or
 - Defer the project until staff can have time to consult further with the area Councillor, area residents and/or report back to Council with a recommended planning / design solution for the project.

3. Focused Consultation as Part of Design Process

- One outcome of the neighbourhood meeting (as described above) may be significant revisions to the design concept or AT route / trail alignment. In this situation staff may elect to undertake this work internally or secure the assistance of outside consultants.
- With these types of projects it is expected that one or more working meetings may be scheduled with the local Councillor and / or neighbourhood residents / stakeholders to identify, review and refine design changes.
- If there is consensus to proceed the following should be undertaken:
 - Finalization of the design;
 - Securing approvals;
 - Tendering the project;
 - Notification of construction; and
 - Construction of the project.
- If there is no consensus, staff should be asked to report back to Council with a recommended course of action and request direction from Council.



4. Broad Consultation as Part of a Class Environmental Assessment or Similar Study Process (also see Section 4.3.3)

The development of Active Transportation routes does not normally require a separate Class Environmental Assessment (EA), however, there may be situations where the County or local municipalities elect to conduct an Environmental Assessment. These typically include:

- Situations where AT routes and trails are identified in the Active Transportation Plan and are part of an Environmental Assessment for other County or local municipal infrastructure projects such as stream realignments, bridges and new roadways etc., then the Active Transportation route and preliminary design should be an integral component of the EA process. As part of the consultation process for the EA, options for the AT route alignment and design can be reviewed and evaluated, so that an integrated solution can be developed and that the AT route can be implemented as part of the construction of the larger project. Integration of the AT route at this stage ensures that it will be properly connected to surrounding facilities. Furthermore, significant cost efficiencies can be realized by implementing the AT route as part of the construction of the larger infrastructure project. The consultation program for the EA will be tailored to meet the scale, location and range of issues anticipated for the proposed project. These are described in Section 4.3.2.





4.4.2 Active Transportation Facilities and Environmental Assessment

Recognizing projects undertaken by municipalities can vary in their environmental impact, such projects are classified in the Municipal Class Environmental Assessment (MEA) process in terms of schedules:

SCHEDULE A OR A+

- Generally includes normal or emergency agency operational and maintenance activities; and
- The environmental effects of these activities are usually minimal and, therefore, these projects are pre-approved.

SCHEDULE B

- Generally includes improvements and minor expansions to existing facilities; and
- There is the potential for some adverse environmental impacts and therefore the proponent is required to proceed through a screening process including consultation with those who may be affected.

SCHEDULE C

- Generally includes the construction of new facilities and major expansions to existing facilities; and
- These projects proceed through the environmental assessment planning process outlined in the Class EA document.

Appendix 1-Project Schedules of the MEA Document also provides a more detailed classification of Class Environmental Assessment (EA) requirements in relation to project type and cost. AT route and trail development is not normally subject to the EA process, however, projects related to some aspects of AT facility and trail development may. The following is a list of those categories that may bear some relationship to the type of projects outlined in the Active Transportation Plan.

1. *Construction of multi-use pathways within existing rights-of way (pre-approved, no lower or upper financial limit, no EA required).*
2. *Culvert repair and replacement where the capacity of the culvert is not increased beyond the minimum municipal standard or the capacity to adequately drain the area, whichever is greater and where there is no change in the drainage area. If culvert replacement and repairs do not result in an increased capacity and there is no change in the drainage area, an EA is not likely required.*
3. *New water crossings to accommodate a connection to an existing or new pathway 'may' require a Schedule B Class EA if the total estimated construction value of the crossings is less than \$2.7M. The*



proponent (County or local municipality) should first consult with the Ministry of the Environment (MOE) Environmental Assessment Branch and the GRCA for trail projects that involve minor 'water crossings' (e.g. a drainage ditch) to determine whether a Schedule B Class EA is warranted.

- 4. Reconstruction of water crossing where the reconstructed facility will be for the same purpose, use, capacity and at the same location, where capacity refers to the hydraulic capacity (pre-approved, no upper or lower financial limit).*
- 5. Reconstruction of a water crossing where the reconstructed facility will not be for the same purpose, use, capacity and at the same location, where capacity refers to the hydraulic capacity (Schedule B where the construction cost is less than \$2.7M).*
- 6. Situations where roadway capacity is being altered by adding AT facilities.*
 - In the case where bike lanes are being included as part of a road widening/increasing the number of motor vehicle travel lanes, this would be assumed to be covered as part of an EA for the road widening (this represents an increase in roadway capacity).*
 - In the case where a "road diet" is being considered, as would be the case where a road that currently has 4 vehicle travel lanes is being changed to have 2 vehicle travel lanes, with a two-way centre left-turn lane and bikes lanes, staff should consider an EA process to ensure comprehensive consultation and evaluation of alternatives is address as part of developing a design recommendation (this represents a decrease in roadway capacity).*

Key Consideration: *In Ontario, the Municipal Engineers Association (MEA) Class Environmental Assessment Document (October 2000, as amended 2007) applies to municipal infrastructure projects including roads, water and wastewater projects.*





4.4.3 Construction Works in, or Near Water and in Regulated Areas

Section 32(1) of the Fisheries Act, which prohibits the Harmful Alteration, Disruption or Destruction of fish habitat, unless authorized by DFO. If in-stream works are required, the project may need authorization from DFO (Department of Fisheries and Oceans). If in-stream works are not required and physical impacts on fish habitat can be mitigated by specific project design and construction procedures, then authorization from DFO would not be required, and the GRCA (Grand River Conservation Authority) would provide a “Letter of Advice” on behalf of DFO. The Letter of Advice would outline specific mitigating measures that would have to be implemented to minimize potential impacts to fish and fish habitat. Excavation or placement of fill near waterways is subject to Ontario Regulation 150/06 – Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, and a permit may be required from the GRCA.

In addition, for any project that is proposed on property owned or regulated by the GRCA, their approval will be required, and approval by the Ministry of Natural Resources (MNR) and the Ministry of Culture (MOC) may also be required, depending on the project location and context. For projects proposed on property owned or regulated by the GRCA, in whole or in part, GRCA should be consulted during the early stages of design as the approval process can take a significant amount of time. Following the completion of an EA, or if the file is deemed a Schedule ‘A’ Environmental Assessment, an Ontario Regulation 150/06 – Development, Interference with Wetlands and Alterations to Shorelines and Watercourses permit may be required from GRCA. Examples of regulated lands include wetlands, steep and erosive river valley slopes and floodplains.

The GRCA generally recommends that multi-use pathways in natural hazard and natural heritage features such as wetlands be avoided where possible, and if a pathway is proposed in a GRCA regulated area, that additional studies such as an Environmental Impact Study may be required to identify the natural features and appropriate buffers to those features prior to consideration of multi-use pathway development in those areas.

Key Consideration: *The Grand River Conservation Authority (GRCA) has an agreement with Fisheries and Oceans Canada (DFO) allowing them to review projects on behalf of DFO at the detailed design stage. Any proposed works within the riparian zones of watercourses and seasonally flooded lands must be reviewed for potential Harmful Alteration, Disruption or Destruction (HADD) of fish habitat under the Federal Fisheries Act.*

4.4.4 Trails and Landfill Areas

All of the County’s active and closed sites were inherited from the member municipalities in 2001. Old closed sites did not have approvals from the Ministry of the Environment for any post closure land use, and the ongoing filling and closure of sites since that time has progressed under the same approach. The Ministry does not permit any post closure land use not approved under the Closure Plans and the County cannot permit trails on these sites. However, in the future, as the Active Transportation Plan is being implemented, the County Solid Waste Services Division will consider accommodating trail systems whenever practical and possible. This can only occur with sites nearing closure and requiring a plan for post operation of the site so that the Active Transportation route/trail can be included in the Closure Plan.



4.4.5 Active Transportation Routes in Unopened Road Allowances, Abandoned Railway Corridors and Utility Corridors

<p>Recommendation 4-10:</p>	<p>The County and local municipalities should:</p> <ul style="list-style-type: none"> a) thoroughly examine the potential to use unopened road allowances as potential Active Transportation routes prior to disposing of them/selling them to adjacent land owners; b) thoroughly examine the potential to use abandoned railway corridors as potential Active Transportation routes prior to declaring no interest in purchasing or leasing them; and c) consider and investigate the potential to utilize utility corridors in urban and rural areas as Active Transportation routes. 	<p>Short-term</p>
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Unopened road allowances, abandoned railway corridors and utility corridors are examples of linear corridors that provide excellent opportunities for Active Transportation/trail route development. The popular Elora Cataract Trail, the Trestle Bridge Trail, the Kissing Bridge Trail and the Whites Junction Trail are 4 extremely successful local examples of trails in abandoned railway corridors that have been developed in Wellington County. Similarly, unopened road allowances offer possibilities for active transportation routes. A number of abandoned railway corridors and unopened road allowances were examined as part of the network development process for Wellington County Active Transportation Plan, and a few were included in the network where investigations indicated that they were available and created good network links. Information was not readily available for some of the corridors, and some of these have been included in the network (e.g. on the outskirts of Mount Forest) with the recommendation to undertake more detailed investigation as part of the first phase of implementation (refer to Section 6.3.3). In the case of some unopened road allowances which still remain in municipal ownership but have been assumed by private land owners (e.g. used for farming), it may be possible to negotiate access along another parallel corridor such as a creek corridor that is not being used for farming in exchange for the unopened road allowance. Section 4.4 provides additional details regarding land acquisition and securement tools for active transportation routes that can be used by the County/local municipalities. Moving forward it is recommended that the County and local municipalities thoroughly examine unopened road allowances and abandoned railway corridors as potential active transportation routes prior to disposing of them.

Utility corridors in rural areas may be owned by the utility company or leased from the landowner. In the case of corridors that are owned by the utility company there may be an excellent opportunity to develop an active transportation route. For example a portion of the designated Trans Canada Trail route from Elora to Guelph is located within a hydro corridor that is owned by the utility (Hydro One) and discussions regarding the creation of a trail have been ongoing for a number of years. These discussions should continue and future potential opportunities of a similar nature should be explored as they arise.



Utility lines in urban areas often have a substantial easement, and in many cases are used informally as trail routes as they tend to provide direct connections to a variety of destinations over and long distance. When the alignment and design details are properly considered, pathways can also serve as emergency and service access routes to assets within the hydro corridor. For example a number of municipalities have adopted policies and practices to provide service and emergency access routes to utilities such as manholes along sanitary sewer lines in river valleys in case of line blockages.

4.5 LAND ACQUISITION & SECUREMENT FOR ACTIVE TRANSPORTATION ROUTES

<p>Recommendation 4-11:</p>	<p>The County and local municipal partners should develop an acquisition strategy for proposed Active Transportation routes on privately owned lands as illustrated in the recommended Network Map using techniques as described in Appendix C of the Active Transportation Plan.</p>	<p>Short-term</p>
------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------

Wellington County is a predominantly rural upper tier municipality with a number of small and medium sized urban centres. Much of the rural area is privately owned and devoted to agriculture. One of the key premises of the Active Transportation Plan is to create routes on lands that are publically owned. However, there are some instances where future critical connections are suggested on lands that are privately owned as no public corridor exists. Some of these connections are located along natural heritage corridors (i.e. creeks and valleys) in land that is presently rural / agricultural.

At some point in the future some of these natural heritage areas may become part of the urban fabric and at that time these corridors would be set aside along with a suitable buffer. These corridors could accommodate AT and trail connections at this time. Where it is unlikely that these corridors would be incorporated into the urban fabric in the foreseeable future and the full build out of the network requires these critical connections, connections across these lands will require permission for access or a strategy to secure ownership before any plans for Active Transportation routes can be made. A range of strategies are available to accomplish this, from “handshake” access agreements to purchase of these lands by the County/local municipality or other partner. An overview of potential land securement and acquisition techniques that may be used to secure access across private lands is presented in **Appendix C** of the Active Transportation Plan.

In a similar fashion this principle could also be applied to lands that are in some other types of transitional land use such as those licensed for aggregate extraction. In this instance the pit/quarry could include trails as part of the post-extraction rehabilitation provided that the municipality or other public body can acquire the lands or negotiate a suitable agreement with the land owner to have trails included as part of the end use plan. In southern Ontario there are a number of examples of successful trails on former aggregate lands.



5.0 THE ACTIVE TRANSPORTATION NETWORK

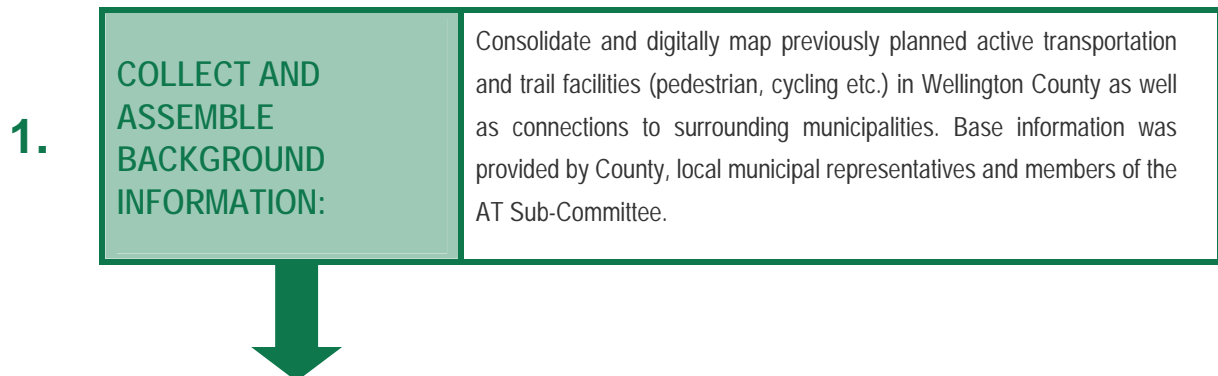
This chapter discusses the network development process, presents the proposed active transportation network as well as the network route selection principles and identifies the recommended facility types. Further details regarding facility types and design are contained in **Appendix A** and details of the recommended network phasing are provided in **Chapter 6**.

The Wellington County Active Transportation Plan supports and builds upon work related to trails and active transportation that has been completed by the County and local area municipalities. Part of this support includes recommendations for a comprehensive network of on and off-road active transportation and trail corridors that connect the urban and rural communities and promote active transportation.

5.1 THE NETWORK DEVELOPMENT PROCESS

The network development process included the following 9 steps.

Figure 5.1 – Network Development Process





2.

**REVIEW
CONSOLIDATED BASE
MAPPING WITH AT
SUB-COMMITTEE:**

Base mapping was reviewed with the AT Sub-Committee at a number of key stages throughout the study and refined as additional information became available.



3.

**DEVELOP ROUTE
SELECTION
PRINCIPLES:**

A set of qualitative principles was developed to guide the selection of routes for consideration at the Candidate Route level. These principles were reviewed with the study team and at the first stakeholder workshop and the public at the first round of Public Information Centres.



4.

**PREPARE CANDIDATE
ROUTE MAPPING:**

Candidate routes were mapped and refined based on the following:

- Consolidated base mapping;
- Route selection criteria;
- Consultation with the AT Sub-Committee;
- Expertise of the study team;
- Consultation with stakeholders and the public; and
- Desktop analysis using the County's Geographic Information System database and aerial imagery available on Google Earth.



5.

**PUBLIC INPUT TO THE
CANDIDATE NETWORK
AND ROUTE
SELECTION
PRINCIPLES:**

County and Local Municipal staff were consulted through the project steering committee. In addition, input was received from the AT Sub-Committee, public and local stakeholders / interest groups based on comments received through the online questionnaire and during the first set of Stakeholder Workshop and first round of Public Information Centres held in November 2011.



6.

FIELD REVIEW AND ASSESS CANDIDATE ROUTES, AND PREPARE DRAFT ROUTE NETWORK:

- Travel and collect information for each of the candidate routes (ground-proof in the field);
- Accept or reject Candidate Routes
- Refine the candidate route network using the route selection principles, information collected in the field combined with the technical expertise of the study team, plus input from the Steering Committee and the public; and

Prepare the draft route network for review by the Steering Committee.



7.

SUGGEST AN APPROPRIATE FACILITY TYPE:

For each route suggest an appropriate facility type by considering a number of characteristics including:

- Geographic location (urban vs. rural);
- Facility type recommended in other County or Municipal plans or studies.
- Current road cross section;
- Current character of the corridor;
- Current traffic characteristics;
- Right-of-way width;
- Distance to the nearest existing or proposed route.

Observations made by the study team were then balanced by comments received from the Steering Committee, stakeholders and the public.



8.

RECEIVE INPUT ON THE DRAFT ROUTE NETWORK AND RECOMMEND FINAL ROUTE NETWORK

Input regarding the draft route network, facility types and implementation priorities was gathered through discussions with the AT Sub-Committee, stakeholders and the public through a second stakeholder workshop and round of Public Information Centres held in April 2012.

Some routes were rejected and new routes were added at this stage as part of the refinement of the route network. The final recommended route network was used as the basis for the Implementation Plan in Step 9.



9.

PREPARE IMPLEMENTATION PLAN:

The 3 phase Implementation Plan was reviewed with the Steering Committee. The recommended facility type was used at the master plan level to develop an order of magnitude cost estimate for the implementation of the network.

Note that as part of the implementation of each route segment, a more detailed assessment will be undertaken at the segment specific level to confirm the route and facility type for the purposes of detailed design using a 5-step implementation process that is described in detail in Chapter 6.

5.1.1 Route Selection Principles

One of the key inputs into development of the recommended route network for the Wellington County Active Transportation Plan was the following set of route selection principles. These were developed by the study team and reviewed with the public as well as key stakeholders in the initial stages of the study. The principles guided the initial stages of the route selection process during the Active Transportation Plan study. They should also be reviewed in the future as part of the detailed feasibility assessment on a route by route basis, and also when any future network changes are being contemplated.

Visible

Active transportation routes should be a visible component of the transportation system.

Connected / Linked

The Active Transportation network should link communities and important destinations throughout the County such as commercial, employment and residential areas, community centres, leisure, recreation and tourist destinations, parks, schools, etc.. The County-wide network should link existing and planned Active Transportation and trail facilities at the local municipal level and should be seamlessly connected to neighbouring municipalities. Active Transportation routes will provide crossings of major barriers (e.g. railways, highways, major arterial roads, valleys and rivers etc.) at appropriate locations.

Easy to Access

Routes should be easily accessible from local neighbourhoods within the County.



Integrated	The network should be integrated with other modes of transportation, particularly public transit. Routes will provide access to existing and future/planned transit stations and hubs (e.g. GO, Greyhound etc.).
Attractive & Interesting	Routes should take advantage of attractive and scenic areas, view and vistas. Routes should provide users with the opportunity to experience and appreciate the natural and cultural heritage assets throughout Wellington County.
Accessible	Where possible and practical, off-road routes will be accessible. It is recognized however that not all off-road routes will be accessible in all locations. Routes will be appropriately signed to communicate the level of accessibility so that users can make their own decision about use based on their personal level of mobility.
Context Sensitive	Facility design for individual routes should follow widely accepted guidelines but may also be modified to respond to the immediate surroundings. For example, off-road routes should be appropriately located when associated with natural heritage features, therefore each site's characteristics should be carefully considered when the alignment and design details are being developed for routes in natural heritage areas.
Sustainable	Sustainability will be a key consideration in the alignment, design and selection of materials for on and off-road Active Transportation routes.
Cost-Effective	The cost to implement and maintain the Active Transportation and trail network and supporting facilities/amenities should be phased over time and designed to be affordable and appropriate in scale for the County and the local municipalities. User safety will not be compromised in the interest of minimizing initial construction or ongoing operational costs. Opportunities for partnerships with other levels of government and outside organizations should be pursued wherever possible.



5.2 A HIERARCHY OF ACTIVE TRANSPORTATION ROUTES

The active transportation and trail facility types proposed in the Wellington County Active Transportation Plan were selected based on the network development approach presented in this chapter and supported by detailed field investigation and subsequent route assessments. The confirmation of routes and facility types for individual segments is intended to be an outcome of using the facility selection tool identified in the Designer's Toolbox (**Appendix A**) and the feasibility review process identified in Chapter 6 of this plan.

The design feasibility review process may suggest a change in route, facility type or propose a context sensitive design solution that meets the needs of the County as well as the local municipality in which the segment is located. A context sensitive solution could include a range of facility types as presented in Appendix A or some form of hybrid that responds to site specific criteria and design challenges and opportunities.

The recommended Active Transportation network includes routes throughout the County, connecting communities, linking key destinations and providing connections to existing active transportation and major trail facilities where they currently exist. In urban areas the major routes are illustrated as part of the County-wide network. It is anticipated that work will continue within each of the local municipalities through local active transportation and/or trail master planning studies to further refine and build on the local networks and continue to link them seamlessly with the broad County-wide network.

How Does The Network Relate to Users and Geography of the County?

The core users of the network consist of two broad categories, namely **pedestrians** and **cyclists**. For the purposes of the Wellington County Active Transportation Plan the **pedestrian group** includes walkers, joggers/runners, hikers, dog-walkers, wheelchair users, parents pushing strollers and other small wheeled users such as skateboarders and in-line skaters. This group generally travels short distances ranging from several hundred metres to less than 10km, with only a small percentage of trips over 10km in length for a single outing. The **cyclist group** includes bicycle riders with a range of experience from novice and occasional recreational riders who travel short distances in and around urban areas and key attractions, to experienced cyclists that may travel over 100km in a single outing.

This plan recognizes that the majority of pedestrian trips will tend to be centred within or close to urban centres and in the vicinity of key recreational attractions (e.g. Belwood Lake). Similarly it is expected that a significant portion of all cycling trips will be close to urban centres and nearby key attractions, however cycling trips will also take place throughout the county.

With this in mind the county-wide Active Transportation network is envisioned as system that connects communities, provides links to important destinations and connects to major existing and planned trails and active transportation routes within each of the local municipalities. In the rural areas the county-wide network provides "grid" of routes that are regularly spaced, connect communities and avoid heavily traveled roads wherever possible. In urban areas the county-



wide network provides a framework of active transportation routes that can serve as the foundation for local area networks.

It is important to note that...

As local municipalities continue to develop their own pedestrian, cycling and active transportation networks within the urban areas as part of local master plans, it is anticipated that these will connect seamlessly to the broader county-wide network routes ultimately creating a comprehensive network with a higher density of routes in the urban areas.

The Active Transportation network is not a “one-size fits all” facility; instead there are different types of facilities in different locations to accommodate varying levels of use and the range of pedestrian and cyclist users. As noted above it is anticipated that there will be larger numbers of users in and around urban centres, and the range of skill/ability of users will be widest in these locations. To accommodate this range of users the Active Transportation network includes the following types of on and off-road routes:

- Off-road trails outside of road rights-of-way in both the urban and rural areas to accommodate pedestrians and cyclists, such as:
 - single track walking and hiking trails for pedestrians;
 - single track trails for hiking and cycling; and
 - multi-use trails for both pedestrian and cyclist user groups;
- Off-road multi-use trails within road rights-of-way, typically in the urban areas that are designed to accommodate both pedestrian and cycling user groups;
- On-road signed routes which include:
 - signed cycling routes on low volume urban roads with sidewalks for pedestrians;
 - signed cycling routes on low volume urban roads without sidewalks where pedestrians share the road with motor vehicles and cyclists; and
 - signed routes on low volume rural roads where cyclists share the road with motor vehicles and pedestrians walk on road shoulders.
- Paved shoulders typically in rural areas that can accommodate pedestrians (walking facing motor vehicle traffic) and cyclists (riding in the same direction as motor vehicle traffic); and
- Bicycle lanes typically in urban areas on higher volume roads, with accompanying sidewalks for pedestrians.



5.3 ACTIVE TRANSPORTATION NETWORK FACILITY TYPES (OVERVIEW)

Network Design Guideline Recommendations:

<p>Recommendation 5-1:</p>	<p>The design standards and guidelines prepared as part of the Wellington County Active Transportation Plan are the guiding document regarding the construction of cycling and trail facilities throughout the County and are intended to inform and support the details provided in other documents used for implementation.</p>	<p>Short-term, ongoing</p>
<p>Recommendation 5-2:</p>	<p>Staff responsible for the design and construction of Active Transportation facilities should remain current regarding best industry design practices.</p>	<p>Short-term, ongoing</p>
<p>Recommendation 5-3:</p>	<p>Local area municipalities should develop local trail master plans to complement and connect seamlessly with the county-wide active transportation network. This will allow each municipality to respond to their unique trail needs and priorities at a local level.</p>	<p>Medium to long-term</p>

5.3.1 On-Road Routes

Signed-only Cycling Routes on Local Roads

Signed routes are typically installed on quiet, residential local/collector streets. Cyclists share the street with motor vehicles and pedestrians use sidewalks where they exist. Apart from “bicycle route” signs, there are generally no changes made to the roadway provided that there is adequate pavement width to safely accommodate both motor vehicles and cyclists, and when adequate sight lines exist and vehicle traffic volume (Average Annual Daily Traffic – AADT) are within acceptable ranges. Where this is not the case alternative routes should be investigated or paved shoulders/bike lanes implemented. In some circumstances signed routes may be implemented on collector or arterial roads as an interim solution where a road segment has an insufficient right-of-way, or where the removal of on-street parking to implement a formal bike lane is not supported.

Existing roads that are recommended as part of the cycling network should not be prematurely signed or identified as part of the network if the right-of-way available to cyclists is too narrow, AADT’s are high, or if the roadway surface is in poor condition. Roads that are presently not suitable for on-road cycling facilities but

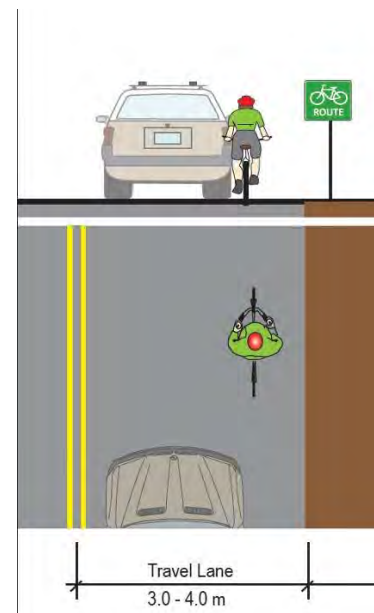


Figure 5.2 – Cross Section of Signed Bike Route



are recommended for implementation in the future should be upgraded to at least minimum standards before being signed as part of the cycling network.

Experience in other municipalities suggests that adding edge lines where feasible (a minimum of 1.0 m from the curb face) along with implementation of parking restrictions during weekday commuting and school travel hours may have a positive traffic calming effect through a reduction in vehicle speed and increased level of comfort for cyclists.

Signed Bicycle Routes on Wide Outside / Curb Lanes

Signed bicycle routes with wide curb lanes are similar to signed only bicycle routes, with the exception that the lane shared by motorists and cyclists is wider than a standard motor vehicle travel lane (e.g. greater than 3.75 metres). Research indicates however that when lane widths exceed 4.0 m this tends to increase confusion and improper lane use by motor vehicles in congested urban environments, and may encourage unsafe passing manoeuvres in rural environments.

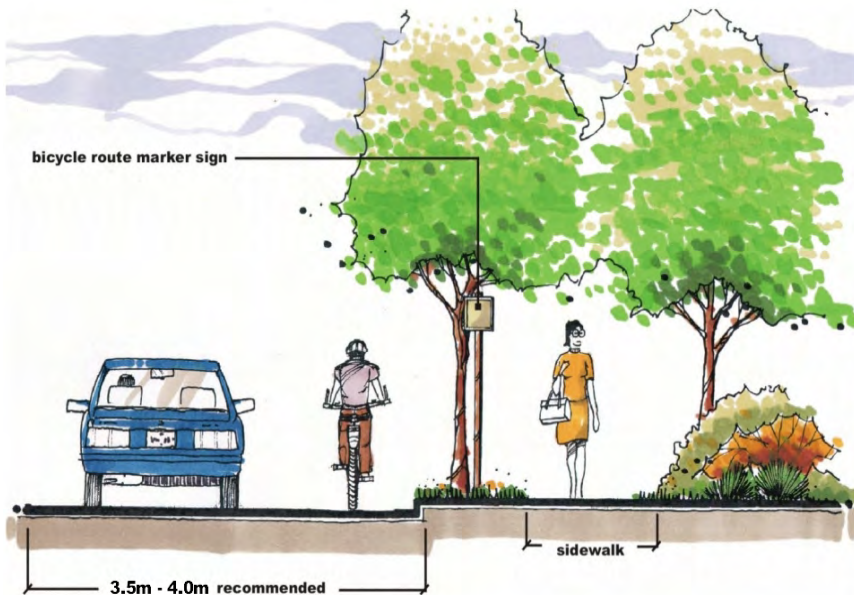
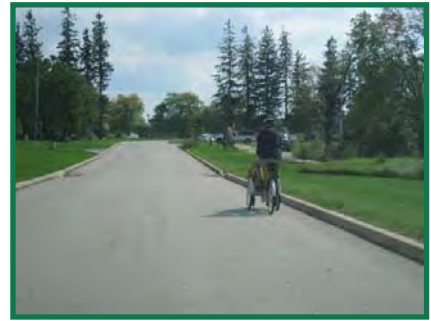


Figure 5.5 – Typical Signed Bicycle Route Cross Section



Elora, ON (Shared Space on Local Road)

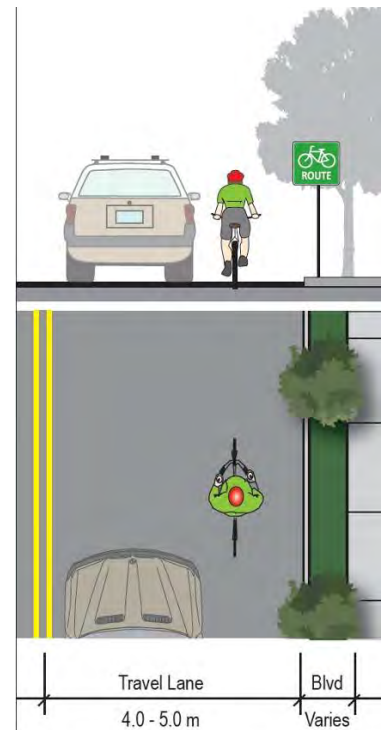


Figure 5.3 – Cross Section of Signed Bike Route on Wide Curb Lane



Figure 5.4 – Signed-only Cycling Route Along a Wide Curb Lane



Signed Route with Sharrow Symbol

Signed routes may be supplemented with the Shared-use or “Sharrow” symbol. Sharrows advise cyclists of the correct bicycle positioning in the lane and may help to deter unsafe passing manoeuvres by motorists and increase driver awareness of cyclists on the road.

The Transportation Association of Canada (TAC) Guidelines for the Design and Application of Bikeway Pavement Markings provides guidance on the application of shared-use lane markings, including the following recommendations (refer to the TAC Guidelines for detailed recommendations):

- Place immediately after an intersection and 10 m before the end of a block.
- Space longitudinally at intervals of 75 m (this spacing may be increased or decreased as needed to have evenly spaced markings within a block).
- This marking may be used on roadways with lanes that are wide enough for side-by-side bicycle and vehicle operation but not wide enough for a standard bicycle lane. These markings should be used on roadways with posted vehicle speeds of 60 km/h or less.
- On roadways without on-street parking, place so that the centre of the marking is a minimum of 1.0m from the face of curb (where one exists) or edge of pavement where there is no curb.

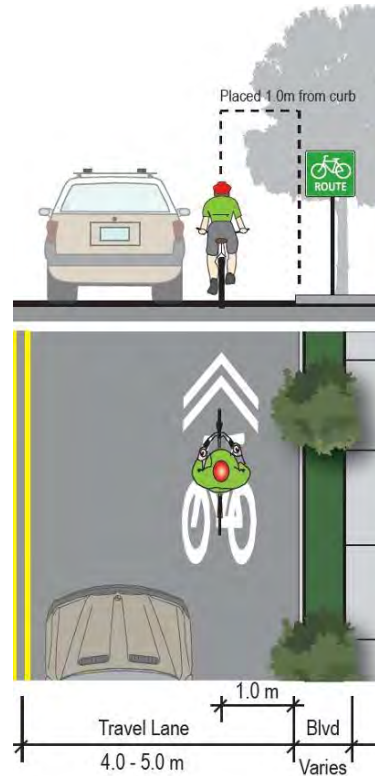
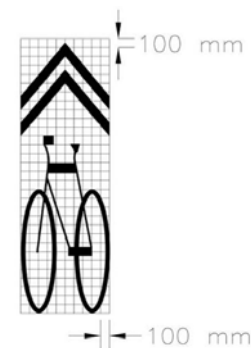
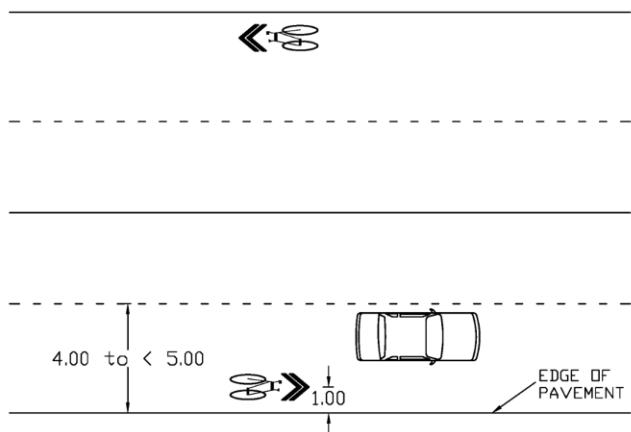
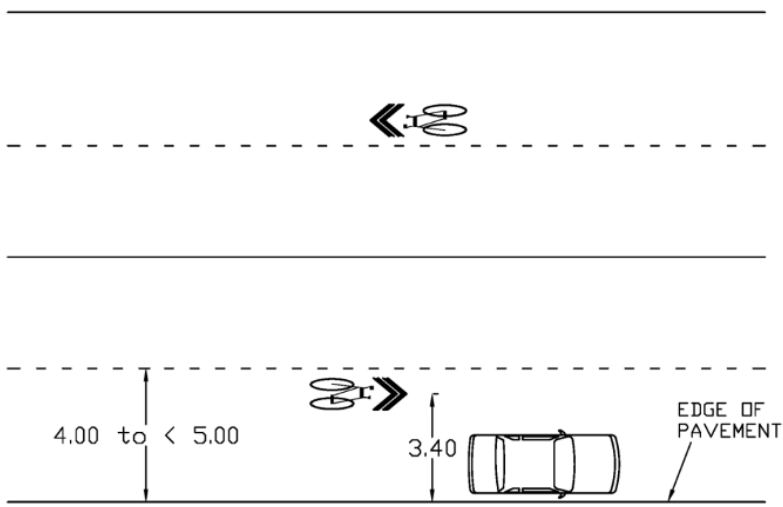


Figure 5.6 – Cross Section of Signed Route with Sharrow Symbol



Sharrow Markings without On-Street Parking:
The offset encourages cyclists to maintain an appropriate distance from the curb.



Sharrow Markings with On-Street Parking:
 The offset encourages cyclists to maintain a clear distance from open doors of parked cars.

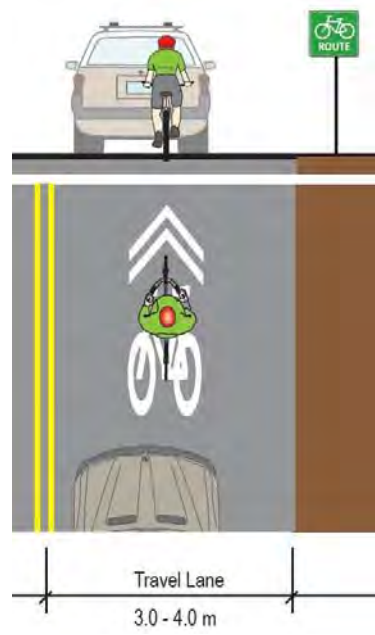


Figure 5.7- Cross Section of Signed Route with Sharrow Symbol with Narrow Travel Lane

Paved Shoulders

A paved shoulder cycling route can be located on roads with rural cross sections and no curbs. Adding or improving existing paved shoulders can be the best way to accommodate cyclists in rural areas and benefit motor vehicle traffic. Paved shoulders offer other advantages: they reduce maintenance costs associated with the grading and maintenance of gravel shoulders, serve as a refuge for disabled vehicles, accommodate emergency vehicles, extend the life of the vehicle lanes through improving the lateral support for the roadway structure, and can reduce run-off-the-road collisions. Where funding or space is limited, adding or improving shoulders on uphill sections will give slow moving cyclists needed manoeuvring space and will decrease conflicts with faster moving motor vehicle traffic.

There are a number of locations throughout the County where existing gravel shoulders have already been partially paved. Where gravel shoulders have not been paved, but the shoulders have the required width and base to support paved shoulders, a shoulder-paving program could be implemented in order to facilitate the use of paved shoulders for cycling on rural roads.

If shoulders are to be provided as part of a new road construction project, the pavement structure design for the shoulder should be the same as that of the roadway. A reduced pavement thickness could be considered in situations where:

- No future road widening is planned within the 10 year road program;



- The existing shoulder area and road structure is structurally stable and well-drained;
- Existing travel lanes have suitable width and are in safe and desirable condition;
- Horizontal control (curvature) is not excessive; and
- Existing and projected traffic volume (AADT) and heavy truck traffic is not considered excessive.

The following construction details should be used to add paved shoulders to roadways where no overlay project is scheduled:

- **Saw Cutting:** A saw-cut 0.3 m inside the existing edge of pavement provides for a tight joint. This eliminates a ragged joint at the edge of the existing pavement;
- **Feathering:** Feathering the new asphalt onto the existing pavement can work if a fine mix is used and the feathering technique does not extend across the area of the travelled bicycle facility;
- **Grinding:** Where there is already some shoulder width and thickness available, a pavement grinder can be used to make a clean cut at the edge of travel lane, grade the existing asphalt to the right depth and cast aside the grindings in one operation. Grinding offers these advantages
 - Less of the existing pavement is wasted;
 - The existing asphalt provides additional pavement base;
 - There will not be a full-depth joint between the travel lane and the shoulder;
 - The grindings can be recycled as base for the widened portion; and
 - New asphalt can then be laid across the entire width of the shoulder lane with no seams.

Paved shoulders are a significant component of the Active Transportation network in rural areas of the County. On rural roads, a marked edge line is typically used to designate a paved shoulder but a buffer zone should be considered where feasible. Signs are used to designate the route and indicate the presence of cyclists.

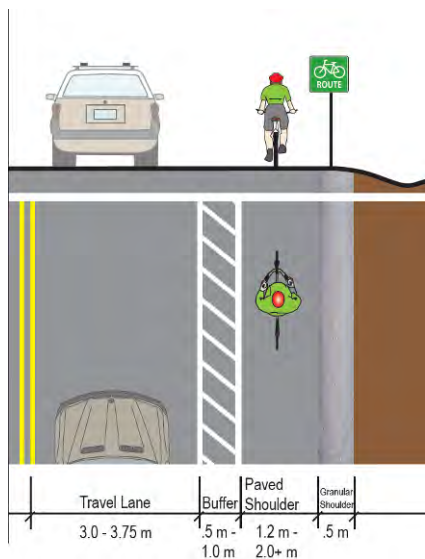
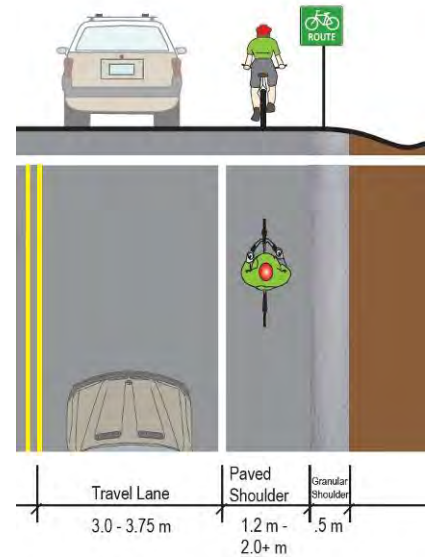


Figure 5.8 – Cross Section of Paved Shoulder (buffer optional)

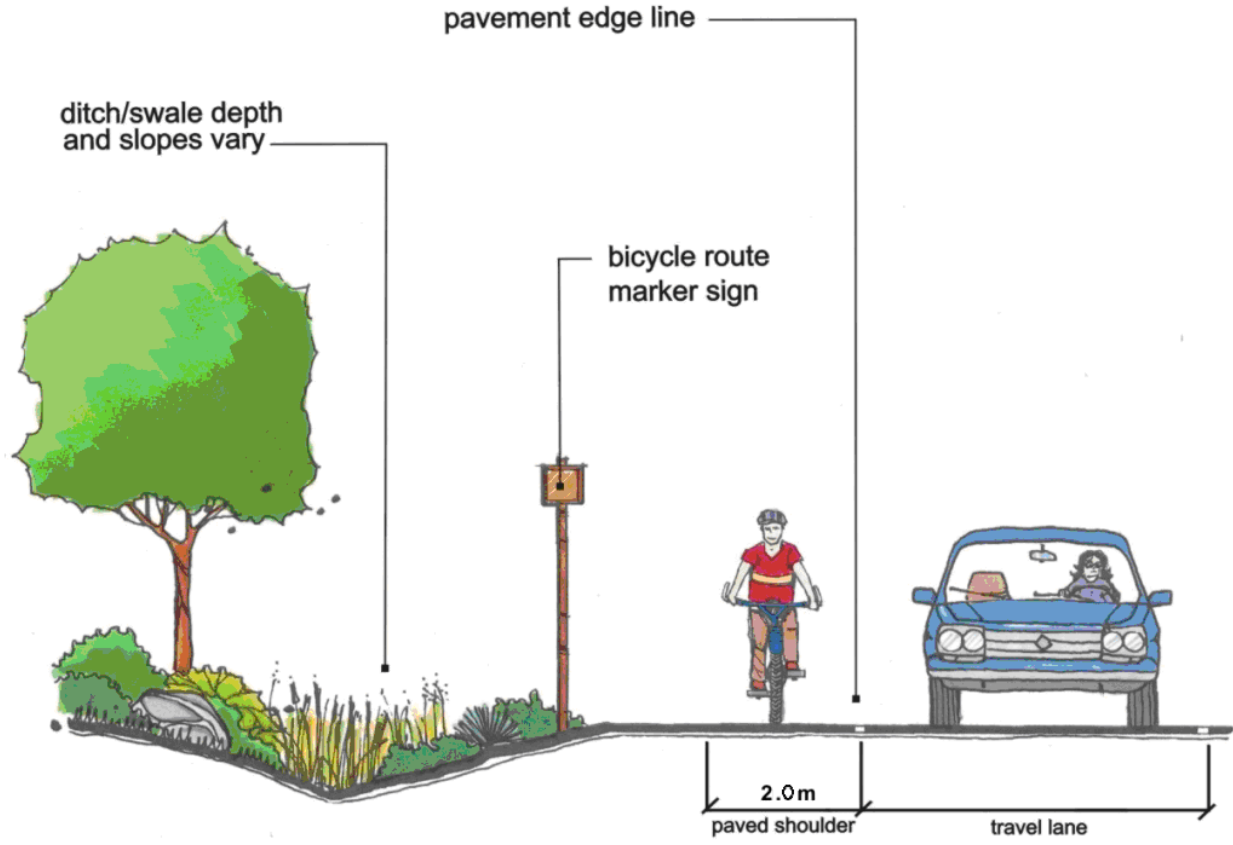
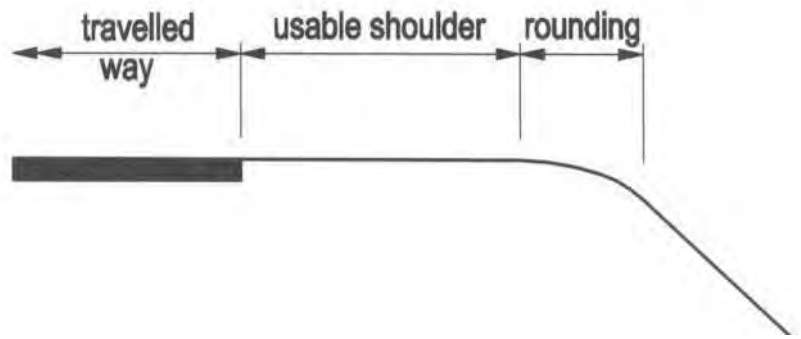


Figure 5.9 – Typical Paved Shoulder Bikeway

Both MTO (Geometric Design Standards for Ontario Highways, GDSOH) and TAC (Geometric Design Guide for Canadian Roads, GDGCR) provide standards for shoulder widths for undivided rural highways that are based on design speed and AADT volumes. The widths recommended by both are in some cases sufficient to accommodate a 1.5 m to 2.0 m paved shoulder cycling route and 0.5 m to 1.0 m for additional granular shoulder width. Figure 5.10 illustrates the shoulder of a typical roadway platform.

Figure 5.10 – Typical Roadway Shoulder





Where paved shoulders are the recommended facility type for the Active Transportation network a width of 1.5 m is preferred. On roads with a high percentage of commercial traffic and speeds above 60 km/h and less than 80 km/h, a wider shoulder is recommended (e.g. 1.8 to 2.0m), however, in constrained areas, shoulder cycling routes with a design width of 1.5 m may be used if additional granular shoulder exists beyond the proposed edge of the paved shoulder. There may be segments of proposed cycling routes on roads with rural cross-sections (no curb) where it is difficult to accommodate even a minimum paved shoulder. In these cases, edge lines (pavement markings) may be provided to mark the vehicle lane width and to delineate as much additional shoulder width as possible for cyclists to use. It should be recognized that a bicycle is defined as a vehicle in the Highway Traffic Act and cyclists will continue to use rural roads regardless of the posted limit, traffic volume or availability of a paved shoulder.



The decision on whether to sign a road with paved shoulders that are less than the desired width as a signed only bicycle route should be based on good engineering judgement. In addition, roadway characteristics such as the traffic volume and percentage of commercial vehicle traffic, as well as a number of other factors such as roadway geometry, gradients, horizontal/vertical curves and sight lines should also be considered. The County may elect to designate some roads as signed only bicycle routes that do not currently meet the suggested minimum shoulder width criteria, as an interim condition. When these roads are scheduled for an overlay or widening, the preferred width should be provided. If the paved shoulder width is less than the preferred, and a cyclist chooses to ride to the right of the edge line, an adjacent gravel shoulder would still provide a “recovery” area.



Source: Flickr, John Luton

Cycling routes with paved shoulders should only be marked as signed-only bicycle routes and this can be supplemented with Bike Route and Share the Road signage. If a rural road is upgraded to an urban section (with curbs) the paved shoulders should be converted into bike lanes.



Bike Lane

A bike lane is defined as a facility located in the travelled portion of the street or roadway and is designed for one-way cyclist travel. Bike lanes are identified on the road through pavement markings and signage. Bike lanes typically form part of the spine bicycle network, but may also form parts of a local neighbourhood network. Bicycle lanes should be constructed on roads with an “urban” cross-section.

Conventional Bike Lane Design

The minimum design width for a bike lane on a street with an urban cross-section without on-street parking should be 1.5 m from the face of the curb (Table 5.1). A preferred width of 1.8 m is recommended, especially on roadways with higher average annual daily traffic (AADT) volumes, speed limits, and commercial vehicle volumes (trucks/buses) such as those on busy arterial roadways. This is consistent with both Ministry of Transportation (MTO) and TAC guidelines. Bike lane widths of 2.0 m should be considered on roads with motor vehicle operating speeds, or posted speed limits between 60 km/h and 80 km/h. Bike lane widths should not exceed 2.2 m because the excess width may encourage motorists to drive in the bike lanes.

In constrained rights-of-ways and/or for short segments, a reduced width of 1.2 m may be acceptable for bike lanes. Lane widths less than 1.2 m should not be designated or signed as bike lanes. When the available lane width narrows below 1.2 m, bike lane signs and pavement markings should cease, and a “Bike Lane Ends” sign should be posted (refer to TAC Bikeway Traffic Control Guidelines for Canada).

Table 5.1: Recommended Bike Lane Widths

Classification	Minimum Width ^(c)	Desired Width
Standard Bike Lane	1.5m	1.8m
Bike Lane Adjacent to On-Street Parking Aisle	1.8m	2.0m
Bike Lanes on Rural Roads with Posted Speed Limit between 60 – 80 km / h ^(a)	1.5m	2.0m
Bike Lanes on Constrained Right-of-Way Width	1.2m ^(b)	1.5m

(a) Note: On-road cycling facilities are not recommended on roadways with posted speed limited greater than 80 km/h

(b) Please note that this should not be considered along high-speed roadways with high AADT volumes and commercial vehicle volumes

(c) Measurements are taken to the face to the curb (i.e. the bike lane can include the gutter pan where one exists.

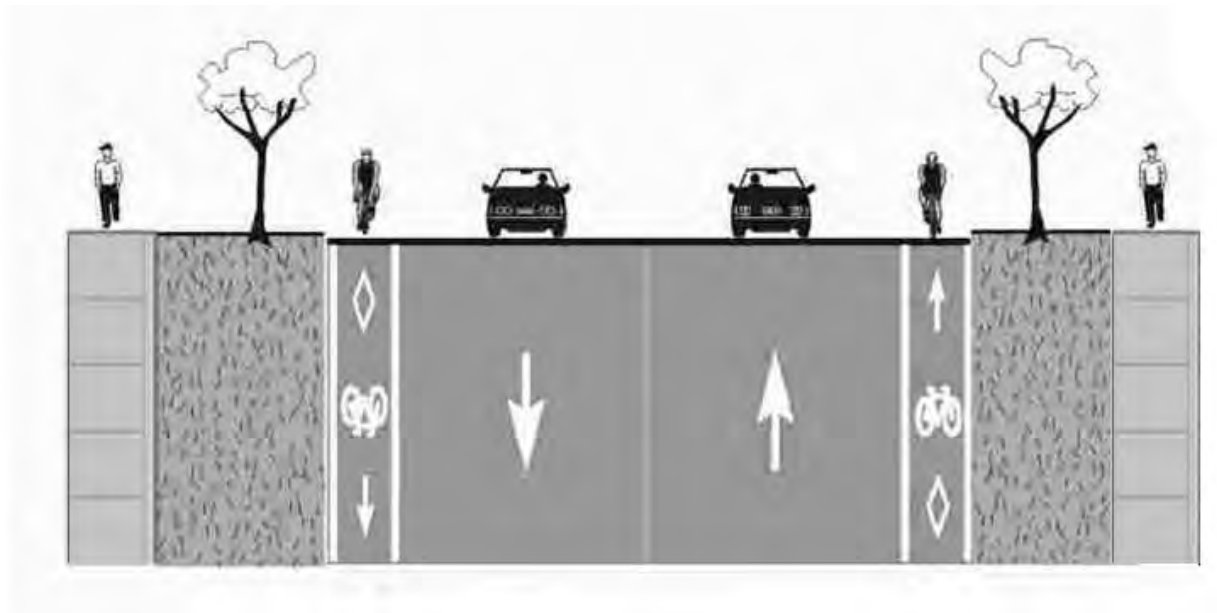
If the edge line does continue along a roadway following the termination of a bike lane along with the cycling route, and the available lane width between the edge line and the shoulder/curb of the roadway is less than 1.2 m, then the edge line should be removed or, as a minimum, be allowed to wear off. The risk is that cyclists may attempt to ride in the space provided by the edge line although it is less than 1.2 m in width. Cyclists should not be encouraged to ride in this constrained space since a cyclist could strike a curb and may “bounce” back into the motor vehicle travel lane. Therefore, curbed roadways with edge lines less than 1.2 m from the face of the curb should not typically be signed or marked as bike lanes. Once the edge lines



have been removed or have worn away, bicycle route signs supplemented by “share the road” sign tabs should be implemented. That said, the use of edge lines 1.2 m to 1.5 m from the curb can serve as an alternative to formal bike lanes and could be combined with time of day parking restrictions to improve conditions for cycling, especially when children are travelling to and from school and peak commuting hours.

The figure below illustrates a typical urban road cross-section standard modified to accommodate bike lanes. The width and number of lanes, distance between the curb and sidewalk and number of sidewalks (one side or both sides) will vary depending on location.

Figure 5.11 – Example of a Road Cross Section with Bike Lane





Bike Lanes with On-street Parking

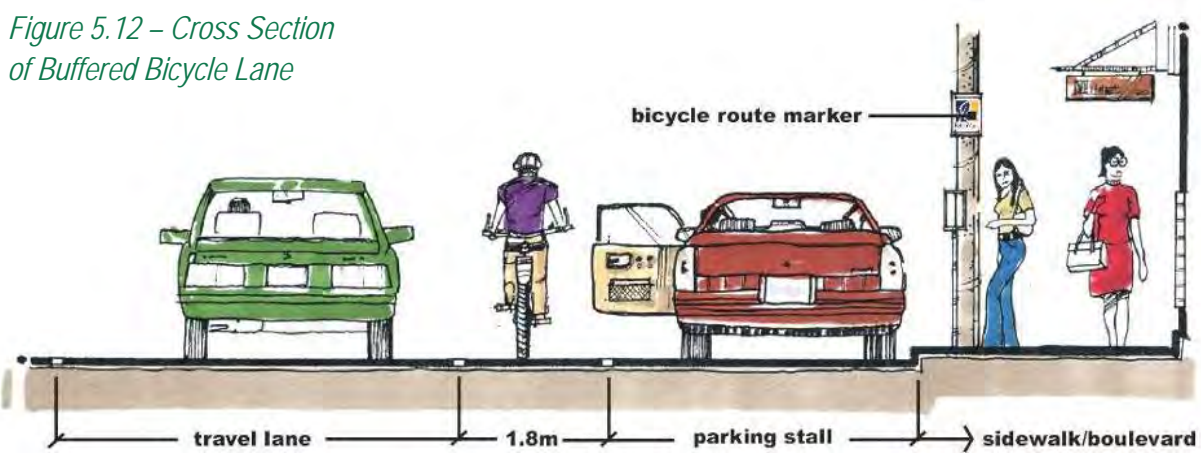
Bike lanes on roads with on-street parking are located to the left of and adjacent to parked vehicles along the curb. Designing this type of cycling facility must take into consideration the potential hazard to cyclists of car doors opening into the travelled portion of the bike lane and impacting a cyclist (“dooring”). In order to allow clearance for vehicle doors, and to minimize collisions with cyclists, the combined bicycle/parking lane should be a minimum of 4.0 m wide. This width for example, allows for a 1.8 m bike lane and a 2.2 m wide curb side-parking stall. The extra width added to the typical 2.0 m wide parking stall provides space for the opening of car doors, and encourages cyclists to travel a safe distance from the parked vehicles. Figure 5.13 provides an illustration of bike lanes adjacent to on-street parking. As an alternative, the width of the bike lane may be reduced to 1.5 m if the parking aisle is greater than 2.4 m wide. Bike lanes on roads with on-street parking should be considered in commercial and residential areas where the demand for and turnover of parking is high, and where commercial and residential property owners may not accept the reduction or prohibition of on-street parking.



Figure 5.13 – Typical Bicycle Lane with On-Street Parking

Where it is not feasible to install dedicated bike lanes, the feasibility of implementing a signed bicycle route (with or without edge lines) or an in-boulevard multi-use trail should be evaluated. Other route alignments may also need to be considered. Where the road right-of-way or other factors limit the opportunity to provide parking bays, standard on-street curb parking should be assumed. For both applications, the desired width of the parking lane should be a minimum of 2.2 m, with the adjacent bike lane 1.8 m.

Figure 5.12 – Cross Section of Buffered Bicycle Lane





5.3.2 Off-Road Routes

Active Transportation Pathways within the Road Right-of-Way

Multi-use boulevard trails (or in-boulevard trails) are bi-directional off-road trails that are located within the boulevard of a road right-of-way and parallel to motor vehicle travel lanes. They are typically designed for a wide range of users including pedestrians, cyclists, and in-line skaters. A schematic illustration of a street cross-section with a multi-use boulevard trail is provided in Figure 5.14.

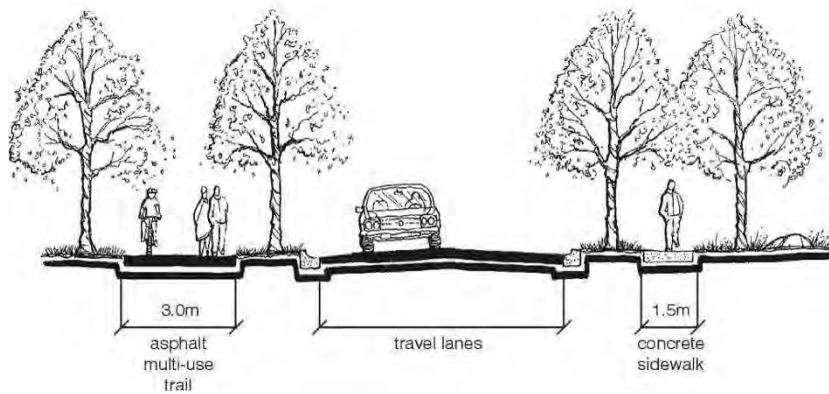


Figure 5.14 – Multi-use Boulevard Trail

Although constructed within the road right-of-way, in-boulevard multi-use trails are separated from regular motor vehicle travel lanes through either a change in roadway elevation (a boulevard trail is usually placed at the same height as a sidewalk) and / or by barriers or medians. Motorists may prefer in-boulevard trails because they move cyclists off of the roadway, however pedestrians may be concerned that faster moving bicycle traffic is located in a space that is traditionally reserved for walking.

There are also cyclists who are uncomfortable operating in traffic that believe in-boulevard trails provide increased safety as cyclists are removed from the motor vehicle traffic stream on a roadway. However, safety professionals and experienced cyclists tend to disagree and collision statistics suggest that cyclists using boulevard trails are more frequently involved in bicycle/motor-vehicle collisions at intersections compared to cyclists riding on road.

It is suggested that only when it has been determined that on-road improvements are not feasible along arterial streets, or when a primarily multi-use trail facility is preferred by a municipality over on-road bicycle lanes with sidewalks for pedestrians, that an in-boulevard multi-use trail be considered. To assist in making the decision regarding facility type the following criteria should be considered:

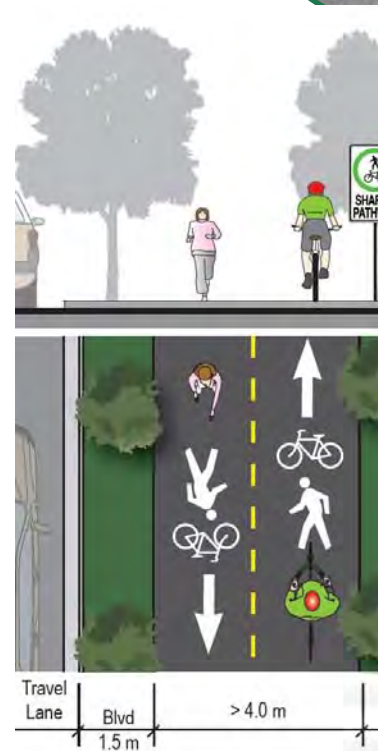


Figure 5.15 – Cross Section of Multi-use Pathways within the Road Right-of-Way





Available Rights-of-Way

- To accommodate the minimum standard for an in-boulevard multi-use trail, there should be at least 6 m of available right-of-way beyond the edge of the road/back of curb to accommodate a minimum 1.5m setback from the edge of road/back of curb, a minimum 1.0m clear zone free from obstructions on both sides of the trail, and a 3.0 to 3.5 m wide trail.

Number of Street and Driveway Intersections

- Studies show that cyclists who ride on multi-use trails incur 1.8 times greater risk of being involved in a collision with a motor vehicle than those who ride on a roadway. The risk increases for path users who are traveling against traffic – they have been found to be at 4.5 times the risk as right-way trail travelers because motor vehicle operators are typically not looking for cyclists or other traffic off of the roadway and / or coming from the opposite direction. For this reason, in-boulevard multi-use trails should not be considered when there are frequent intersections. The following thresholds are suggested - more than 12 residential driveways, 6 commercial drives/minor streets, or 3 major street intersections per kilometre. Beyond these thresholds a cyclist would encounter more than 1 driveway every 30 seconds, or 1 street every minute, and the safety and utility of the path deteriorates dramatically. Commercial strips and other areas with heavy vehicular turning movements can also be a risk management concern.

Additional Cautions Regarding In-Boulevard Multi-Use Trails

In addition to the considerations noted above some of the following additional issues may need to be addressed during detailed design, including

- Providing access to destinations located on the opposite side of the street from the trail,
- Modifying signal timing to permit non-motorized users to move through an intersection,
- Removing obstructions from sight triangles,
- Locating crosswalks at a proper distance from the parallel roadway, and
- Providing curb cuts and transition areas so that cyclists may access the path from both the parallel and intersecting streets.

However, in no instance should development of a multi-use boulevard trail preclude cyclists from using an adjacent roadway. Many cyclists will use the roadway instead of the boulevard trail because they have found the roadway to be more convenient, better maintained, or perceive it to be safer. Some motorists who feel that in all cases cyclists should be on the trail may harass cyclists using the roadway.



Active Transportation Pathways outside of the Road Right-of-Way

Off-road multi-use trails are bi-directional off-road trails located outside of road rights-of-way, typically in parklands, valley lands, utility corridors and along abandoned rail lines. Although cyclists may choose to remain on parallel on-road routes, off-road multi-use trails should be designed to accommodate a variety of user groups. A review of various cycling and trail design guidelines from throughout North America indicates that standards vary depending upon the trail's location, the anticipated number of users and the permitted uses. The preferred width is typically 3.0 m, which allows for bi-directional flow. On popular, heavily traveled multi-use trails, a width of 3.0 m to 4.0 m should be considered to allow for a wider variety and greater number of users. Signage and/or painted centrelines can be used on asphalt trails to identify separate lanes for opposing directions of travel and encourage the practice of keeping to the right side of the trail unless needing to pass. A schematic illustration of a typical off-road multi-use trail is provided in Figure 5.16.

5.3.3 Pedestrian Facilities

Pedestrian facilities in the Active Transportation network include:

- Off-road multi-use spine trails within or outside the road right-of-way as discussed above;
- Secondary trails outside of the road right of way; and
- Sidewalks.

A sidewalk is located within the road right-of-way but separate from the traveled portion of the roadway. In urban areas where the Active Transportation network includes on-road facilities for cyclists (signed routes, paved shoulders, bike lanes etc.) pedestrians will use sidewalks. Sidewalks are preferred on both sides of all streets in urban areas that are designated as Active Transportation routes, where this cannot be achieved a sidewalk should be provided on at least one side for all streets other than cul-de-sacs and laneways. In locations where traffic volume is extremely low, pedestrians may be able to safely share the street with motor vehicles. Sidewalks are typically constructed of concrete, are a minimum width of 1.5 m and are designed primarily for pedestrians. Ideally the sidewalk also includes a buffer zone of setback from the roadway to separate pedestrians from the road.



Figure 5.16 – Cross Section of Multi-use Pathways outside of the Road Right-of-Way



Figure 5.17 - Shared Pathway Signage 0.6 m x 0.3 m



Source: MTO, 1996; TAC, 2012; AASHTO, 2010



5.4 THE RECOMMENDED ACTIVE TRANSPORTATION (AT) NETWORK

Recommendation 5-4:	The active transportation network as identified in the Wellington County Active Transportation Plan should be adopted by the County and local municipalities and consideration should be given to including it as a schedule in future updates of the County and local municipal Official Plans (where local Official Plans exist).	Short-term, ongoing
Recommendation 5-5:	Recognize that the Active Transportation network will change over time as new opportunities offered by unopened road allowances, hydro rights-of-way, existing abandoned rail corridors, open green-space and future roadway improvements become available. To respond to new opportunities changes to the network can be approved at the Director level without the need for an Official Plan Amendment.	Short-term, ongoing

One of the primary objectives of the Wellington County Active Transportation Plan is to identify a continuous and connected active transportation network that provides safe recreational and utilitarian routes which builds upon, connects and supports existing and planned local municipal routes and facilities. Furthermore, the network should minimize risk to users and be accessible and integrated with other facilities (local, bordering municipalities, end of trip, etc.). Map 5-1 illustrates the recommended county-wide active transportation network and includes recommended facility types.

It is important to note that County and local municipal boundaries are not always apparent to cyclists and pedestrians. A municipal or county boundary can sometimes become the “end of the road”, simply because a proper active transportation connection has not been made to the neighbouring County or municipality. In an effort to make seamless connections to surrounding municipalities, all municipal master plans for Wellington County’s neighbours were examined and these are summarized in Table 5.2. Table 5.2 should be read in conjunction with Map 5-1.

Table 5.2: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
1	Kitchener and Walter Bean Trail/Grand Valley Trail	Kathleen St. N	Region of Waterloo Cycling Master Plan
2	Waterloo and Kitchener and Walter Bean Trail/Grand Valley Trail	Grand Valley Trail	Grand Valley Trail Association
3	Elmira and Waterloo	Floradale Rd.	Region of Waterloo Cycling Master Plan
4	Guelph	Kissing Bridge Trail/Trans Canada Trail	Region of Waterloo Cycling Master Plan
5	Waterloo	Hergott Rd.	Region of Waterloo Cycling Master Plan



Table 5.2: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
6	Linwood	Manser Rd.	Region of Waterloo Cycling Master Plan
7	Palmerston	Road 157	Consulting Team
8	Drayton	89 Line	Consulting Team
9	Wroxeter and Wingham	County Rd. 87	Consulting Team
10	Bruce County Rail Trail	Fordwich Rd. and Mud Lake Line	Huron County Transportation Demand Management Plan/Consulting Team/Bruce County Rail Trail (Bruce County Planning Department)
11	Durham	Grey County Rd 106	Consulting Team
12	Durham	Grey County Rd 106	Consulting Team
13	Flesherton and Dundalk	County Rd 16	Consulting Team/Southwestern Ontario Recreational Trails Map (http://www.ontariotrailmaps.ca/Sunshine-Country.page)
14	Shelburne and Grand Valley	County Rd 15	Consulting Team
15	Grand Valley	Upper Grand Trailway	Dufferin County Trails and Active Transportation Master Plan Study
16	Grand Valley	County Rd. 19	Dufferin County Trails and Active Transportation Master Plan Study
17	Hillsburgh and Caledon	Grand Valley Trail	Dufferin County Trails and Active Transportation Master Plan Study/Grand Valley Trail Association
18	Hillsburgh and Caledon Trailway	Elora Cataract Trailway/Trans Canada Trail	Dufferin County Trails and Active Transportation Master Plan Study
19	Belwood and Fergus	Elora Cataract Trailway/Trans Canada Trail	Dufferin County Trails and Active Transportation Master Plan Study
20	Belwood	Grand Valley Trail	Grand Valley Trail Association
21	Grand Valley	County Rd 24/25	Dufferin County Trails and Active Transportation Master Plan Study
22	Orangeville	Winston Churchill Blvd.	Dufferin County Trails and Active Transportation Master Plan Study
23	Alton	Highpoint Sideroad	Peel Region Active Transportation Plan (Draft)/Grand Valley Trail Association/Town of Caledon Trails Map
24	Forks of the Credit Provincial Park and Caledon Trailway	Elora Cataract Trailway	Peel Region Active Transportation Plan (Draft)/Town of Caledon Trails Map
25	Belfountain	County Rd. 52/Bush Street	Consulting Team
26	Terra Cotta, Caledon Trailway and Georgetown	Winston Churchill Blvd.	Town of Halton Hills Cycling Master Plan
27	Georgetown	Ninth Line	Town of Halton Hills Cycling Master Plan
28	Limehouse, Georgetown	Fifth Line	Town of Halton Hills Cycling Master Plan



Table 5.2: Active Transportation Network Connections to Surrounding Municipalities

Number on Map EX-1	Connection To	Trail/Road Name	Source
29	Limehouse, Milton	Hydro corridor	Town of Halton Hills Cycling Master Plan (this applies to sections of the corridor owned by the Town of Halton Hills)
30	Acton	Third Line/Churchill Rd.	Town of Halton Hills Cycling Master Plan
31	Acton	Dublin Line	Town of Halton Hills Cycling Master Plan
32	Guelph, Campbellville, Milton and Burlington	County Rd. 29 and 1 st Line Nassagaweya	Town of Milton Trails Master Plan
33	Eden Mills, Campbellville Milton and Burlington Guelph Radial Trail and Bruce Trail	Arkell Rd and County Rd. 29 and 1 st Line Nassagaweya,	Consulting Team/Town of Milton Trails Master Plan
34	Acton and Georgetown	County Rd 34 /Sideroad 20	Town of Milton Trails Master Plan
35	Georgetown and Milton	County Rd 36 /Concession Rd 11 /15 Sideroad	Town of Milton Trails Master Plan
36	Mountsberg Conservation Area and Burlington	Leslie Rd. West and Millborough Line	City of Hamilton Cycling Network Strategy
37	Burlington	Concession Rd. 9 and Centre Rd.	City of Hamilton Cycling Network Strategy
38	Hamilton and Lafarge Trail, Fletcher Creek Conservation Area and Valens Conservation Area (Hamilton Region Conservation Authority)	Concession 7	Consulting Team
39	Cambridge	Village Rd and Clyde Rd.	Region of Waterloo Cycling Master Plan
40	Cambridge, Irish Creek Wetland (GRCA)	Townline Rd.	Region of Waterloo Cycling Master Plan
41	Cambridge	Townline Rd.	Region of Waterloo Cycling Master Plan
42	Cambridge	Speed River Trail	Guelph Hiking Trail Club
43	Cambridge	Fife Rd. Township Rd 16 (Woolwich) Rd	Region of Waterloo Cycling Master Plan
44	Maryhill and Kitchener	County Rd. 30 and Maryhill Rd.	Consulting Team
45	Maryhill and Kitchener	County Rd. 51 and Crowsfoot Rd. (Woolwich Twp.)	Region of Waterloo Cycling Master Plan
46	Elmira	Kissing Bridge Trail/Trans Canada Trail	Region of Waterloo Cycling Master Plan



The recommended County-wide active transportation is illustrated in Map 5-1 and enlargements of each area municipality are shown in Maps 5-2 through 5-8:

- Township of Centre Wellington (Map 5-2);
- Township of Mapleton (Map 5-5);
- Town of Erin (Map 5-3);
- Town of Minto (Map 5-6);
- Township of Guelph-Eramosa (Map 5-4);
- Township of Puslinch (Map 5-7); and
- Township of Wellington North (Map 5-8).

When complete after the 20 plus year build-out the proposed Active Transportation network will include just over 1000km of facilities, with approximately 30% of the entire network being off-road and the remaining 70% being on-road. Table 5.3 provides a summary of the network by facility type and phase. Phasing is discussed in greater detail in Chapter 6.

Table EX.2: Network Summary- Facility Lengths (km) by Phase and by Facility Type ⁽¹⁾					
	Existing	Short Term (Years 1-10)	Mid Term (Years 11-20)	Long Term (Beyond Year 20)	Total by Facility Type
Multi Use Trail (Spine Off-Road Route)	93.0	11.6	43.4	10.2	158.2
Secondary Off-Road Route ⁽²⁾	136.8	0	0	0	136.8
Signed Route	0.5	138.4	183.8	101.9	424.6
Signed Route with Sharrows	0	5.1	12.4	7.8	25.3
Paved Shoulder	27.0	43.4	93.9	102.2	266.5
Bike Lane	0	0	0.8	0	0.8
Total by Phase	257.3	198.5	334.3	222.1	
Grand Total					1012.2

Notes


























(1) Facility lengths are measured to the nearest 0.1km

(2) Includes existing Secondary off-road trails only. No Secondary off-road trails are proposed in the Wellington County Active Transportation Plan. Proposed/future Secondary off-road trails are to be determined through local municipal Trail Master Plans

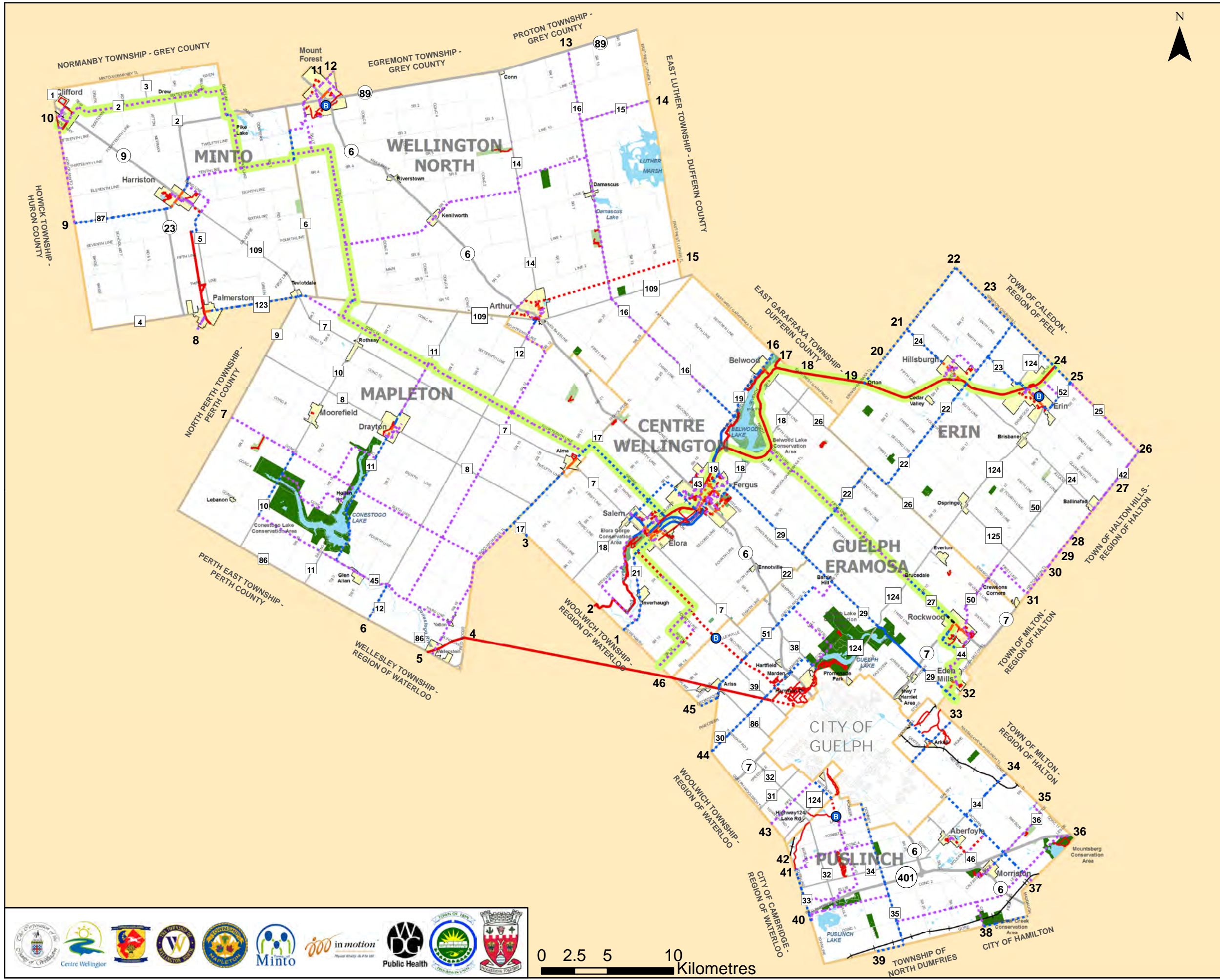
MAP 5.1 NETWORK FACILITY TYPES COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

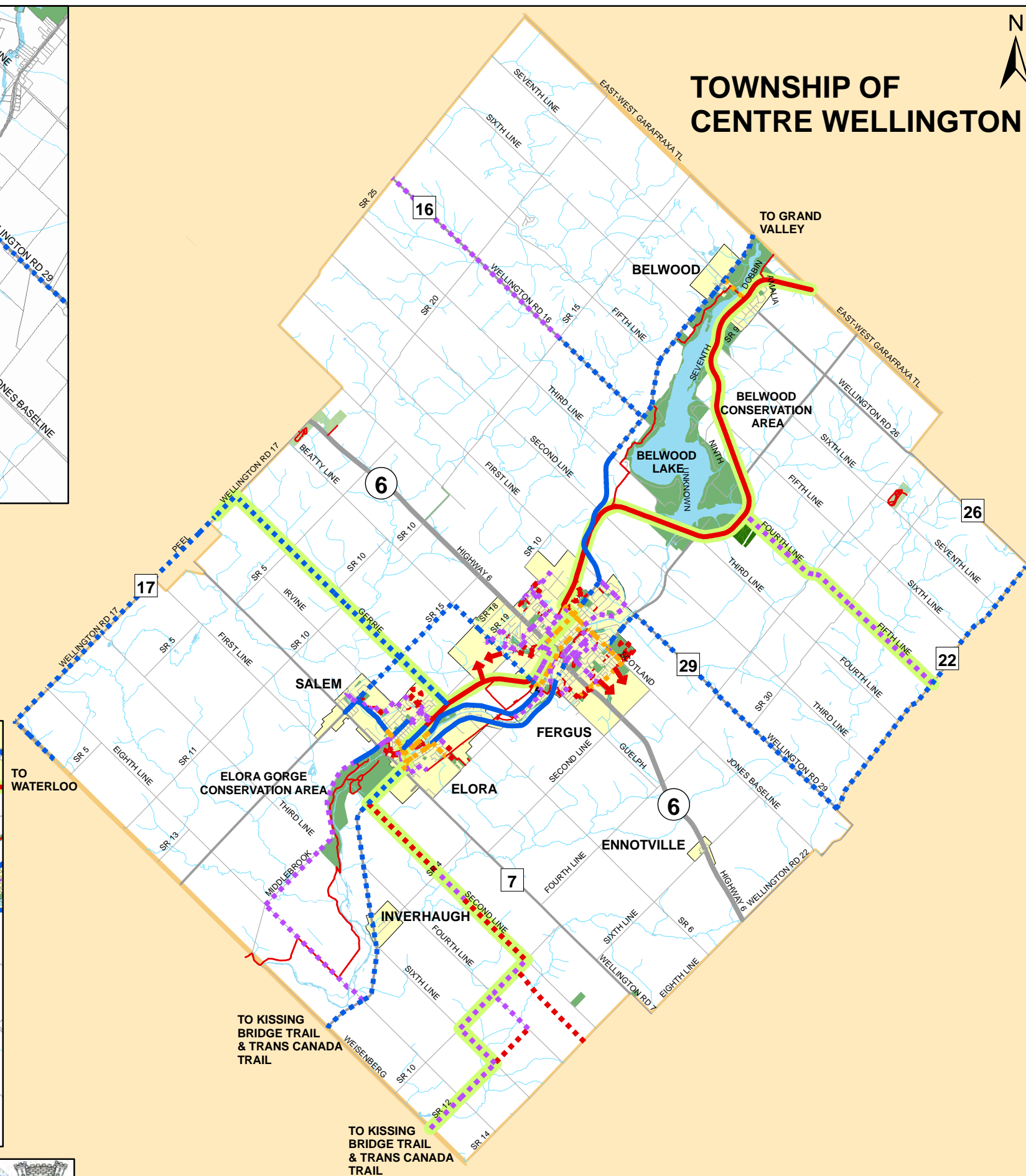
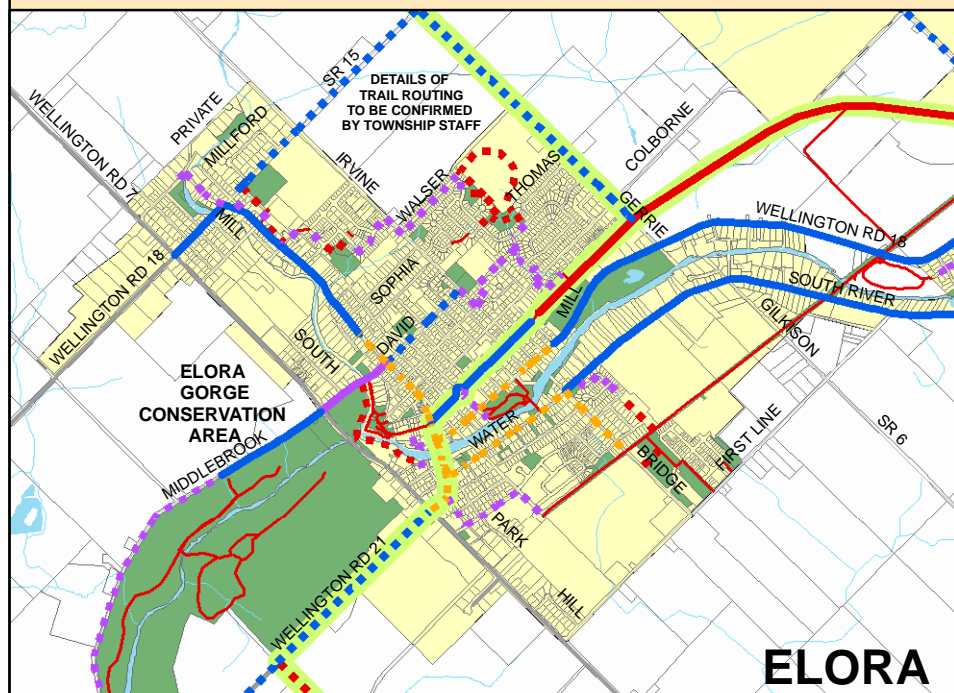
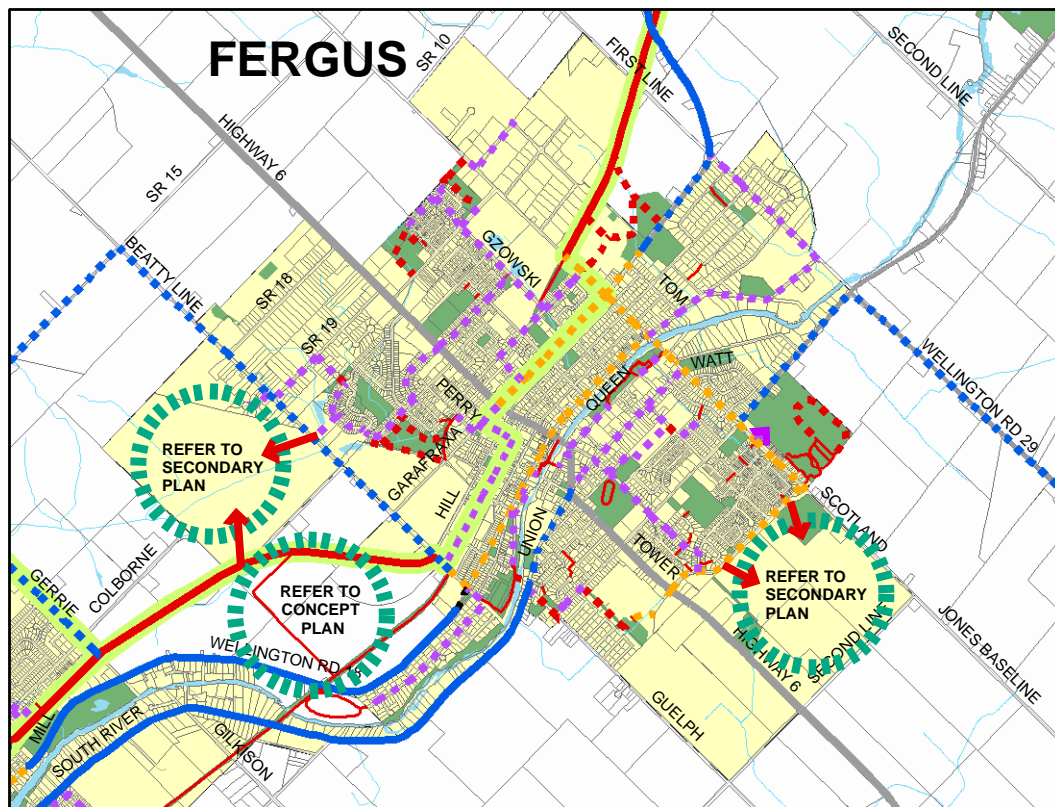


Legend

-  Existing Spine Off-Road Route
-  Proposed Spine Off-Road Route
-  Existing Off-Road Secondary Route
-  Proposed Off-Road Secondary Route
-  Existing Signed Route
-  Proposed Signed Route
-  Existing Paved Shoulder
-  Proposed Paved Shoulder
-  Proposed Signed Route with Sharrows
-  Proposed Bike Lane
-  County Wide Spine Route
-  Proposed Future Connection on Lands in Private Ownership
-  Connections to Adjacent Municipalities
-  Proposed Bridge
-  Rail
-  Local Roads
-  County Roads
-  Provincial Highway / Freeway
-  Streams
-  Lakes and Rivers
-  Parkland
-  County Forests
-  Forests Tracts owned by Conservation Authority or MNR
-  Hamlets / Urban Centres
-  Municipal Boundary

NOTE: For details regarding connections to adjacent municipalities, please refer to Table 5.1.



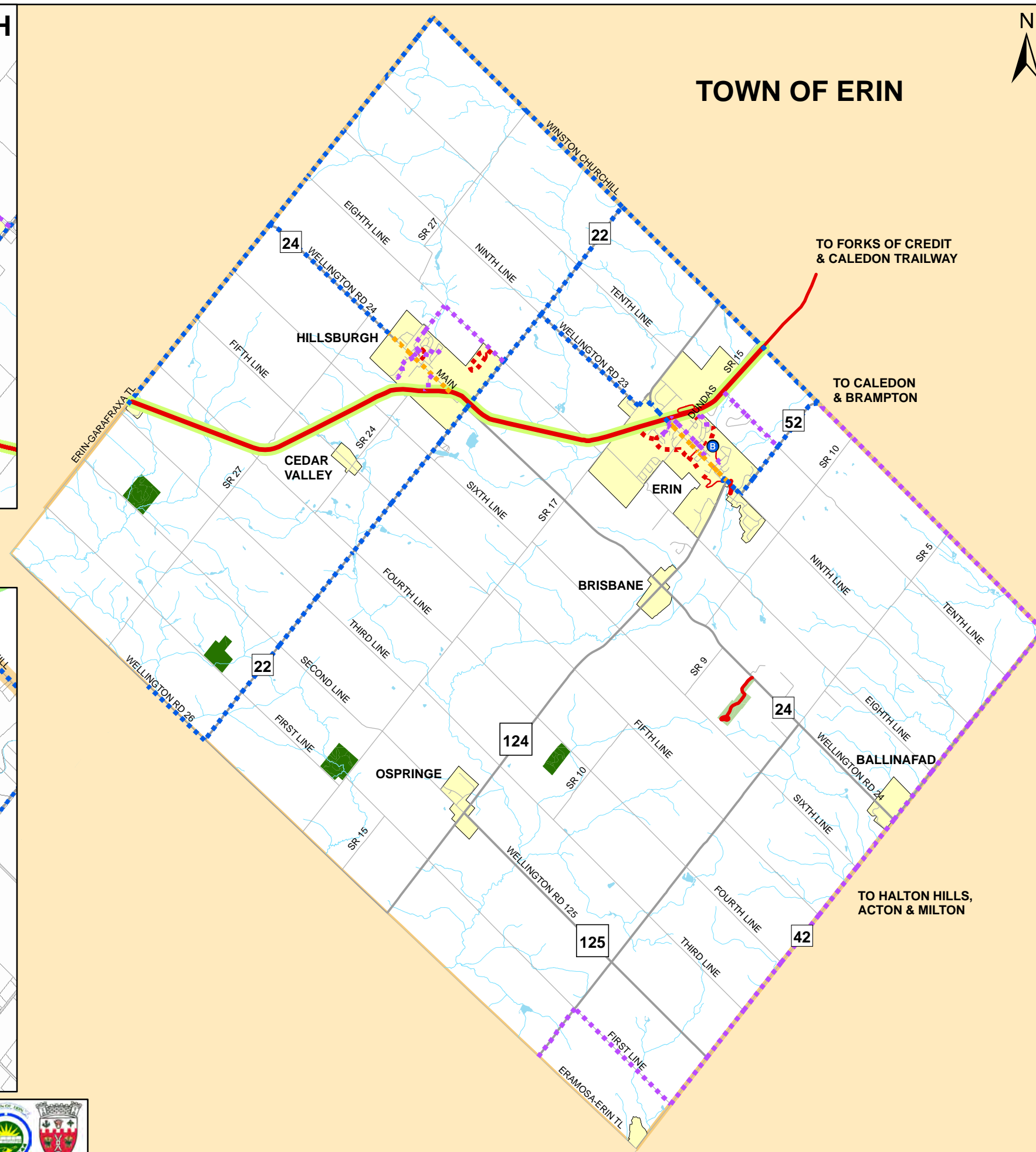
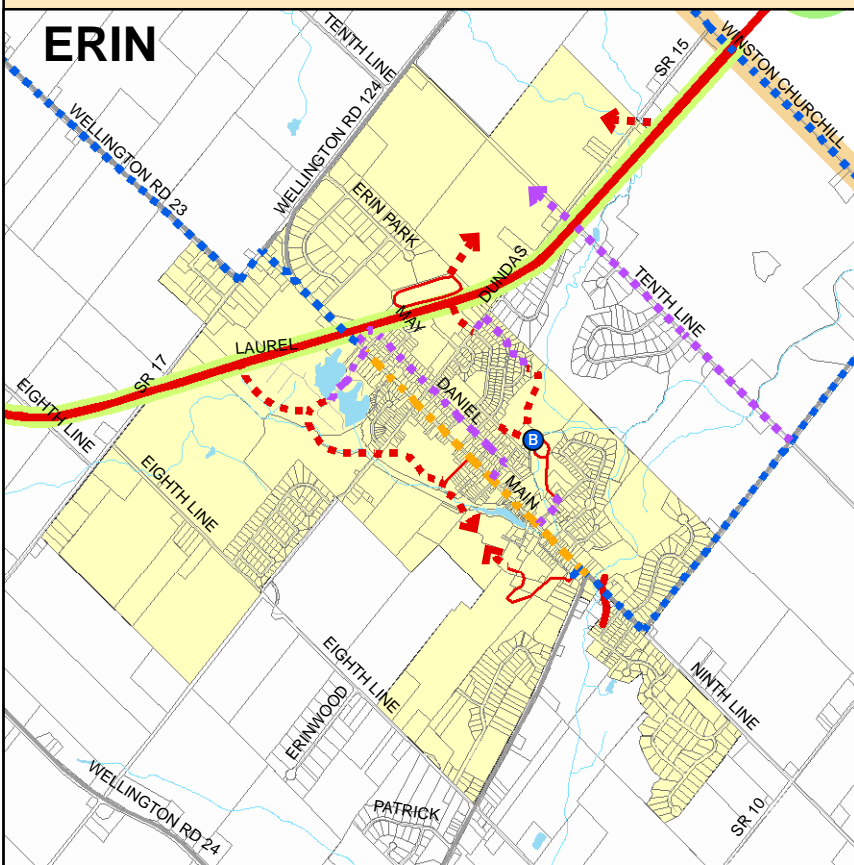
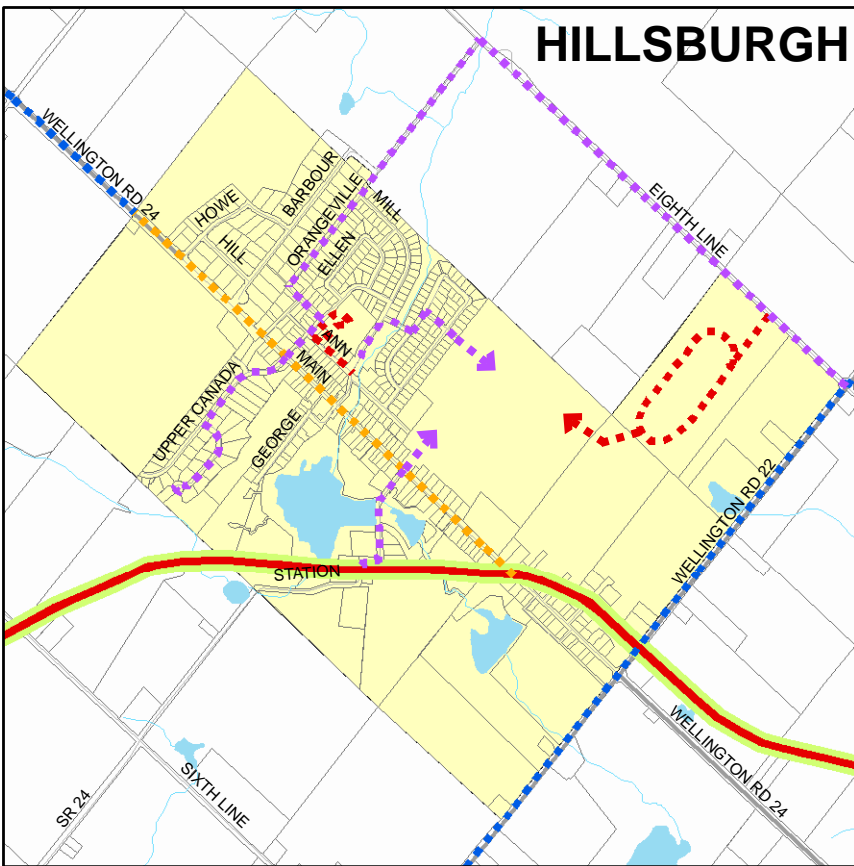


COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP 5.2 CENTRE WELLINGTON FACILITY TYPES (ENLARGEMENTS)

- Legend**
- Existing Spine Off-Road Route
 - Proposed Spine Off-Road Route
 - Existing Off-Road Secondary Route
 - Proposed Off-Road Secondary Route
 - Existing Signed Route
 - Proposed Signed Route
 - Existing Paved Shoulder
 - Proposed Paved Shoulder
 - Proposed Signed Route with Sharrow
 - Proposed Bike Lane
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - County Roads
 - Provincial Highway / Freeway
 - Streams
 - Lakes and Rivers
 - Parkland
 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

SEPTEMBER 2012





COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

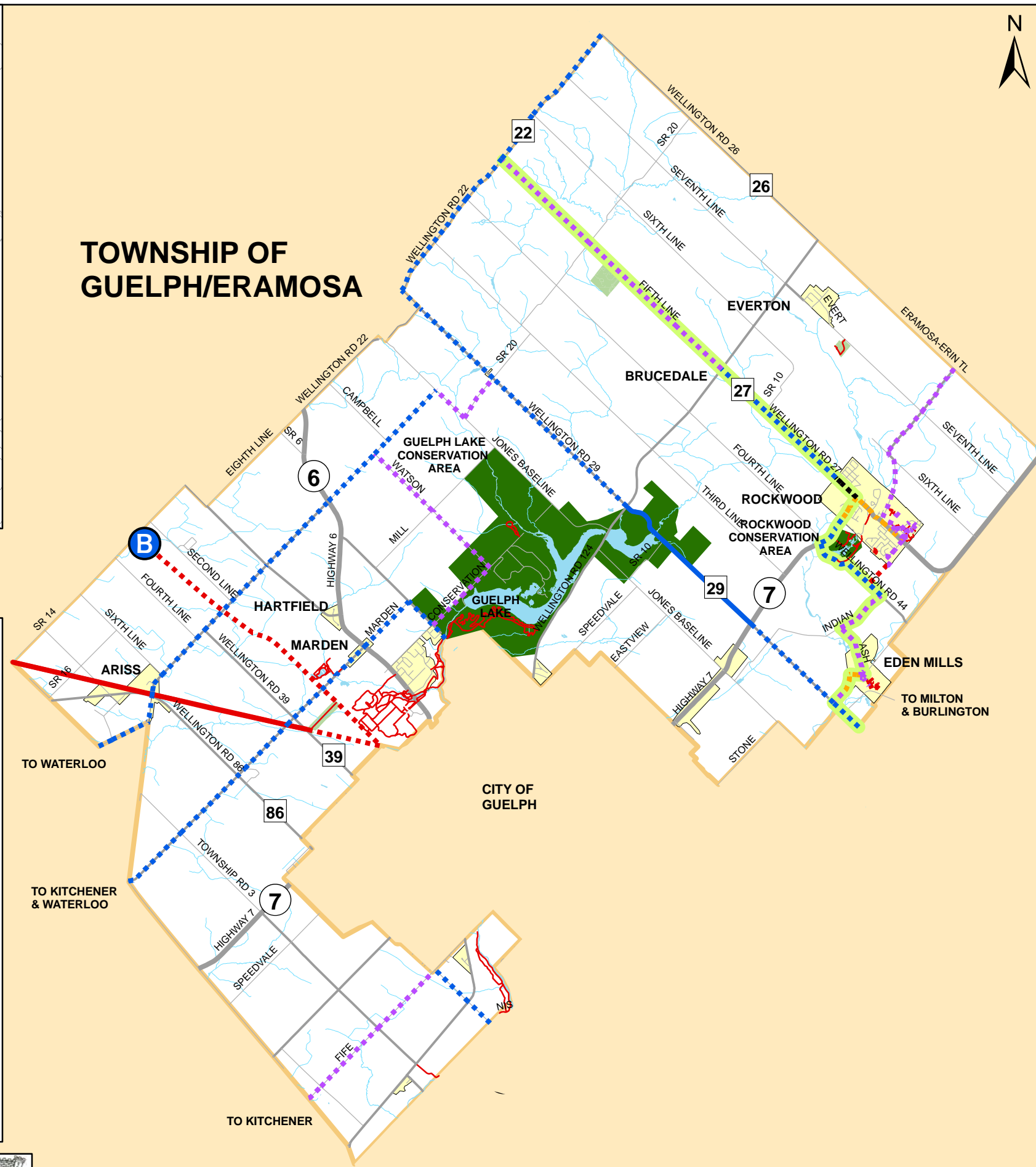
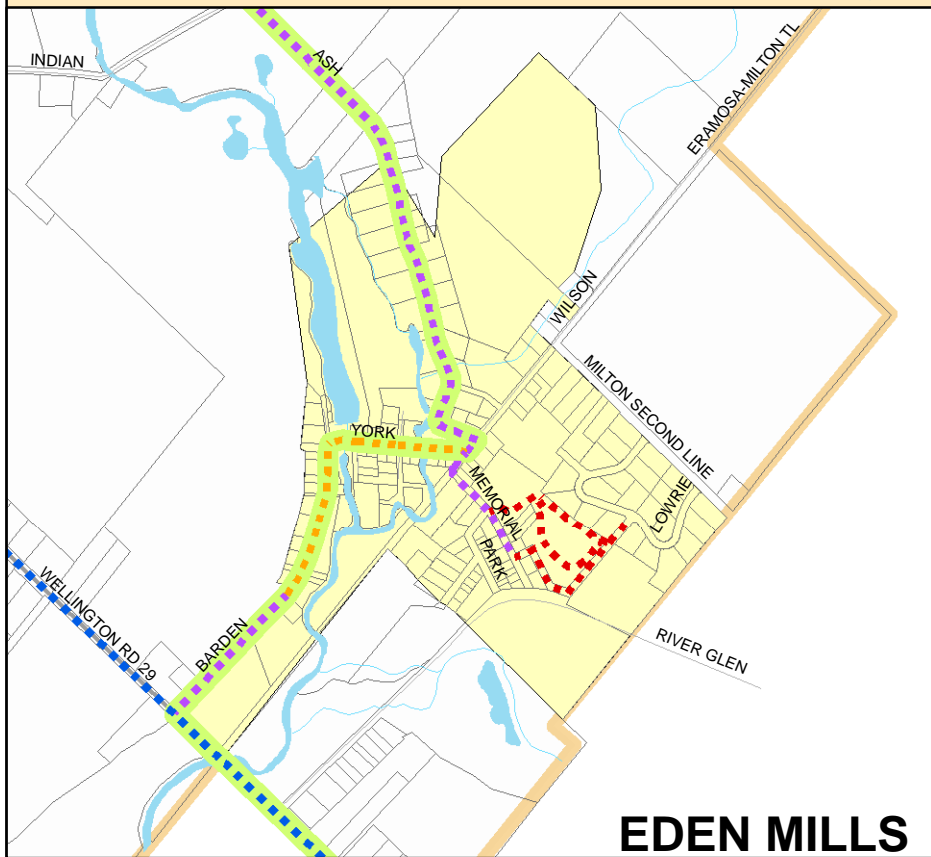
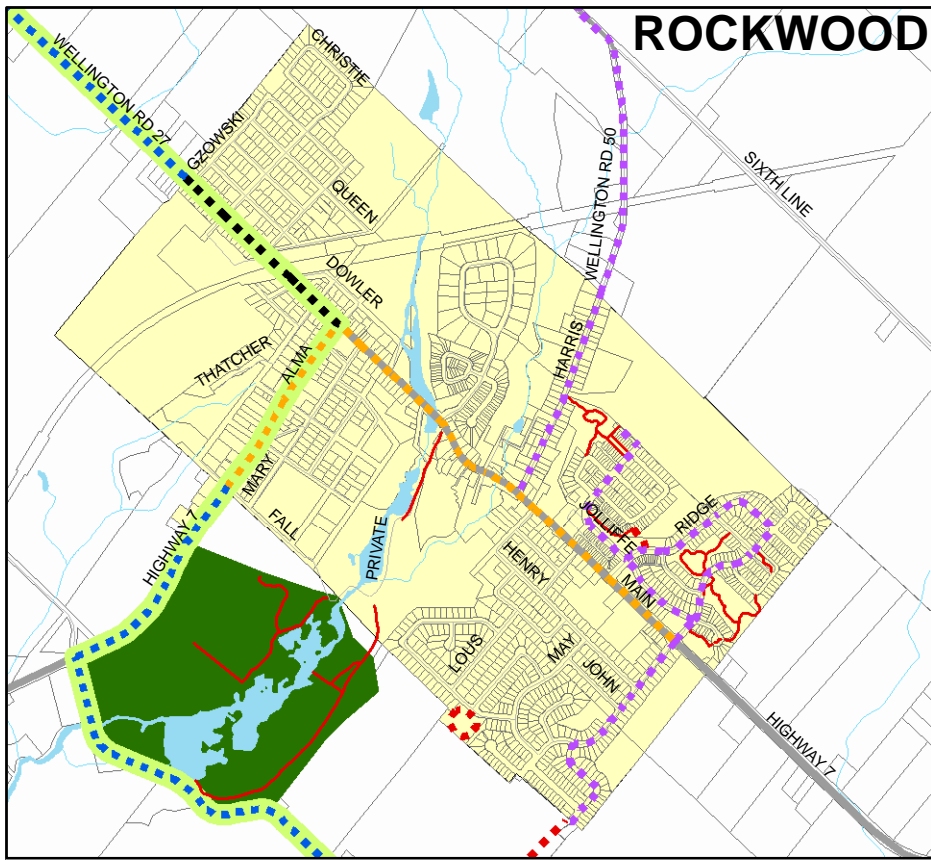
MAP 5.3 - ERIN NETWORK FACILITY TYPES (ENLARGEMENTS)

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

SEPTEMBER 2012





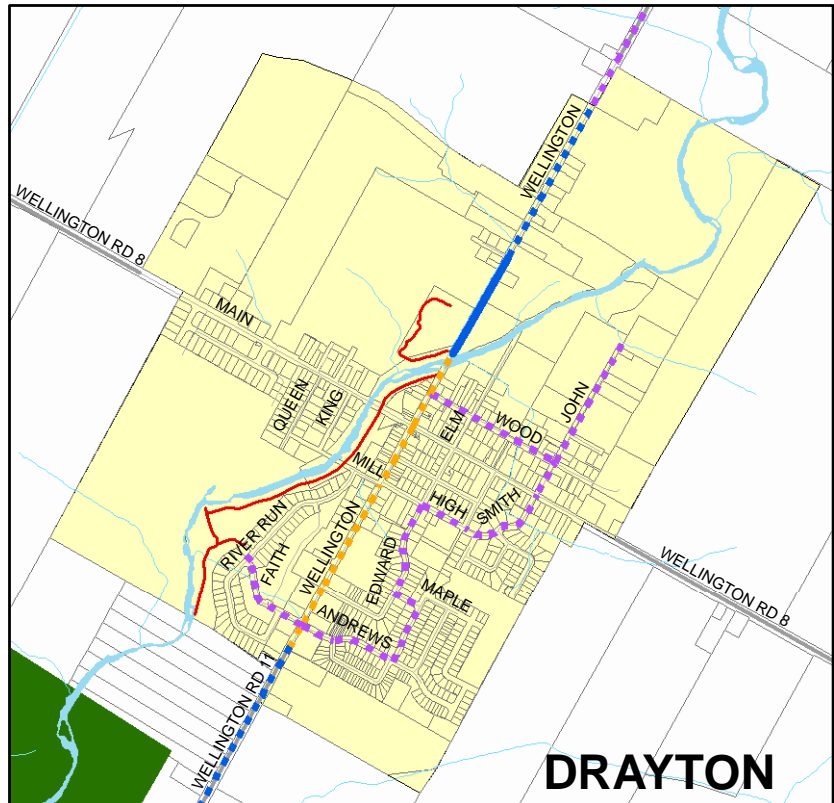
**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION PLAN
MAP 5.4 - GUELPH/ERAMOS
NETWORK FACILITY TYPES
(ENLARGEMENTS)**

Legend

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- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
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- Provincial Highway / Freeway
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- Forests Tracts owned by Conservation Authority or MNR
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- Municipal Boundary

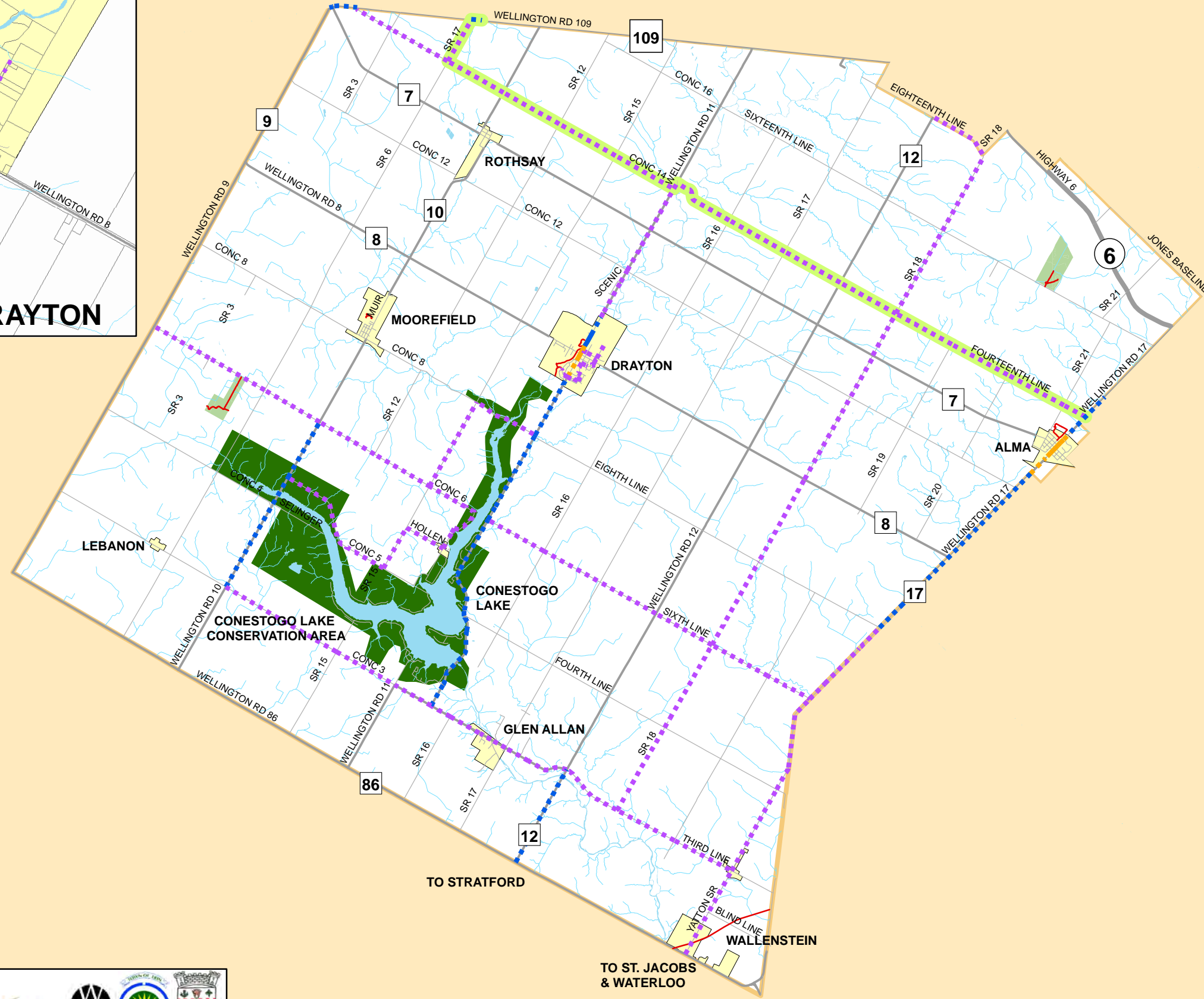
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DRAYTON

TOWNSHIP OF MAPLETON



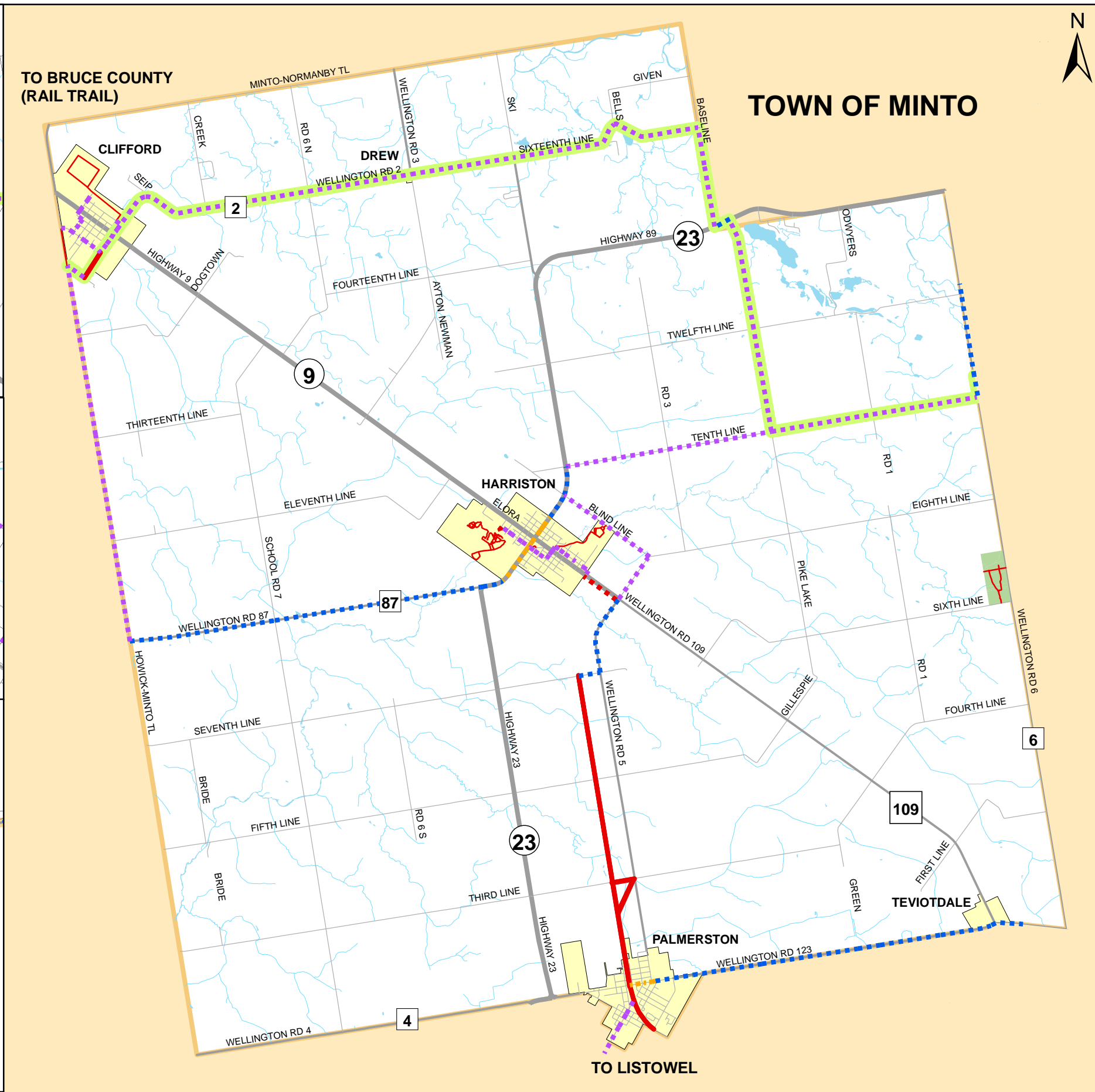
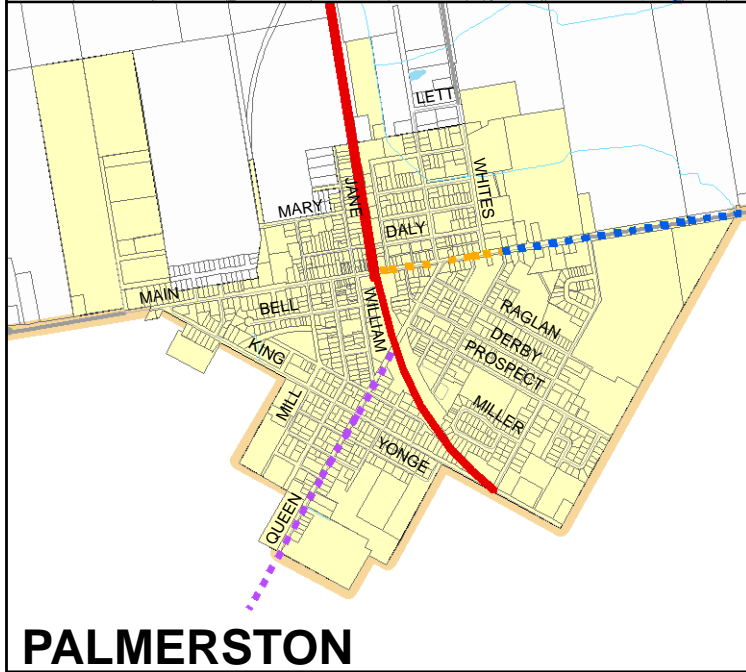
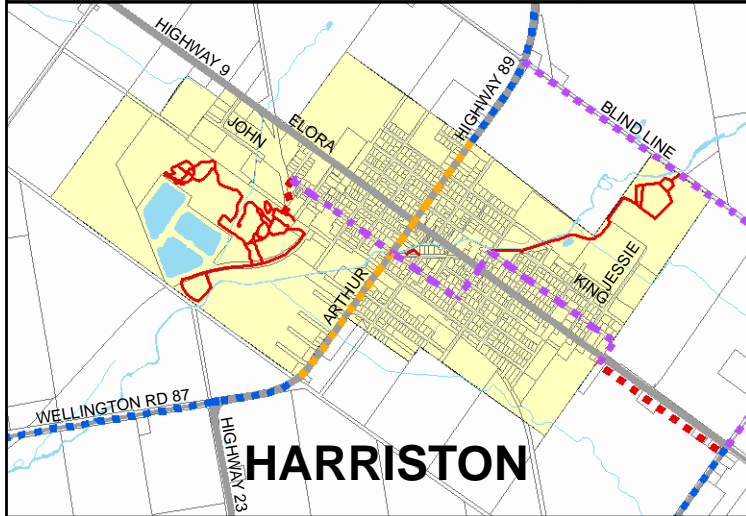
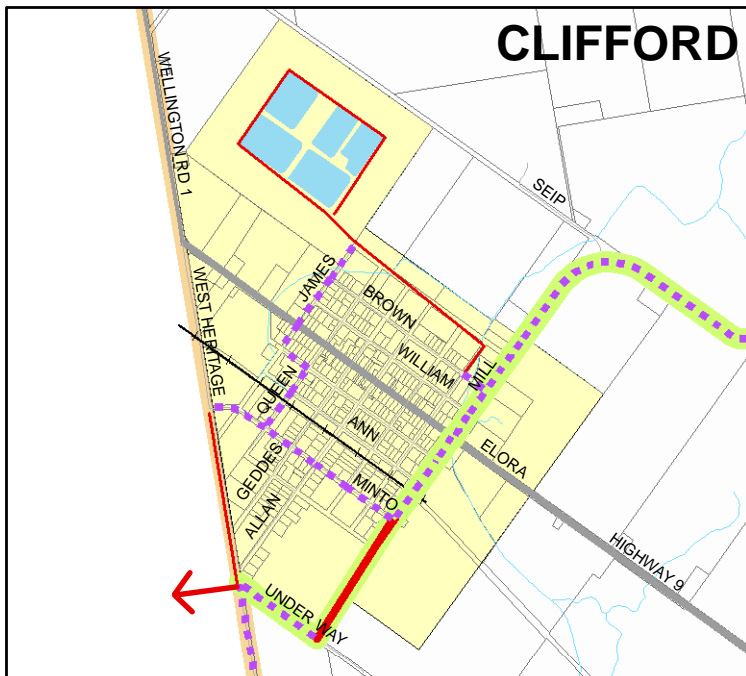
COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP 5.5 - MAPLETON NETWORK FACILITY TYPES (ENLARGEMENTS)

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrow
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
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SEPTEMBER 2012





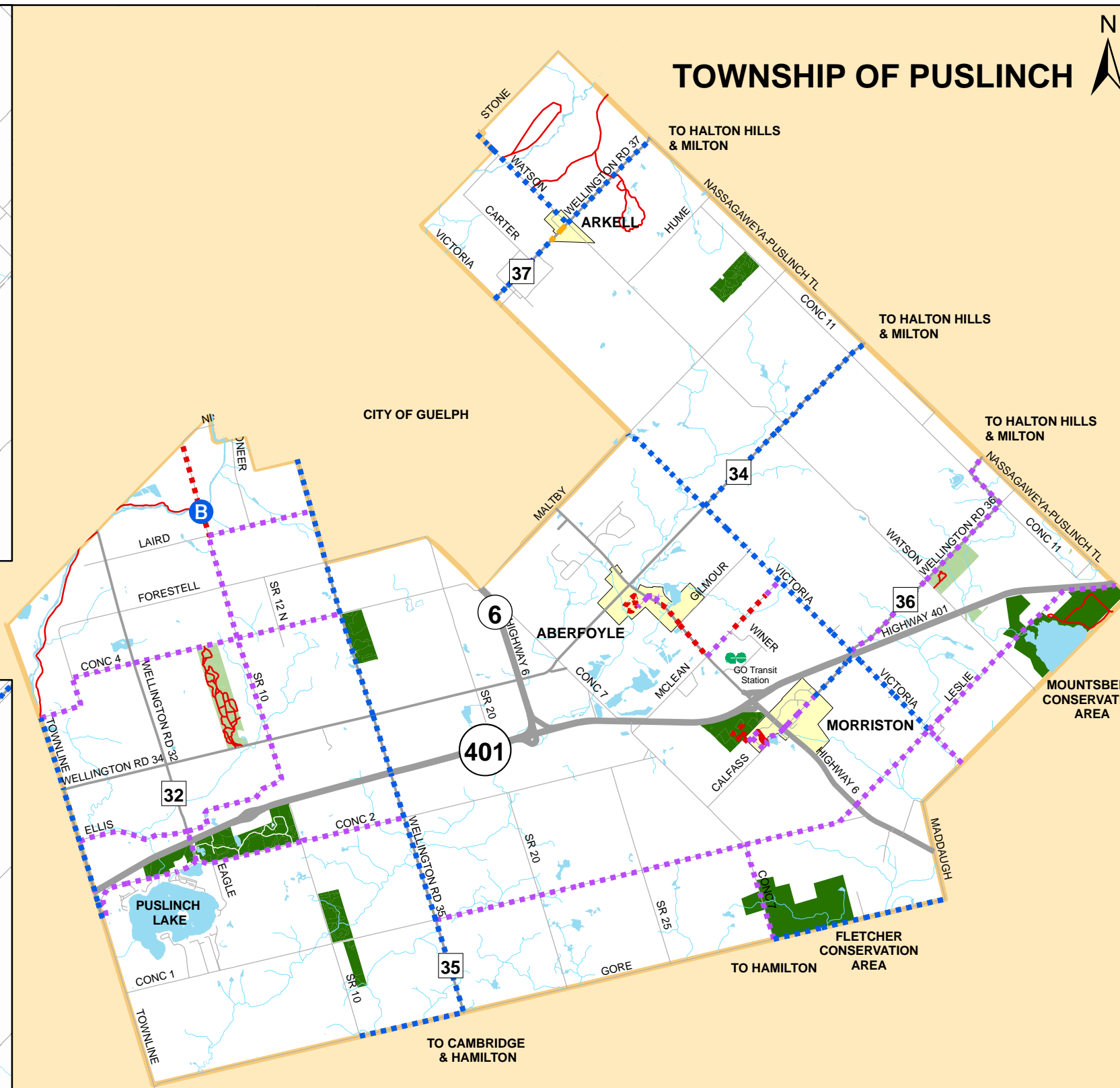
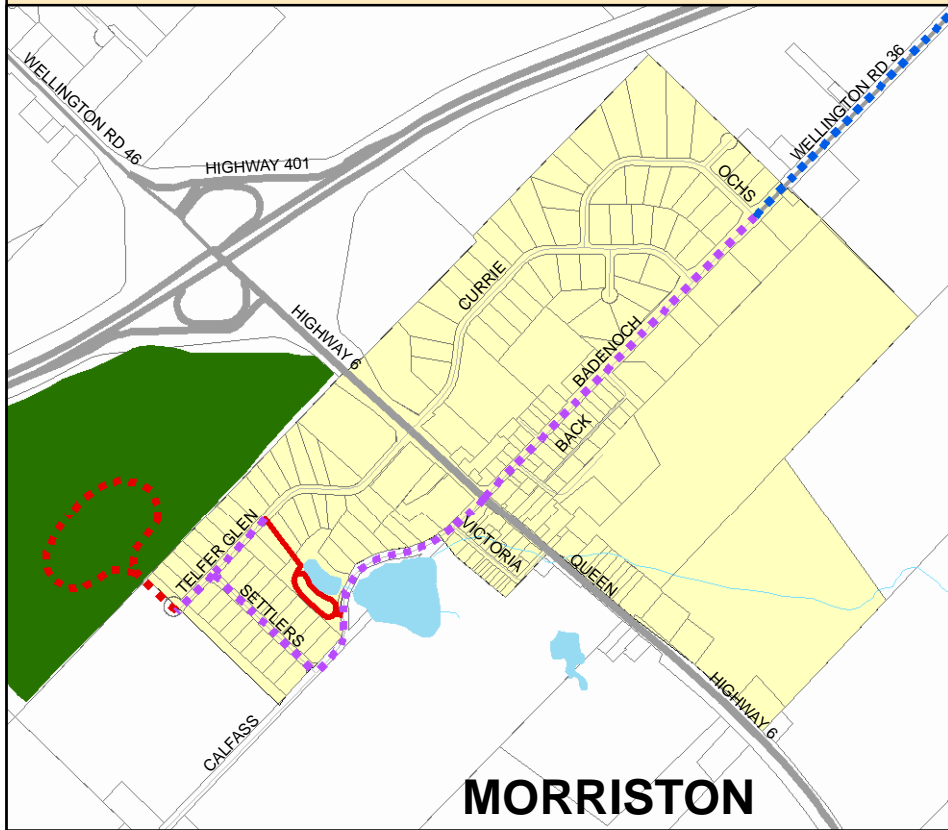
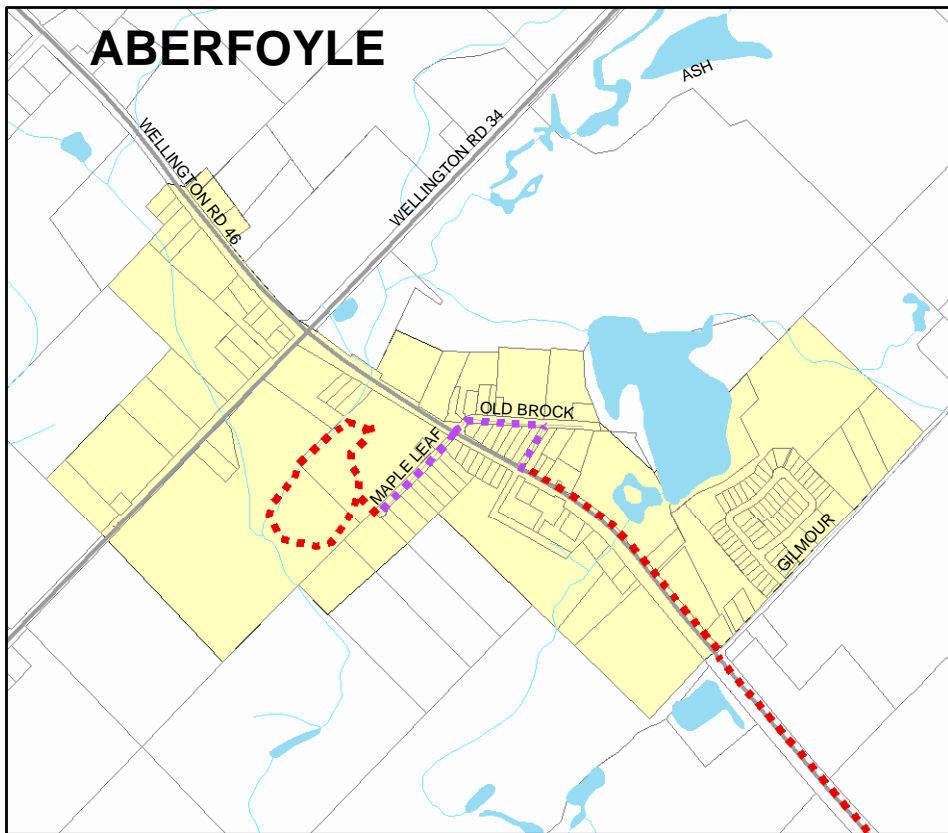
**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION
PLAN
MAP 5.6 - MINTO
NETWORK FACILITY TYPES
(ENLARGEMENTS)**

Legend

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- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

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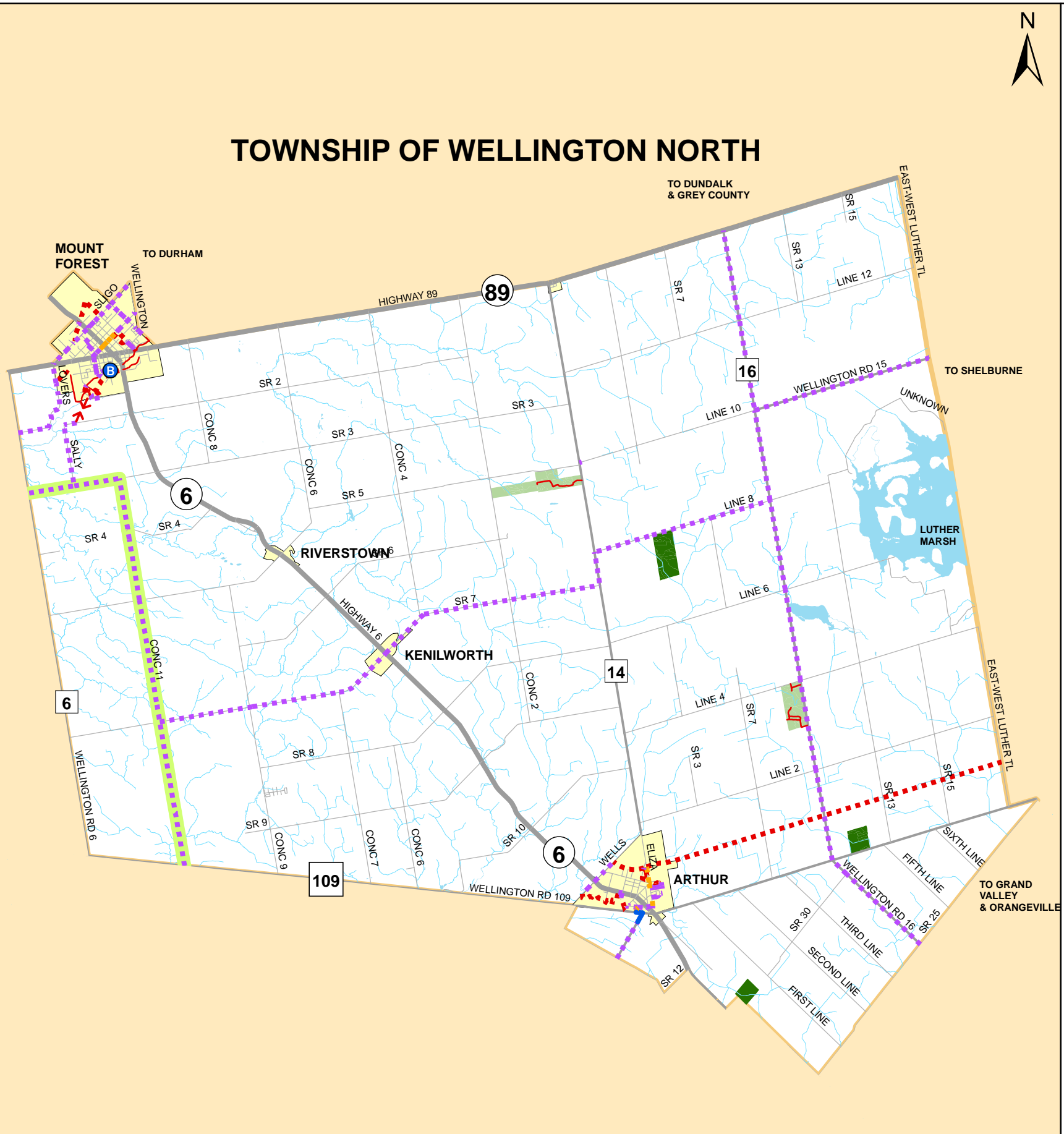
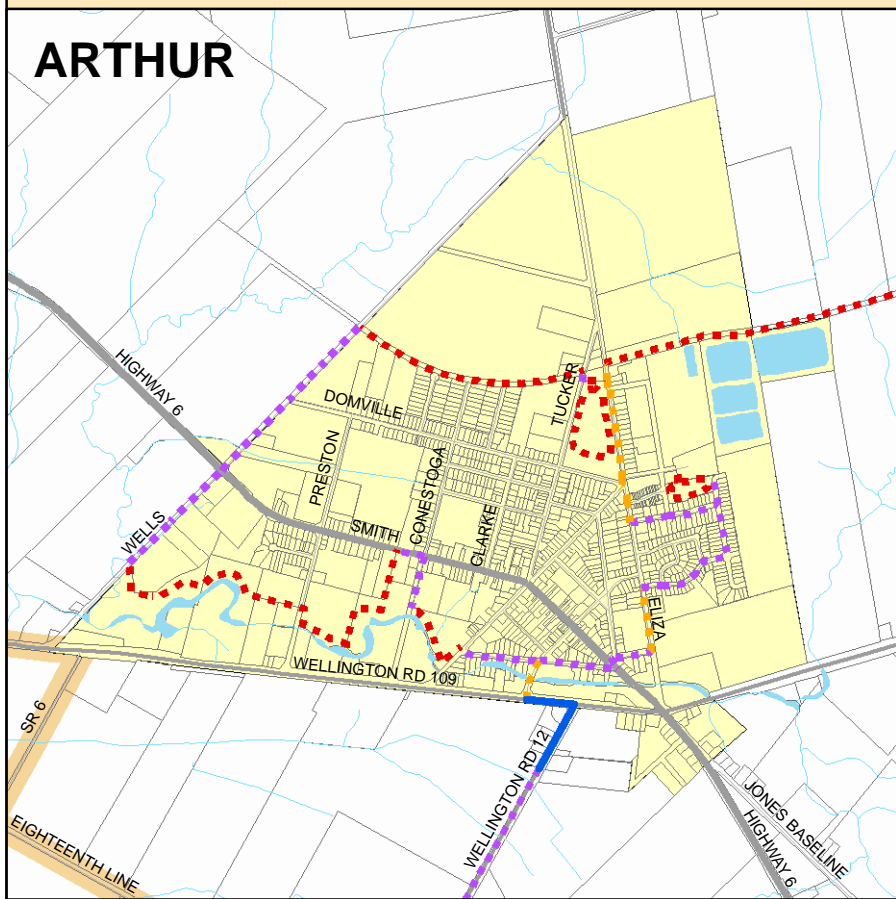
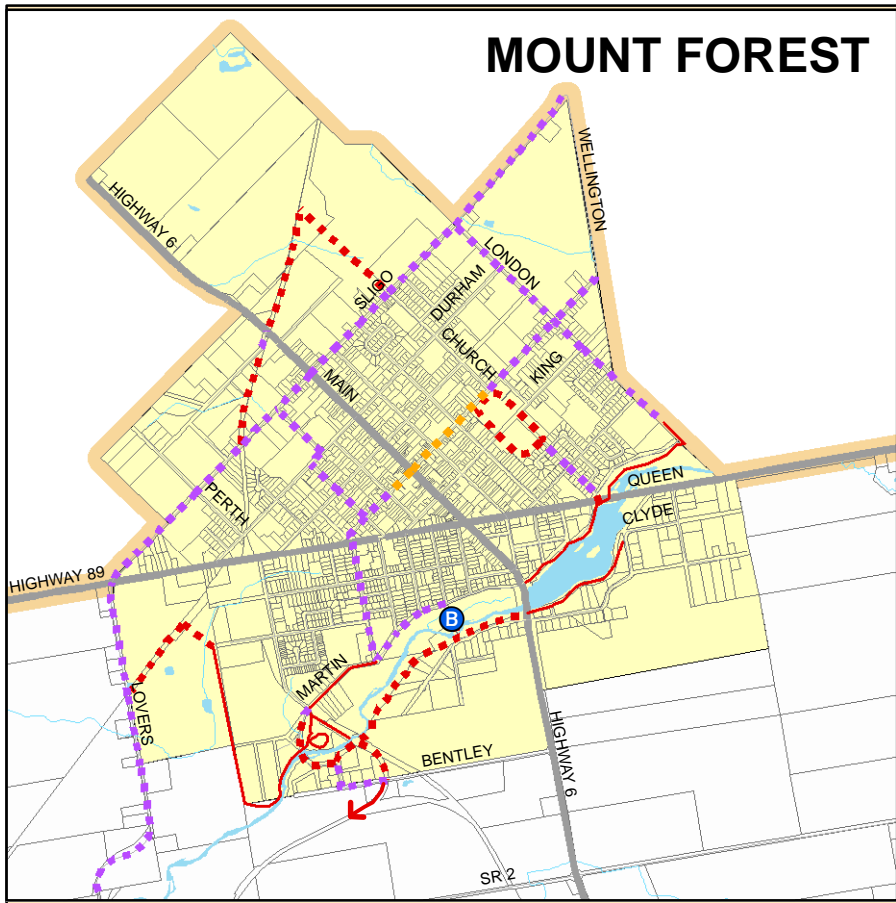
**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION
PLAN
MAP 5.7 - PUSLINCH
NETWORK FACILITY TYPES
(ENLARGEMENTS)**

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
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- Municipal Boundary

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COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

MAP 5.8 - WELLINGTON NORTH FACILITY TYPES (ENLARGEMENTS)

Legend

- Existing Spine Off-Road Route
- Proposed Spine Off-Road Route
- Existing Off-Road Secondary Route
- Proposed Off-Road Secondary Route
- Existing Signed Route
- Proposed Signed Route
- Existing Paved Shoulder
- Proposed Paved Shoulder
- Proposed Signed Route with Sharrows
- Proposed Bike Lane
- County Wide Spine Route
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6.0 IMPLEMENTING THE PLAN

Wellington County's Active Transportation Plan is a blueprint which is intended to guide the decisions made and provide the tools and policies necessary to implement a County-wide active transportation strategy.

The Wellington County Active Transportation Plan is intended to complement and support existing and future local municipal AT and trail plans and initiatives. The proposed infrastructure improvements and additions require a clear implementation strategy that prioritizes routes for both new construction and rehabilitation. However, it is important to keep in mind that the Active Transportation Plan is not only an infrastructure plan. It also includes a number of recommendations and policies to be considered for adoption by the County in partnership with the local area municipalities and other key stakeholders such as Wellington-Dufferin-Guelph Public Health and *WDG in motion*. These recommendations are to be used to promote safe active transportation in Wellington County and to recognize and promote the economic, health and quality of life benefits that this form of transportation and recreation can offer. The proposed network is supported and complemented by a number of outreach initiatives and suggested policies and recommendations that can be used to encourage active transportation and trail development and use throughout Wellington County.

This chapter outlines a suggested strategy for implementing the recommendations of Wellington County's Active Transportation Plan. The recommended implementation strategy includes a 20+ year implementation strategy consisting of three phases:

- Short Term (Years 0 – 10);
- Medium Term (Years 11 – 20); and
- Long Term (Beyond Year 20).

Please note that...

For each of the recommendations, a proposed timing (i.e. Phase 1 – short term, Phase 2 – medium-term and Phase 3 – long term) has been identified. However, many of the recommendations and initiatives are expected to take a number of years to implement (or will be ongoing). Therefore, the schedule for implementation is expected to be adjusted from time to time to accommodate available budgets, Council and staff priorities and partnership opportunities.

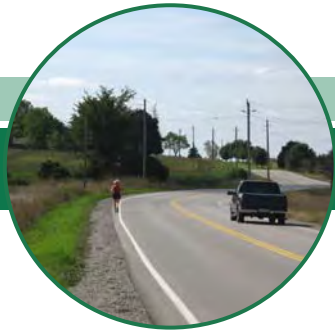


Included in this chapter are the following:

- A 5-step implementation process that takes the routes from the master plan level through to design and post-construction monitoring;
- A set of maps showing recommended phasing for each route in the AT network;
- A list of implementation priorities for the AT network at the county-wide level and within each of the local area municipalities;
- An order of magnitude opinion of cost to implement the network, broken out by facility type and phase;
- Strategies regarding end-of-trip facilities, maintenance and risk management;
- A network management tool using the GIS data created as part of the Wellington County AT Master Plan;
- Community Design Strategies that support Active Transportation;
- Suggested strategies and initiatives for outreach, education and promotion;
- Funding and Partnership strategies; and
- Suggested performance measures against which the progress of the implementation of the Plan can be tracked.

6.1 THE IMPLEMENTATION STRATEGY

Recommendation 6-1:	The County should adopt the 20+ year active transportation network implementation plan and use it to guide the implementation of the network over time.	Short-term, ongoing
Recommendation 6-2:	The County should take the lead in establishing an Inter-Municipal Active Transportation Working Group including but not limited to staff representatives from the County, local municipalities, Wellington-Dufferin-Guelph Public Health and other key agencies as determined.	Short-term
Recommendation 6-3	The County should take the lead in establishing an Active Transportation Citizen's Advisory Committee including but not limited to representatives from local advocacy groups, citizens-at-large, local businesses and other key groups as determined.	Short-term
Recommendation 6-4:	The County should coordinate the active transportation network implementation with the County's Engineering Services Department Five-Year Road Rehabilitation Program.	Short-term



The implementation of Wellington County's Active Transportation Plan will be accomplished through both short and long-term actions and partnerships. Short-term actions include County and Local Councils adopting the Active Transportation Plan and the Plan should be referred to in the next update of the County Official Plan as the source document for policies and actions related to planning, designing, maintaining and promoting the active transportation system in Wellington County.

To facilitate the implementation of the Active Transportation Plan it is recommended that the current Active Transportation Advisory Committee should be enhanced so that the communication and coordination that took place during the development of the Plan can continue into the future. Specifically, it is proposed that the County explore the potential for two groups of representatives to provide input and guide the future development of active transportation in Wellington County. The structure and composition of the committees would be determined by the County.

1. Inter-Municipal Active Transportation Working Group:

The Inter-Municipal Active Transportation Working Group would include the same cross section of representatives established for the development of the Active Transportation Plan. Representatives from the County, Local Municipalities, Wellington-Dufferin-Guelph Public Health and other key agencies would meet on a regular basis (e.g. quarterly) to review and discuss active transportation projects and initiatives and track the implementation of the Plan.

2. Citizen's Advisory Group:

A Citizen's Advisory consisting of representatives from local trail and cycling groups, interest and advocacy groups, citizens at large, representatives from local businesses and / or representatives from other County or local municipal committees. The group would be kept informed of active transportation initiatives through email and face-to-face meetings (e.g. quarterly) chaired by a municipal staff representative(s). The Citizen's Advisory Group would serve as one of the conduits between municipal government and area residents and assist with priority setting for implementation of Plan elements. The Citizen's Advisory Group will also be instrumental in planning, coordinating, participating in, and rallying community members to participate in local events related to active transportation.

A successful Active Transportation Plan requires champions, partnerships and leadership at the County and local level to move from the planning and design stage to the funding and implementation stage. The relationships between levels of government, decision makers and organizations are important factors in determining whether an active transportation initiative will proceed and be successful. Maximizing participation and removing obstacles to the flow of information between participants are two of the main objectives in managing implementation. Wellington County's Active Transportation Plan is more than a proposed network of on and off-road pedestrian and cycling facilities. It is a Plan that includes a set of proposed actions to promote safe cycling and walking in Wellington County and to recognize and share in the economic, health and quality of life benefits that these forms of transportation can offer.



6.2 HOW TO IMPLEMENT THE PLAN

The Wellington County Active Transportation Plan is a long-term strategy that consists of three phases implemented over a twenty year plus time period. The phased implementation strategy outlined in this chapter includes both infrastructure and program initiatives, as well as associated costs. The implementation plan is intended to be integrated with the County and Local Municipal current outreach initiatives as well as the capital roads programs and complement infrastructure works when they are scheduled or planned.

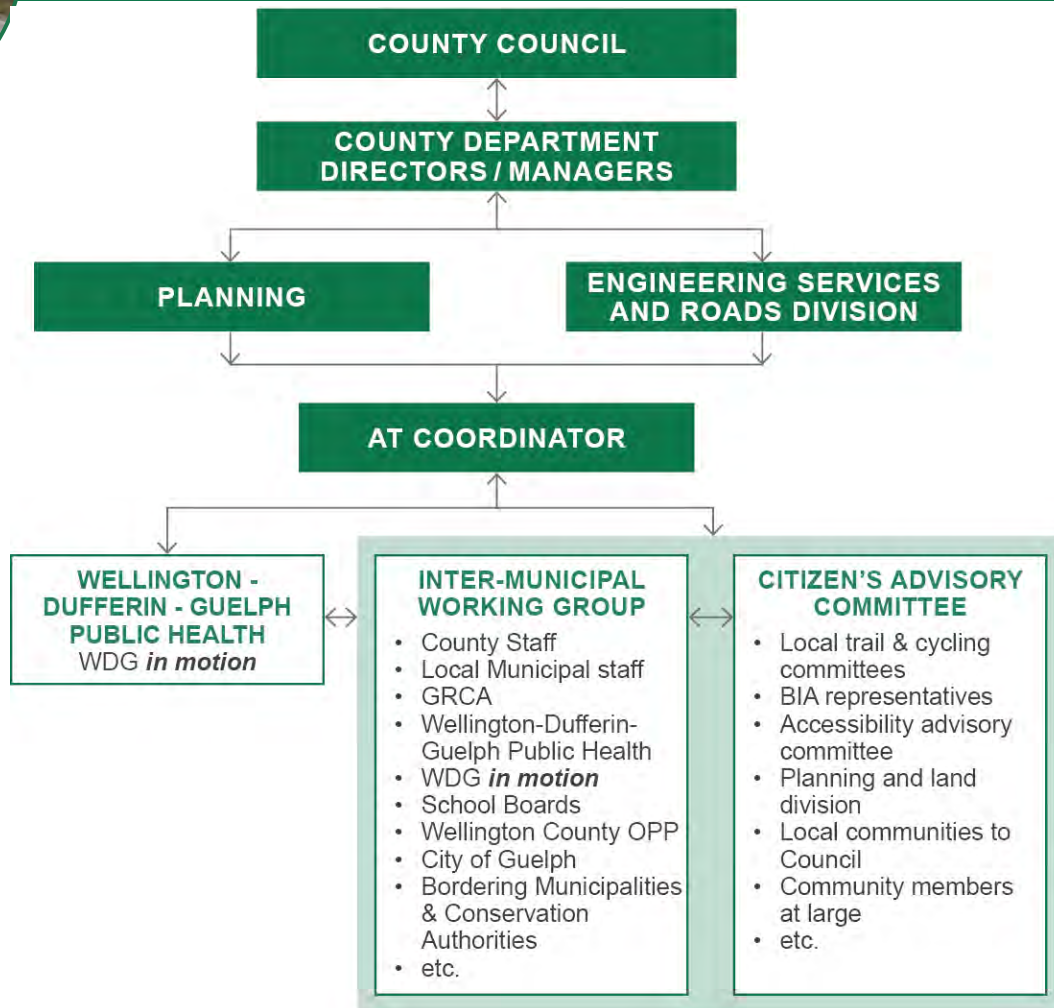
6.2.1 Who Does What?

<p>Recommendation 6-5:</p>	<p>The County should explore the development of the role of an Active Transportation Coordinator, who would be responsible for the “championing” of AT related issues, initiatives and programming throughout the County. This role could be a new full-time (e.g. 1 FTE) position at the County, or a shared position between the County and Wellington-Dufferin-Guelph Public Health (e.g. 1/2 FTE for each organization).</p>	<p>Short to medium-term</p>
<p>Recommendation 6-6:</p>	<p>The Active Transportation Coordinator would be responsible for the implementation and follow-up of Wellington’s Active Transportation Plan at the County level and provide updates on the progress of the study when necessary to local municipalities, stakeholders and interest groups etc..</p>	<p>Short-term to medium-term</p>

An efficient reporting and implementation structure is vital to ensuring that the decision-making process associated with the implementation of Wellington’s Active Transportation Plan is managed and all relevant County and local municipal departments are appropriately engaged. A suggested structure for managing the master plan at the County level is illustrated in Figure 6.1.

6.2.2 A Network Management Tool

The proposed active transportation network for the Wellington County Active Transportation Plan was developed using the County’s Geographic Information System (GIS) database along with some GIS data provided the local municipalities. The GIS based network map prepared as part of the Active Transportation Plan can also be used as an asset management tool. A database is associated with the map information and includes a number of different attributes. For example, the network has been divided into segments, each specifying a length of the segment and the facility type proposed, as well as the phase in which the route and facility is proposed to be implemented.



During the implementation process, the Inter-Municipal Working Group and County / Local Municipal staff can use this tool to assist in confirming the feasibility of cycling and trail routes and facilities and the proposed schedule (Phases 1, 2 or 3) for implementation. The GIS tool can also be used to track and document new segments as they are implemented. Updating the facilities component of the Master Plan on a regular basis will significantly reduce the effort and cost to update the entire Plan, which is recommended to occur every five years. If the County chooses, this GIS information, with some supplementary programming, could also be posted on the County's website in an interactive map format. This accessible mapping would be useful to the public as well as visitors to the County.

6.2.3 A Five-Step Network Implementation Process

Recommendation 6-7:	The Inter-Municipal AT Working Group, County and Local Municipal staff should review the proposed five-step process tool for guiding the implementation of active transportation network facilities in Wellington County and adapt it as necessary.	Short-term
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Recommendation 6-8:

The Active Transportation Plan should be reviewed and given consideration when County Roads (or local municipal roads as identified as part of the AT Network) and other capital infrastructure projects are identified and scheduled.

Short-term

The Wellington County Active Transportation Plan is not intended to be a static document. The timing and details related to implementation, particularly the location of recommended routes and active transportation facility types should and will evolve through the environmental assessment, planning and capital budget processes. At the same time, however, the local municipal, public and stakeholder effort that established the overall direction for the master plan should be respected.

Central to the proposed implementation process tool presented in this chapter is a proposed recommendation that the Plan be reviewed and given consideration when County Roads (or local municipal roads identified as part of the network) and other capital infrastructure projects are identified and scheduled. This should include the County and Local Municipal asset management programs for reconstructing or resurfacing roads, as well as any investigation of potential new road alignments or the reuse and/or selling of abandoned rail and utility corridors. The objective is to ensure that County/Local Municipal assets, particularly roads designated in the Plan for future cycling and trail / pedestrian routes are given due regard when planning, designing and budgeting for road / infrastructure projects. This step should also apply to County or local municipal planning studies, and those studies in which the County is a partner. Without this step, network opportunities could be lost and cost efficiencies not realized.

Figure 6.2 outlines a proposed process tool for guiding the implementation of active transportation network facilities in Wellington County. It is recommended that the Inter-Municipal Working Group, once established, along with County and local municipal staff review this tool and adapt it as necessary to suit their needs.

The process comprises five parts and is a step-by-step mechanism to confirm the feasibility of each route recommended in this report at the time implementation is proposed. It is intended to assist County/Local Municipal staff from affected departments to work together, to share information and to facilitate the implementation of the Master Plan. Changes to policies and the network should also be considered through the update of the County and Local Municipal Official Plans conducted every five-years or the development of a Transportation Master Plan for the County as determined by County and Local Municipal Councils. For segments of the proposed County active transportation network that are under local municipal ownership, the County should work in conjunction with local municipalities to strive to apply a consistent and integrated implementation process.

Each part of the network implementation is described in the following sections.

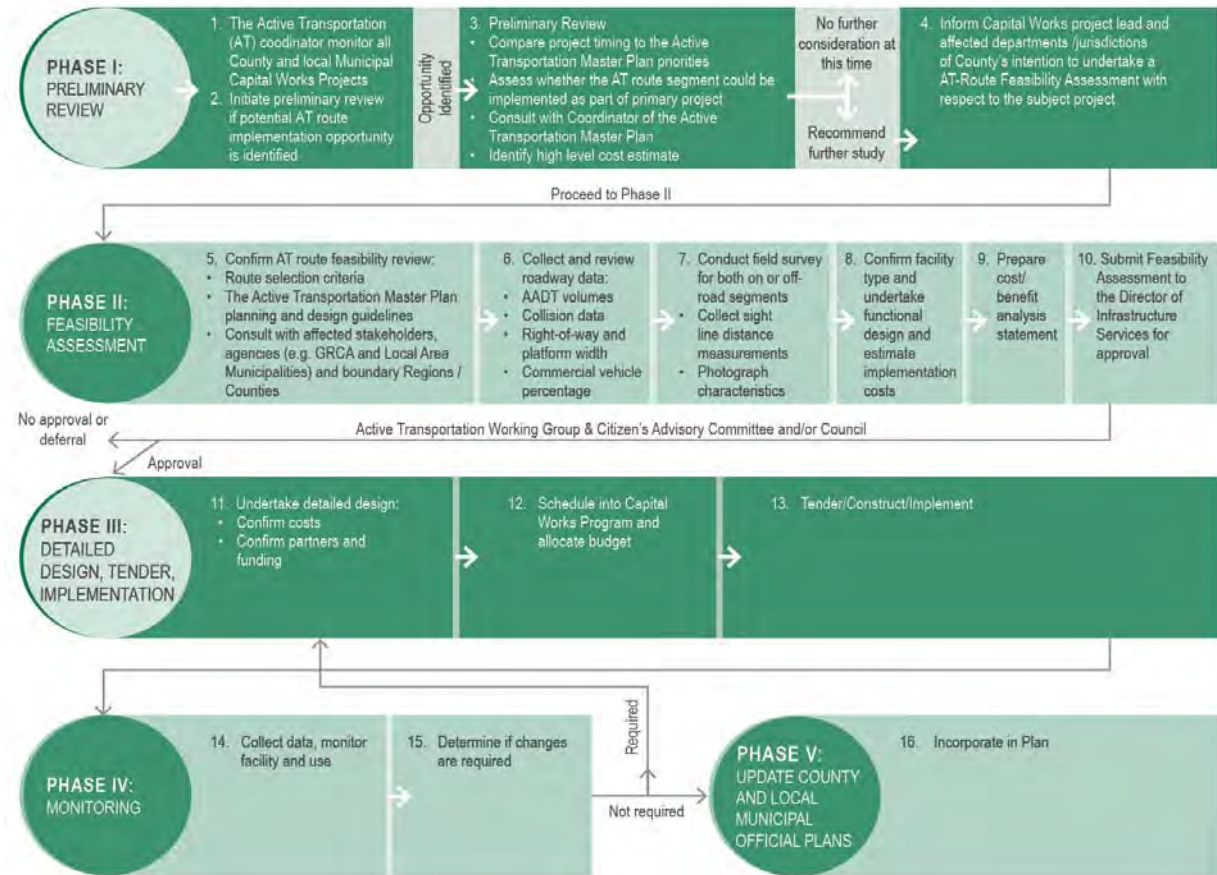


Figure 6.2 - Five-Step Implementation Process

Part I: Preliminary Review

The first step in implementing network segments of the Active Transportation Plan is to identify and communicate opportunities. As part of the Master Plan, the Inter-Municipal AT Working Group should monitor all County and local municipal road projects scheduled in Wellington County, including the capital roads forecast. When a project involving a corridor or road proposed for a pedestrian or cycling route identified in the Plan is advanced to the planning stage, or an opportunity to establish a new route not identified in the Plan comes forward, the AT Committee supported by the Active Transportation Coordinator should undertake a Part 1 Preliminary Review. This review should:

- Identify the jurisdictions involved in a project;
- Compare the timing of the project to the short and long term implementation priorities identified in the Plan;
- Assess whether the nature of the project may permit implementation of the preferred pedestrian or cycling facility type in a cost effective manner; and



- Inform the project lead and affected departments whether or not a feasibility assessment should be undertaken to confirm the feasibility and costs for implementing the proposed cycling route as part of the subject project.

The key aspect of this initial part is communication. Staff from various County departments and local municipalities should report all upcoming projects that may involve or impact a pedestrian or cycling facility designated in the Wellington County AT Plan. From this point forward, the Inter-Municipal AT Working Group / Active Transportation Coordinator, with appropriate technical support when required, would be expected to work through the remaining three parts of the implementation process with various departments at the County and local level as appropriate.

Part II: Feasibility Assessment

If a pedestrian or cycling project is confirmed through the preliminary review process (Part I), the County's AT Coordinator should guide and support the AT Committee in undertaking a Feasibility Assessment. This is intended to be a brief assignment and confirm the feasibility of the route based on a review of the Master Plan and supporting route selection and planning and design criteria, as well as other relevant information.

- Collect or confirm current roadway characteristic information including AADT volumes, collision data and the commercial vehicle percentage.
- Conduct a field check for both on and/or off-road route segments to identify any other issues that should be considered and to measure sight line distances (if applicable).
- Undertake a preliminary functional design for the on or off-road cycling facility segment and estimate implementation costs, including construction and signing.
- Prepare a cost/benefit analysis statement. This "statement" should comment on the following:
 - The timing for implementing the proposed pedestrian or cycling facility;
 - Costs and efficiencies achieved;
 - Identify any less costly alternatives and how they may fit within the overall pedestrian and cycling network plan;
 - Provide recommendation on how to proceed; and
- Submit the Feasibility Assessment to the Coordinator, and then County Engineer.

This process may take place in conjunction with, or as input to, a roadway or public works Class EA or functional design process whereby design alternatives are prepared, or as an independent review. It is at this stage that consideration may be given to context sensitive solutions. The design for the pedestrian and cycling portion of the facility should be in accordance with the Design Guidelines in Appendix A of this report, as well as other relevant provincial and national design guidelines / standards.



AT network phasing should be generally consistent with the strategy outlined in the Wellington County AT Plan. However, priorities can be adjusted in situations where there is a clear community demand for pedestrian / trail and cycling facilities and/or where local municipalities or another partners wish to advance a particular route segment. If site-specific circumstances prevent a facility from being constructed in association with a particular road improvement project being considered, other nearby parallel routes on County or local Municipal roads should be closely examined at this time for their suitability.

Another possible outcome of the feasibility assessment may be a decision by the County and/or Local Municipality to introduce an interim facility type in the short term (Phase 1) to get a desirable connection or link in place earlier than proposed in the plan. An example might be to implement a signed bike route with sharrow pavement markings in the short term and then upgrade to a formal bike lane/ buffered bike lane, paved shoulder or cycle track in the longer term i.e. Phase 3.

Part III: Detailed Design, Tender and Implementation

Once approval has been obtained to implement a pedestrian and/or cycling route segment, the necessary detailed design should be completed. This step is typically done as part of the detailed design for the primary capital roads project, such as a road widening and does not require additional resources. The third part of the process should also include confirming details with regard to partners (if any) and the potential for cost sharing. The project should then be scheduled into the County or local Municipal Capital Roads Program and suitable budget allocated. The final step involves tendering the project and then construction / implementation.

It is also possible that following detailed design the decision is made not to proceed with the facility or preferred facility type because of the cost, other constraints that arise through the detailed design process or based on direction from Council. If this occurs, the network should be updated and an alternative parallel route should be proposed.

Part IV: Monitoring Phase

Once the Active Transportation facilities have been constructed, their design and use should be monitored to ensure they function in the manner intended. When necessary, the facilities should also be upgraded and maintained to ensure continued safe use by cyclists. Monitoring should also ensure that the cycling design guidelines are current. This step will involve collecting data to assist in the monitoring task.

Part V: County and Local Municipal Official Plans

The fifth component of the implementation process includes updating the AT network schedule in the County Official Plan and Municipal Official Plan (i.e. Township of Centre Wellington – if applicable).



6.3 BUILDING & MAINTAINING THE NETWORK

The network is intended to build upon the active transportation and trails networks recommended and proposed in the County as well as those adopted by local municipalities, agencies and organizations. The network has been reviewed and refined based on information gathered by the study team as part of the consultation program for the Wellington County Active Transportation Plan.

6.3.1 Network Implementation Schedule

The proposed Implementation Plan consists of three phases:

- **Short Term** (Years 0-10 years);
- **Mid Term** (Years 11-20); and
- **Long Term** (Beyond Year 20).

A number of other criteria were used to prioritize the implementation of routes in this plan. It is recommended that these should continue to be used in the future when annual network priorities are being reviewed and / or updated. These include:

- Review the approved County and local Municipal capital projects forecasts that have been provided with the intent to maximize cost savings by working in tandem with planned capital road and implement AT facilities in conjunction with other capital infrastructure projects such as road rehabilitations and reconstructions, the construction of new roads and the construction of linear utilities such as underground gas lines, water supply lines and sewers
- Build demand by implementing and connecting a number of the key signed bike route segments in phase 1, while ensuring a balanced approach to implementation across all municipalities in the County
- Close short gaps in the existing network with a focus on those gaps that when completed results in continuous routes and /or important links.
- Create connections to regional and national trails such as the Elora Cataract Trail, Kissing Bridge Trail and Trans Canada Trail.
- Work with local partners, encourage the implementation of new routes as part of new land development at the time of construction rather than retrofitting routes at a later date.
- Develop on road bike lanes where they can be implemented through lane reallocations and repainting pavement markings.
- Focus on areas where current Active Transportation volumes are highest, and/or where the highest demand is anticipated. For example routes that facilitate access to key destinations, especially those that have the potential to attract large numbers of “would-be” walkers and cyclists including those who would be traveling to schools in the urban centres, tourist destinations, community centres, and large employers.



- Consider prioritizing routes based on input from the proposed Inter-Municipal AT Working Group, the Citizen's Advisory Committee and the public.
- Focus on creating spine connections between urban centres within the County, by completing the East-West Spine Route and developing the North-South Spine Route as described below.

6.3.2 The Spine Routes and Major Loops

There is a growing body of evidence that bicycle related tourism is an emerging and affluent market. The bicycle tourist demographic includes a high percentage of university graduates and professionals with higher than average incomes. Research from the 1990's indicates that the majority of bicycle tourists were in the 30-35 year old age range and more recent research suggests that the rate of bicycle tourism has remained stable in the 35-54 year old age range and has increased significantly in both 55-64 and 65-74 year old age ranges.

The development of the Spine and Major Loop Routes concept is suggested as a priority area of focus for the implementation of the Wellington County Active Transportation Plan that will not only provide opportunities for local residents to cycle on a variety of routes and better connect communities within the County, it will also provide local businesses the opportunity to enjoy economic benefits created by bicycle tourists that are interested in a longer distance route from the north shore of Lake Ontario in the Burlington area to the east shore of Lake Huron at Port Elgin. The concept includes a north-south spine and an east-west spine. The east-west spine utilizes the Elora Cataract Trail and the northern section of the designated Trans Canada Trail route. A significant portion of this infrastructure is already in place. The north-south spine is primarily an on-road route utilizing both County and local roads, which apart from only a few short sections is on hard-surface roads. There are few short sections that would require conversion from gravel surface to a hard surface.

Figure 6.3 illustrates the concept and the details of the north-south spine and east-west spine routes are provided below.



The North-South Spine Route

- From the Lake Ontario waterfront in Burlington into Milton follow First Line Nassagaweya (Town of Milton) north to Wellington Road 29
- North on Wellington Road 29 to Barden Street
- East on Barden Street and York Street in Eden Mills
- Ash Street to Indian Trail
- East on Indian Trail to Wellington Road 44
- North on Wellington Road 44 to Hwy. 7
- East on Hwy 7 past Rockwood Conservation area to Wellington Road 27
- North along Wellington Road 27 and 5th Line to connect with Belwood Lake and the Elora Cataract Trail,
- North from Fergus on Gerrie Road,
- West on Wellington Road 17 to 14th Concession
- North on 14th Concession to Sideroad 6
- North on Sideroad 6 to Concession 11
- North on Concession 11 to Sideroad 3
- West on Sideroad 3 and 10th Line to Pike Lake Road
- North on Pike Lake Road to Baseline
- North on Baseline to 16th Line
- West on 16th Line and Wellington Road 2 into Clifford
- North west from Clifford using Fordwich Line, Mud Lake Line and Huron Bruce Road to connect with the Bruce County Rail Trail (to the Lake Huron Waterfront in Port Elgin)

The East-West Spine Route

- Elora Cataract Trail from the Caledon/Erin boundary west into Fergus
- Clearly defined route and using on-street connections through Fergus to the trail staging area on Beattie Line
- West on the Elora Cataract Trail into Elora and using on-street connections to the intersection of County Rd 7 and 21.
- West on Wellington Road 21 to 2nd Line right-of way
- South on 2nd Line right-of-way to 2nd Line, follow 2nd Line south to Sideroad 10
- West on Sideroad 10 to 6th Line
- South on 6th Line to Sideroad 12
- West on Sideroad 12 to the Kissing Bridge Trail

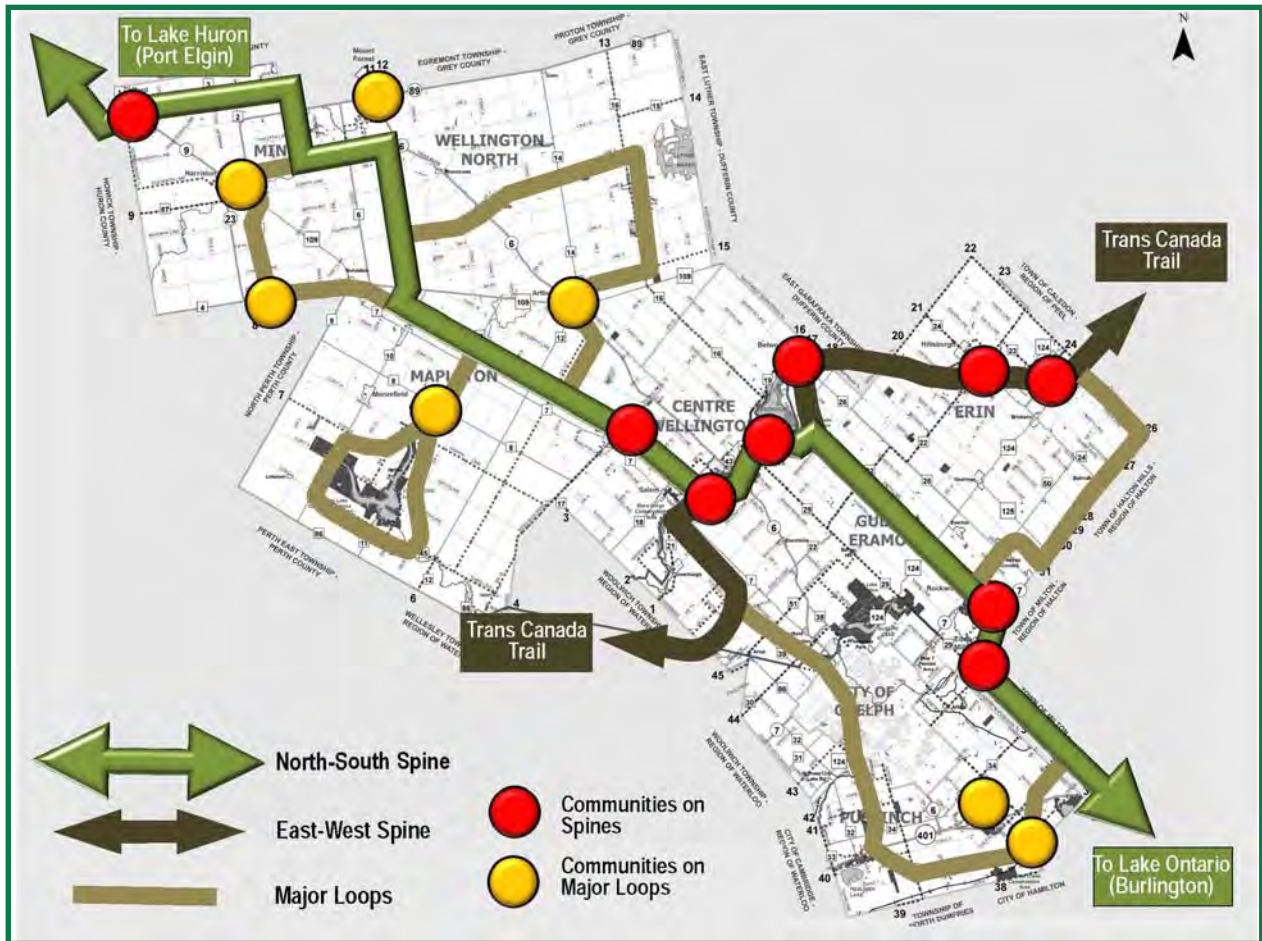


FIGURE 6.3 - THE SPINE ROUTES AND MAJOR LOOPS

A number of the larger towns within the County are directly on the spine routes or major loops and those that are not are generally within a couple of kilometres of the larger towns.



6.3.3 The Network Implementation Plan and Priorities

The Network Implementation Plan is illustrated in Maps 6.1 through 6.8. Map 6.1 shows the entire County and breaks the routes out according to recommended phase. Maps 6.2 through 6.8 illustrate priorities within each of the 7 municipalities in the County.

County-Wide Priorities (Map 6.1)

- Complete the east-west central spine by completing/more clearly defining the Elora-Cataract Trail through Fergus and Elora
- Initiate the North-South Spine Route connection in coordination with the Town of Milton and Bruce County
- Re-engage in the process of securing the Trans Canada Trail from Guelph to Elora, in particular the section south of Sideroad 10 into Guelph
- Complete any steps necessary to secure the abandoned railway corridor parallel to Wellington Road 109 from Arthur east towards Grand Valley

Township of Centre Wellington Priorities (Map 6.2)

- Gerrie Road as part of the North-South Spine Route
- Trans Canada Trail from Wellington Road 21 to Sideroad 10, Sixth Line and Sideroad 12 to connect with the Kissing Bridge Trail
- Wellington Road 21 from Elora west to the county boundary to connect with existing paved shoulders on this road in Waterloo Region (Regional Road 23).
- Clearly define the Elora Cataract Trail through Elora and Fergus
- Fourth/Fifth Line south of Belwood Lake as part of the North-South Spine route
- Complete the connections along South River and Wellington Road 18 into Elora

Town of Erin Priorities (Map 6.3)

- Improve connections to the Elora-Cataract Trail in Erin
- Develop a main route through Hillsburgh from the northeast part of town to the Elora-Cataract Trail at Station Street
- Road 52 from 9th line east towards Belfountain
- Wellington Road 23 north of Sideroad 17
- Wellington Road 22 from Wellington Road 23 to Wellington Road 26
- Wellington Road 42 and 50 from Winston Churchill Boulevard to Rockwood









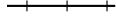










MAP 6.1 NETWORK IMPLEMENTATION

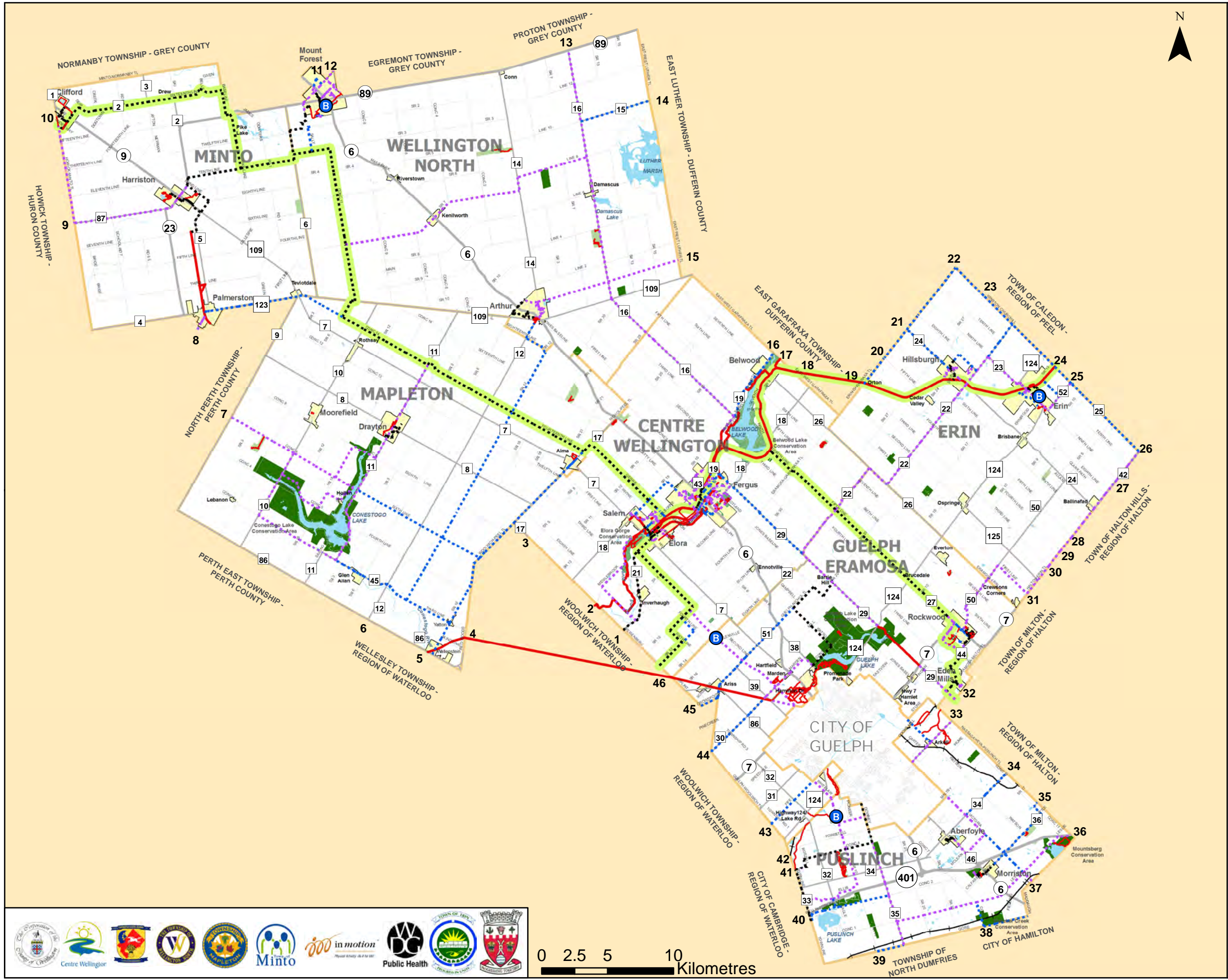
COUNTY OF WELLINGTON

ACTIVE TRANSPORTATION PLAN



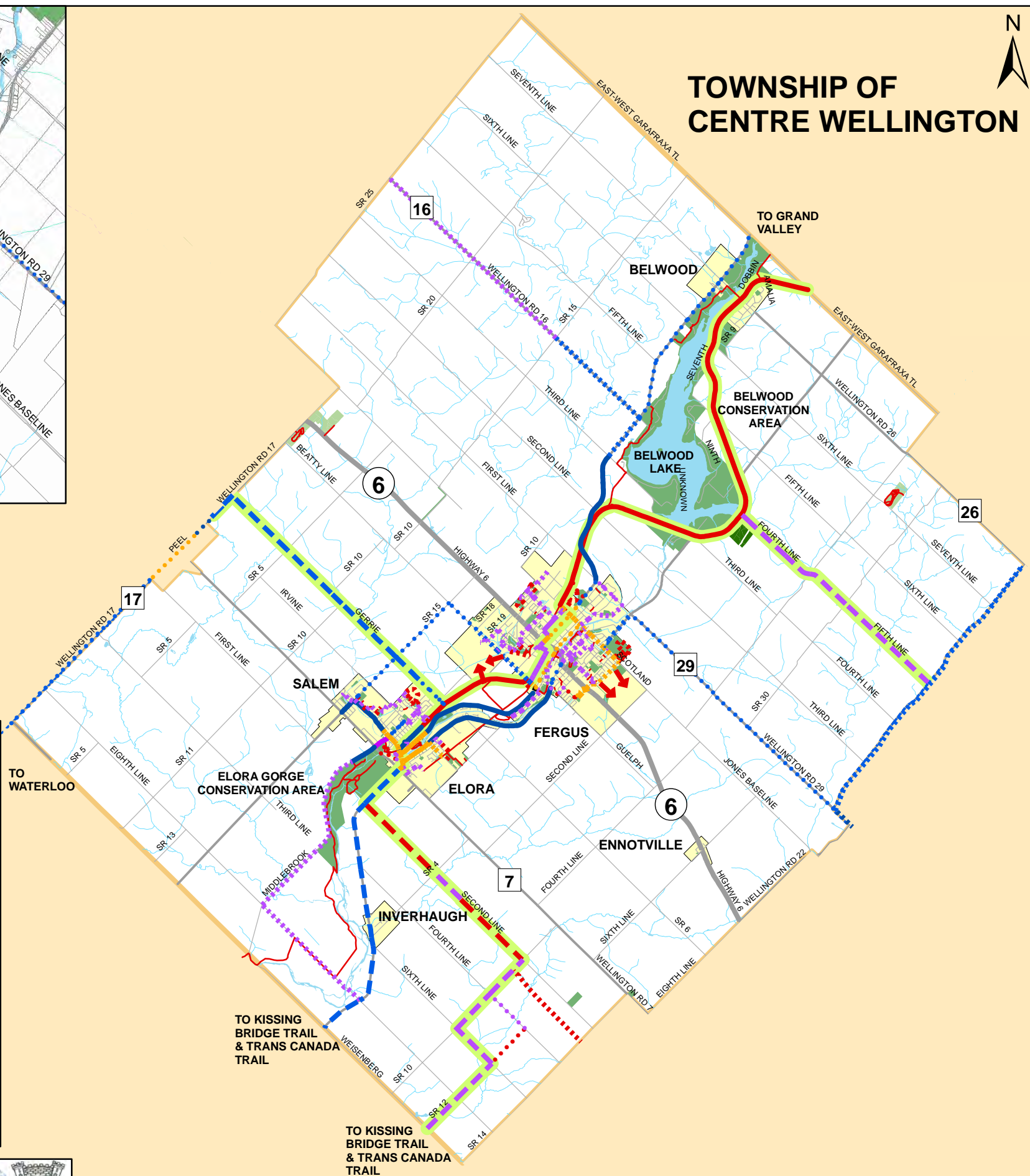
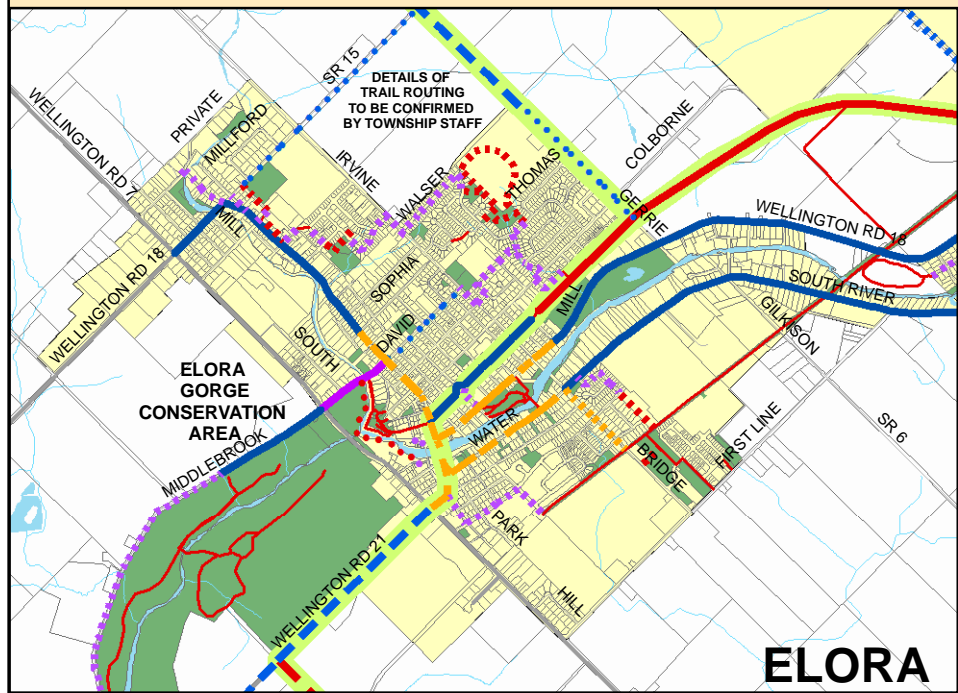
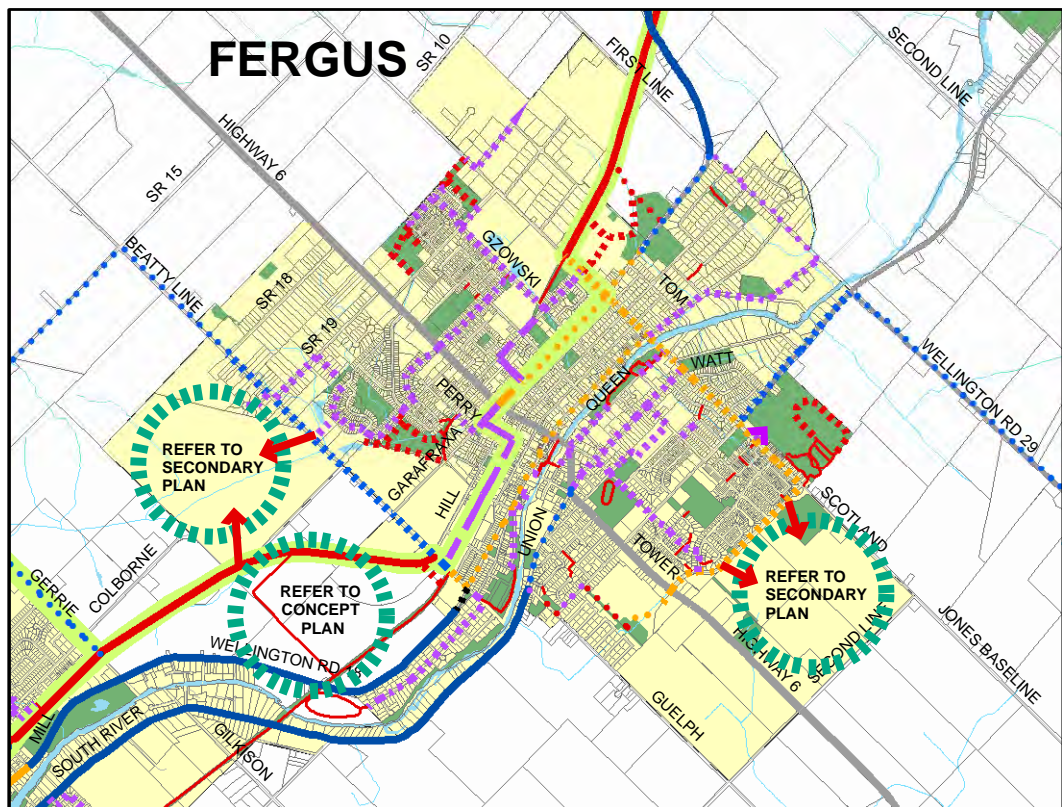
Legend

-  All Existing On and Off Road Routes
 -  Short Term (Years 1-10)
 -  Medium Term (Years 11-20)
 -  Long Term (Beyond Year 20)
 -  County Wide Spine Route
 -  Proposed Future Connection on Lands in Private Ownership
 -  Connections to Adjacent Municipalities
- NOTE:** For details regarding connections to adjacent municipalities, please refer to Table 5.1.
-  Proposed Bridge
 -  Rail
 -  Local Roads
 -  County Roads
 -  Provincial Highway / Freeway
 -  Streams
 -  Lakes and Rivers
 -  Parkland
 -  County Forests
 -  Forests Tracts owned by Conservation Authority or MNR
 -  Hamlets / Urban Centres
 -  Municipal Boundary



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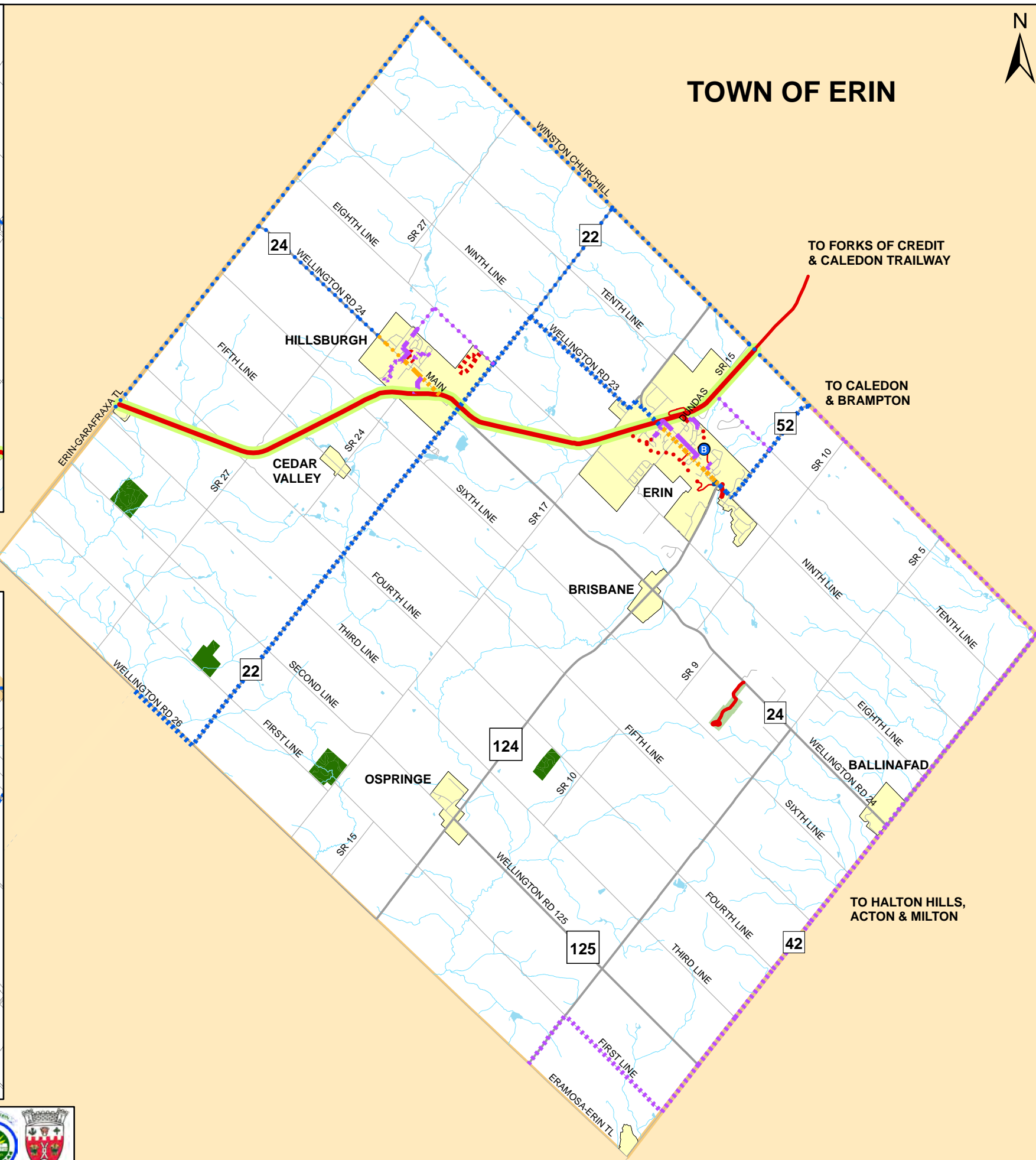
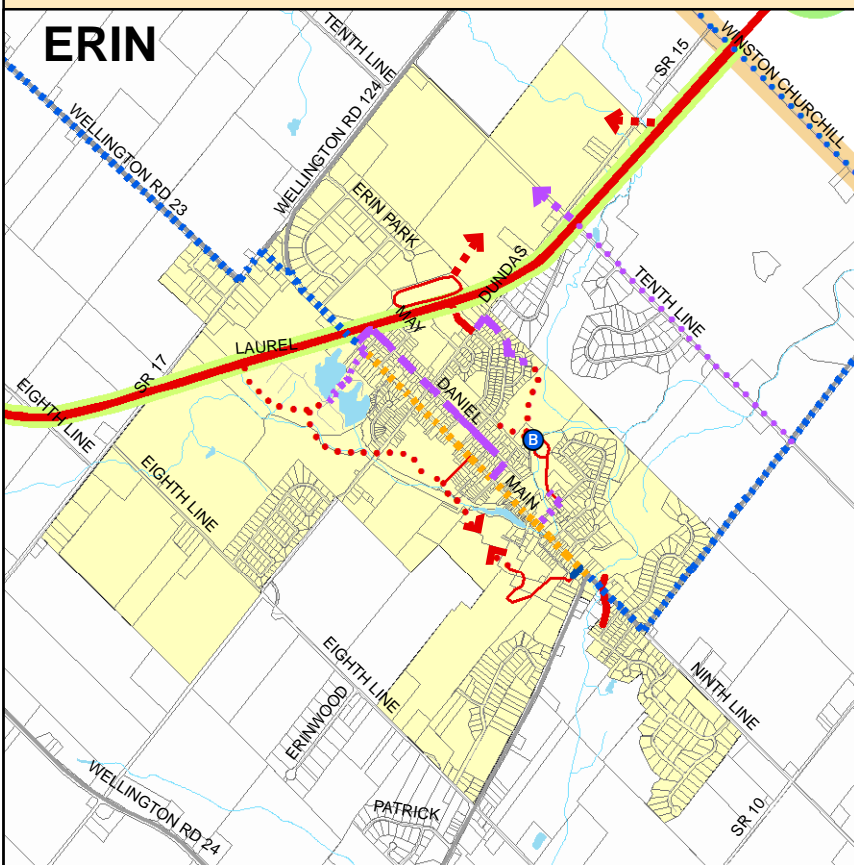
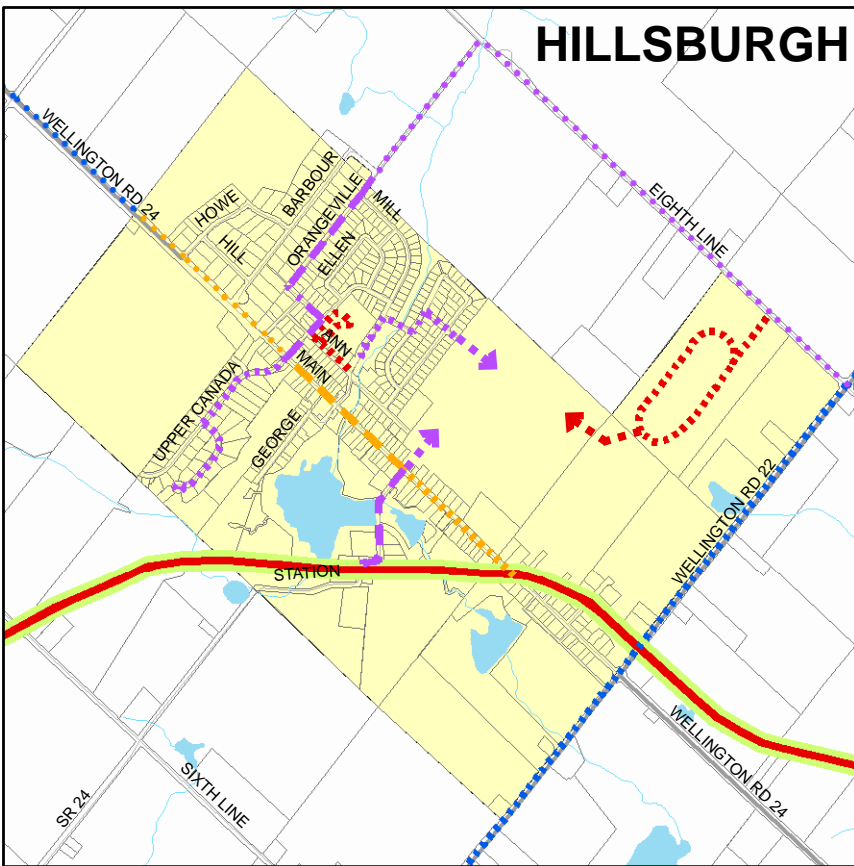
COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

MAP 6.2 CENTRE WELLINGTON NETWORK IMPLEMENTATION (ENLARGEMENTS)

- Legend**
- Existing**
- Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
- Years 1-10**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Years 11-20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Beyond Year 20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

SEPTEMBER 2012



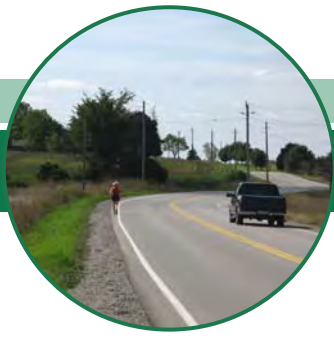


COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP 6.3 - ERIN NETWORK IMPLEMENTATION (ENLARGEMENTS)

- ### Legend
- Existing**
- Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
- Years 1-10**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Years 11-20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Beyond Year 20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
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- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

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Township of Guelph Eramosa Priorities (Map 6.4)

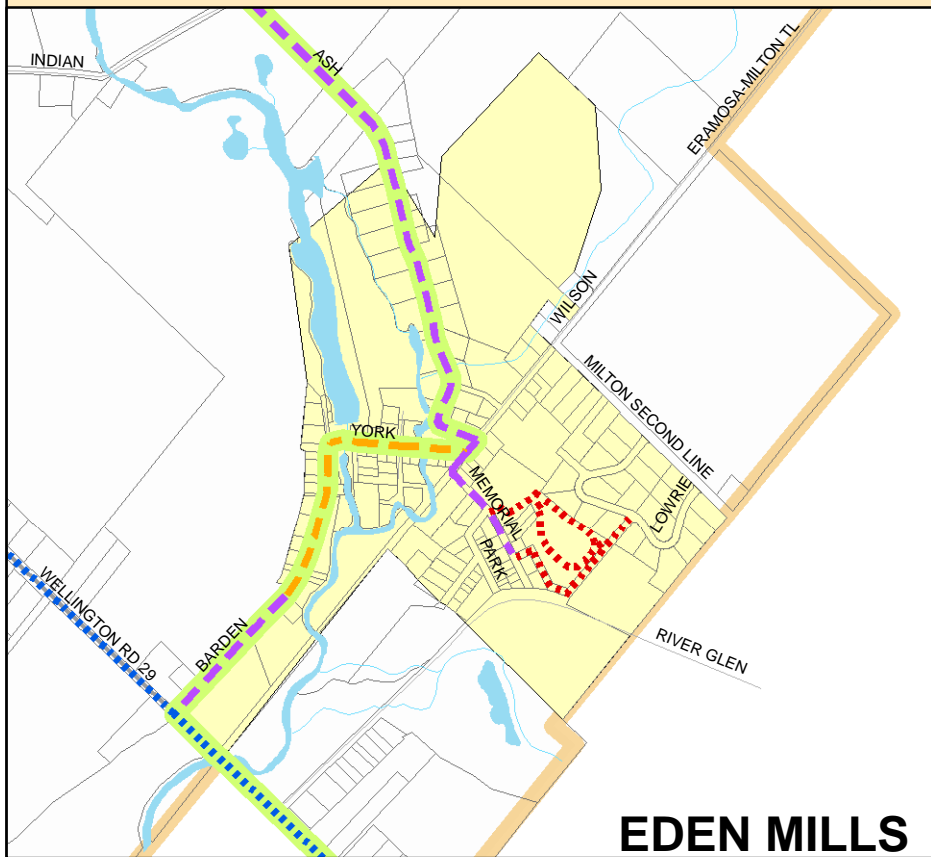
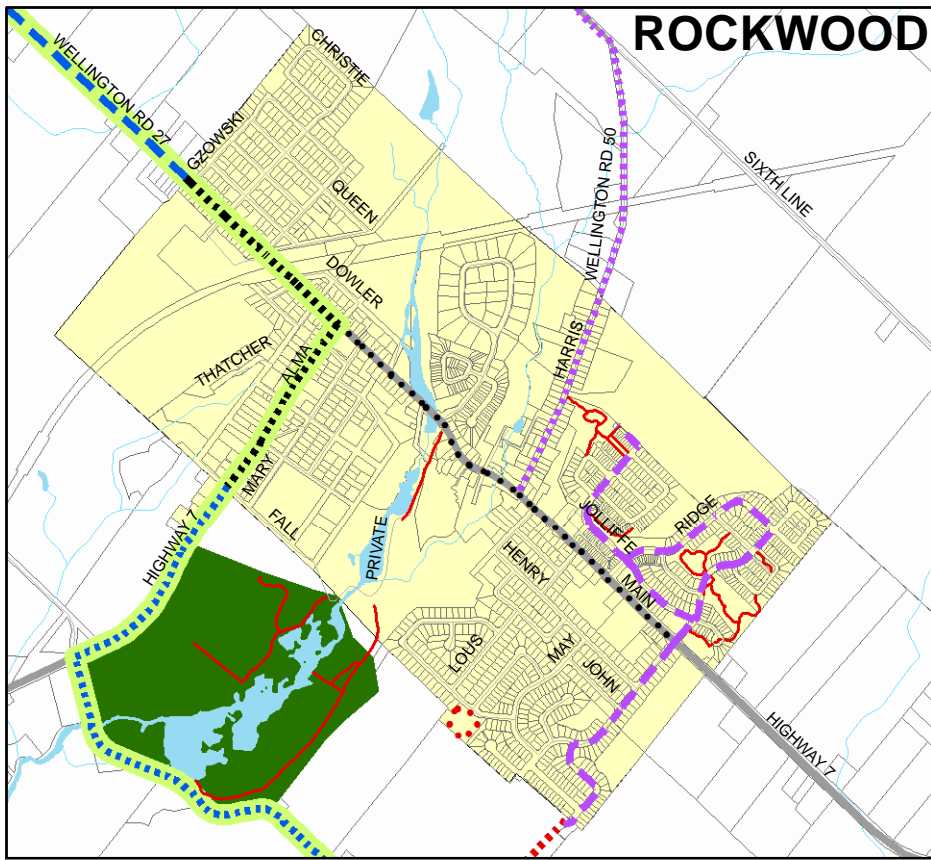
- Wellington Road 29 from the Milton boundary to Barden Street
- Barden, York, Ash, Indian Trail and County Rd 44 to create a link between Eden Mills and Rockwood and also to commence development of the North-South Spine route
- Develop the signed route connection between the new trail access off Wellington Road 44 through neighbourhoods in the south part of town to Wellington Road 50/Harris Street
- Wellington Road 27 as part of the North-South Spine Route

Township of Mapleton Priorities (Map 6.5)

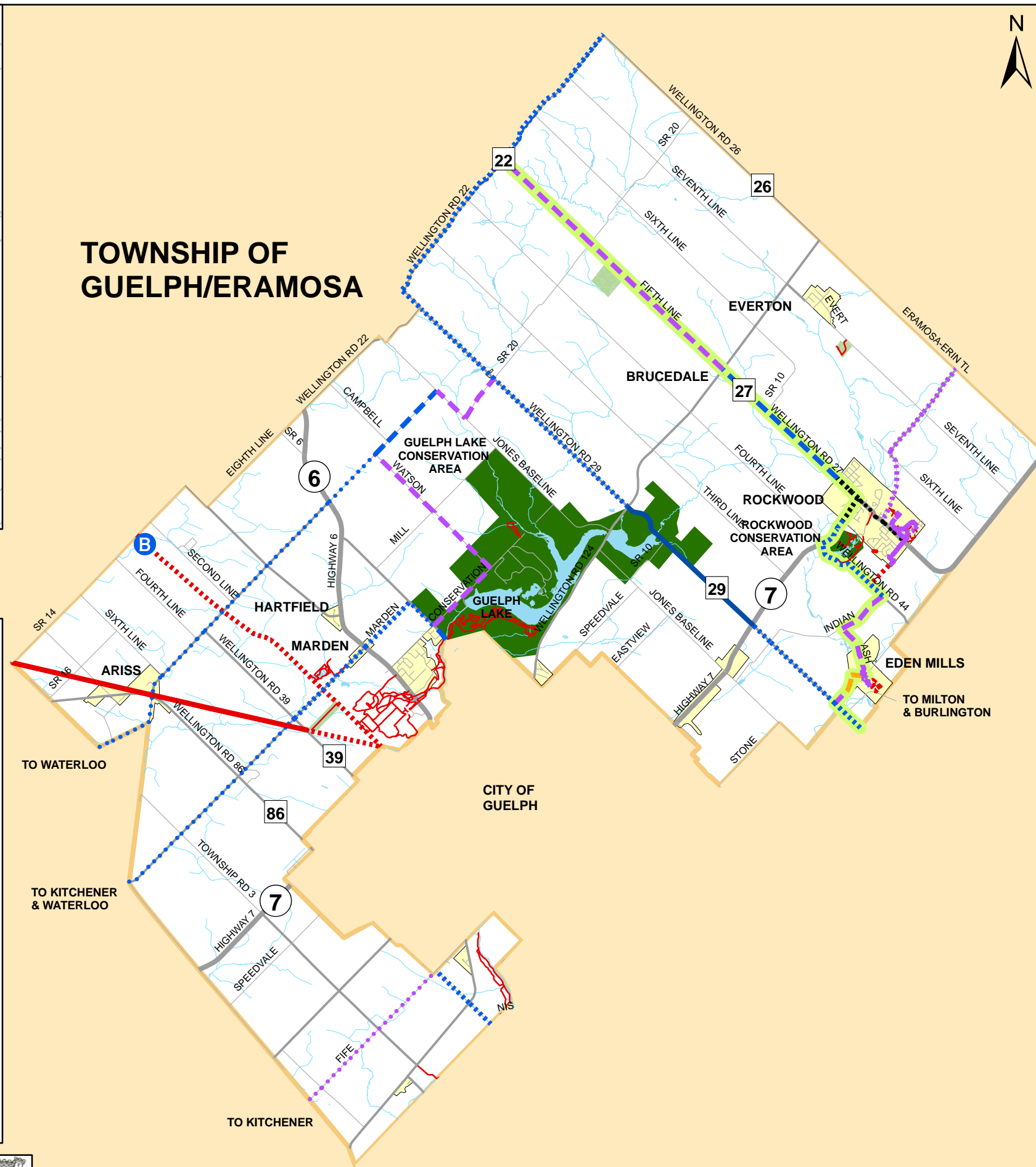
- 14th Line from Alma to Sideroad 6 as part of the North-South Spine Route
- Connections along Wellington Road 11 into Drayton and develop loop route around Conestoga Lake and to Glen Allan
- Develop signed route in Drayton on south side of Wellington Road 11 to connect schools and connect both ends of the existing riverside trail on to form a local loop

Township of Minto Priorities (Map 6.6)

- Complete the connection from the north end of the Whites Junction Trail into Harriston (collaborate with local trail committee to work on securing an off road connection from Wellington Road 5 into Harriston)
- Route crossing Wellington Road 109 at Wellington Road 5 Blind Line
- Develop the connection between Harriston and Mount Forest using Tenth Line, a short section of Wellington Road 6 and Lover's Lane 10th Line,
- Pike Lake Road, Baseline and Sixteenth Line as part of the North-South Spine route and connection between Mount Forest and Clifford
- Signed route loop in Clifford using Mill, Minto, Queen and James



TOWNSHIP OF GUELPH/ERAMOSA



COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP 6.4 - GUELPH/ERAMOSA NETWORK IMPLEMENTATION (ENLARGEMENTS)

Legend

- Existing**
- Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
- Years 1-10**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Years 11-20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- Beyond Year 20**
- Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
- County Wide Spine Route
- Proposed Future Connection on Lands in Private Ownership
- Proposed Bridge
- Rail
- Local Roads
- County Roads
- Provincial Highway / Freeway
- Streams
- Lakes and Rivers
- Parkland
- County Forests
- Forests Tracts owned by Conservation Authority or MNR
- Hamlets / Urban Centres
- Municipal Boundary

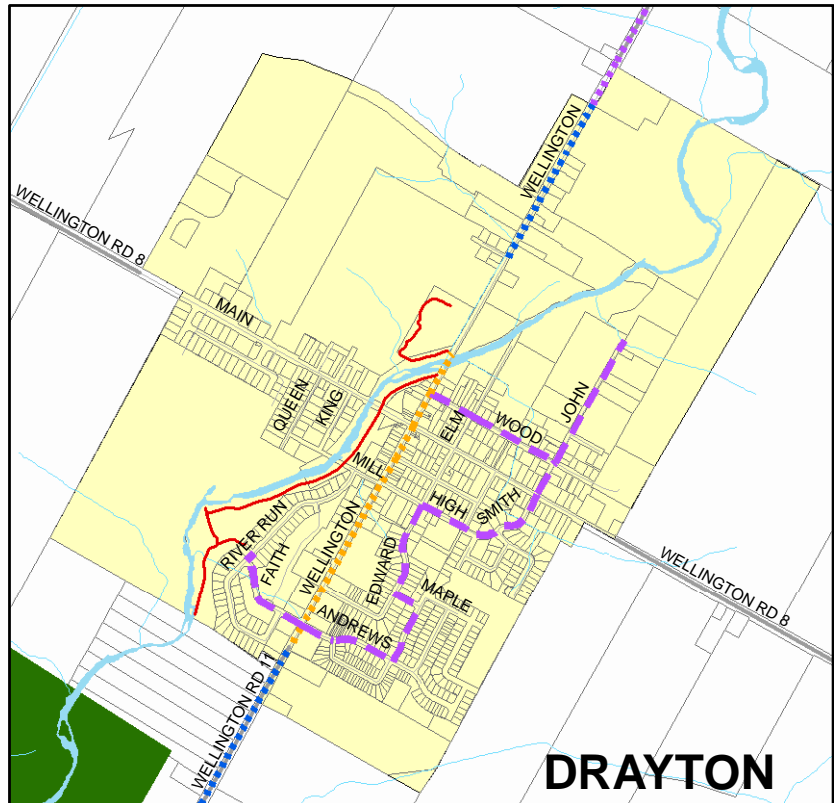
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**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION PLAN
MAP 6.5 - MAPLETON NETWORK IMPLEMENTATION (ENLARGEMENTS)**



TOWNSHIP OF MAPLETON



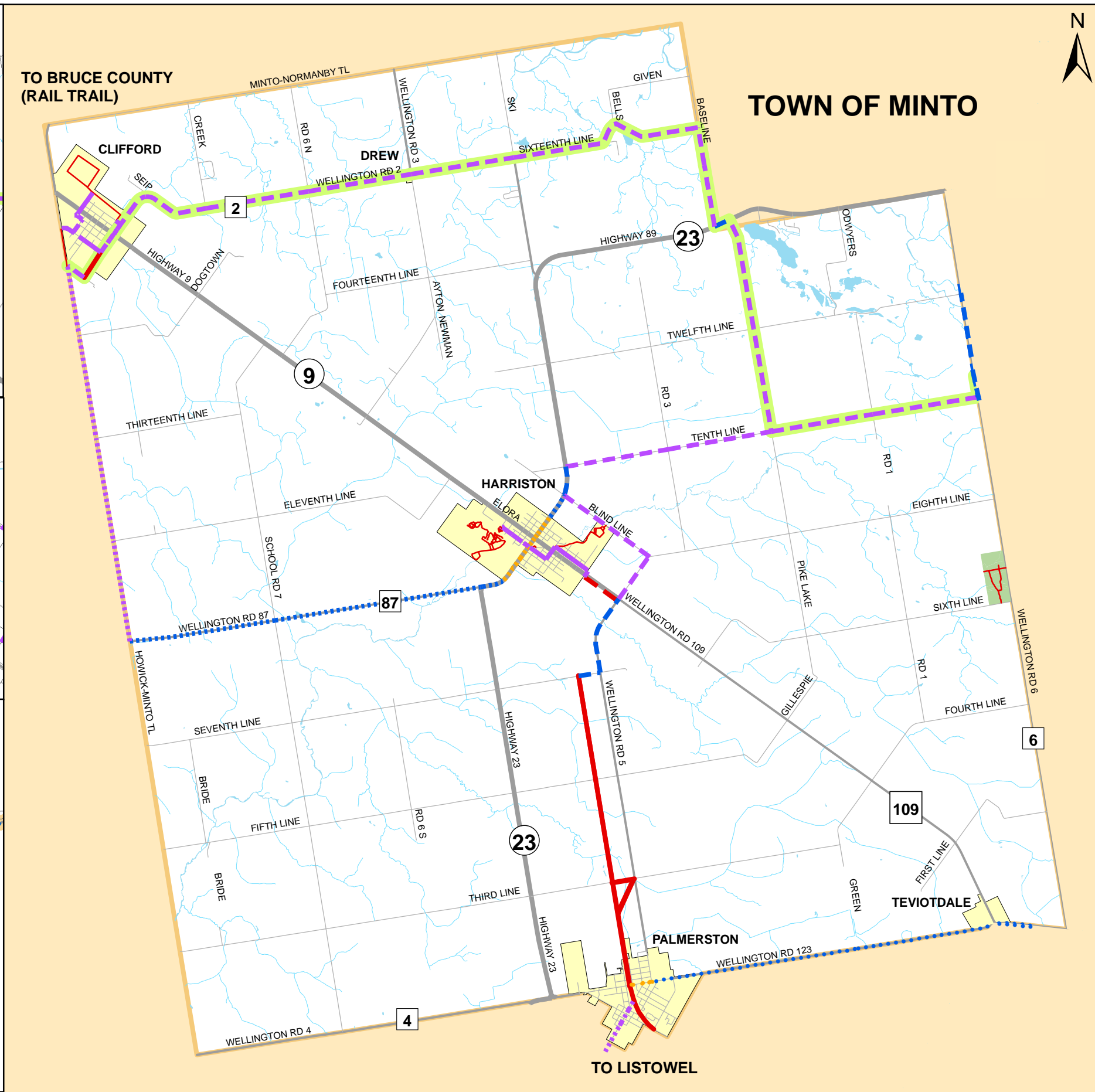
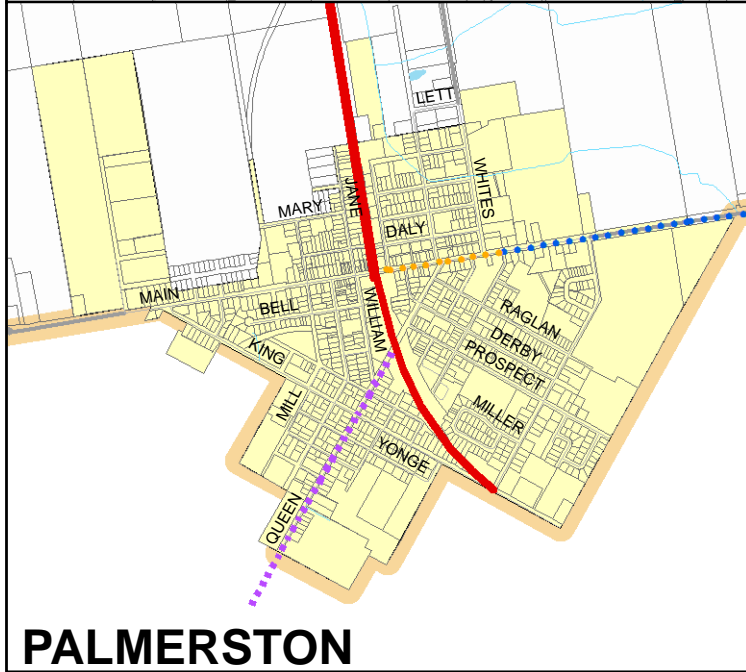
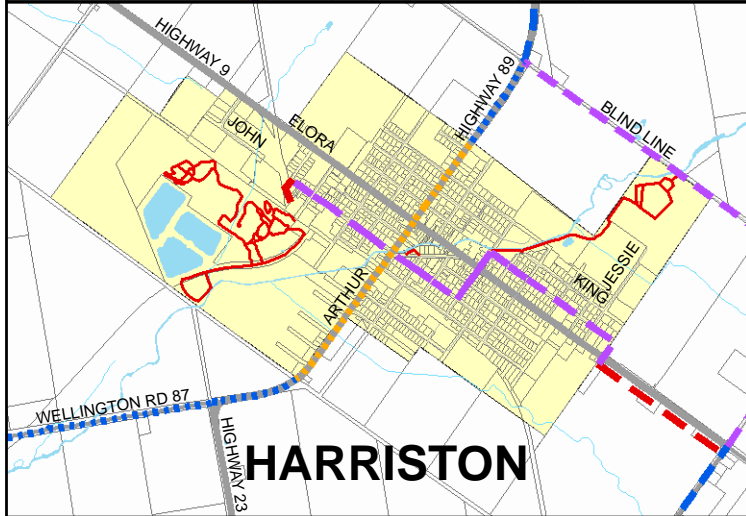
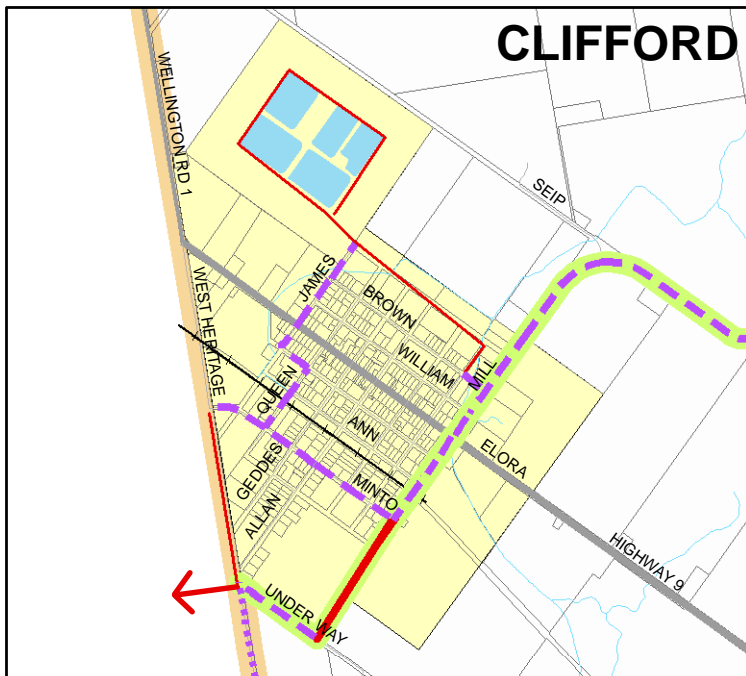
DRAYTON



- Legend**
- Existing**
 - Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
 - Years 1-10**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Years 11-20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Beyond Year 20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
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 - County Roads
 - Provincial Highway / Freeway
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 - Lakes and Rivers
 - Parkland
 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

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COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN MAP 6.6 - MINTO NETWORK IMPLEMENTATION (ENLARGEMENTS)

- Legend**
- Existing**
 - Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
 - Years 1-10**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Years 11-20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Beyond Year 20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - County Roads
 - Provincial Highway / Freeway
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 - Forests Tracts owned by Conservation Authority or MNR
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 - Municipal Boundary

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Township of Puslinch Priorities (Map 6.7)

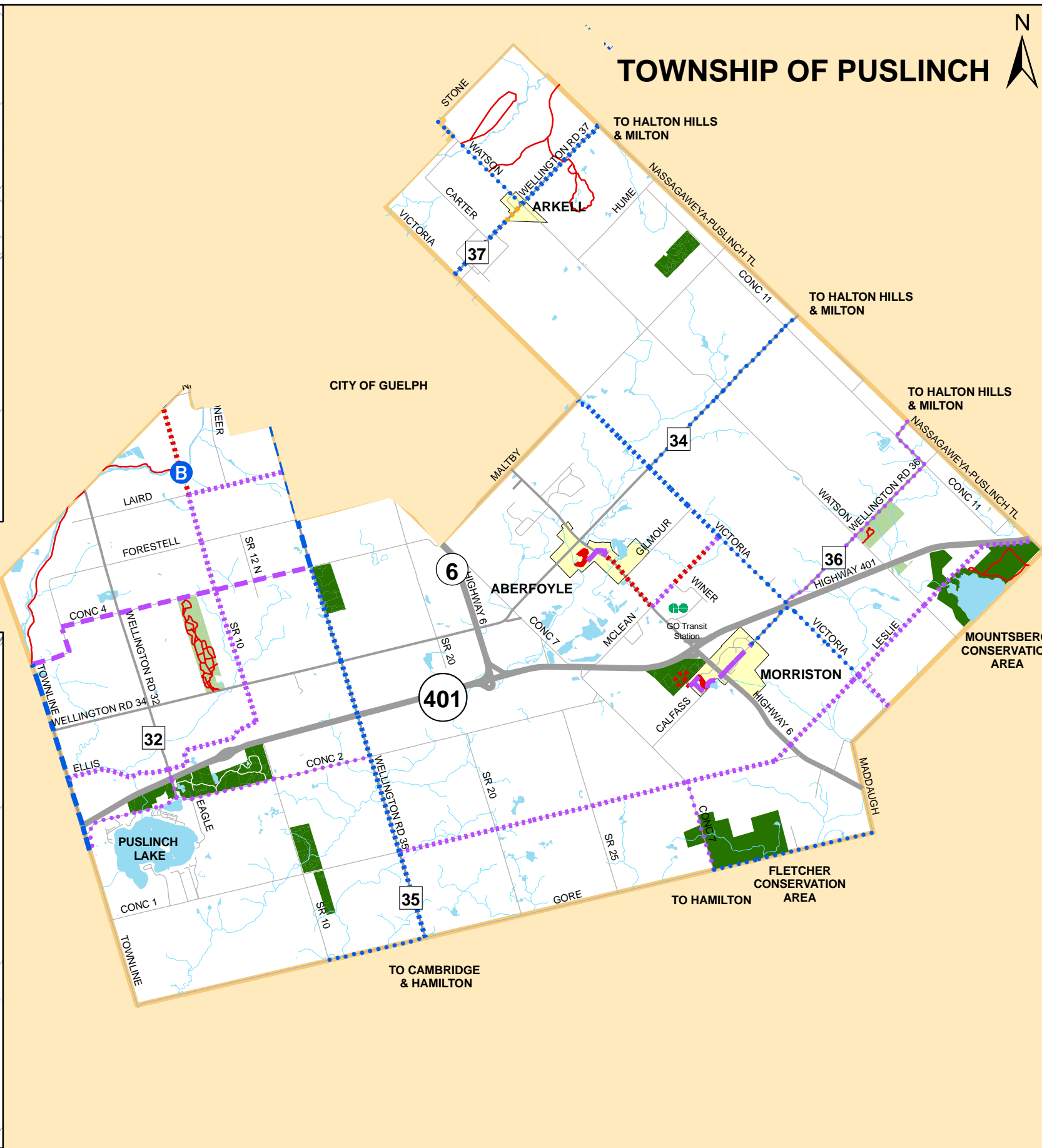
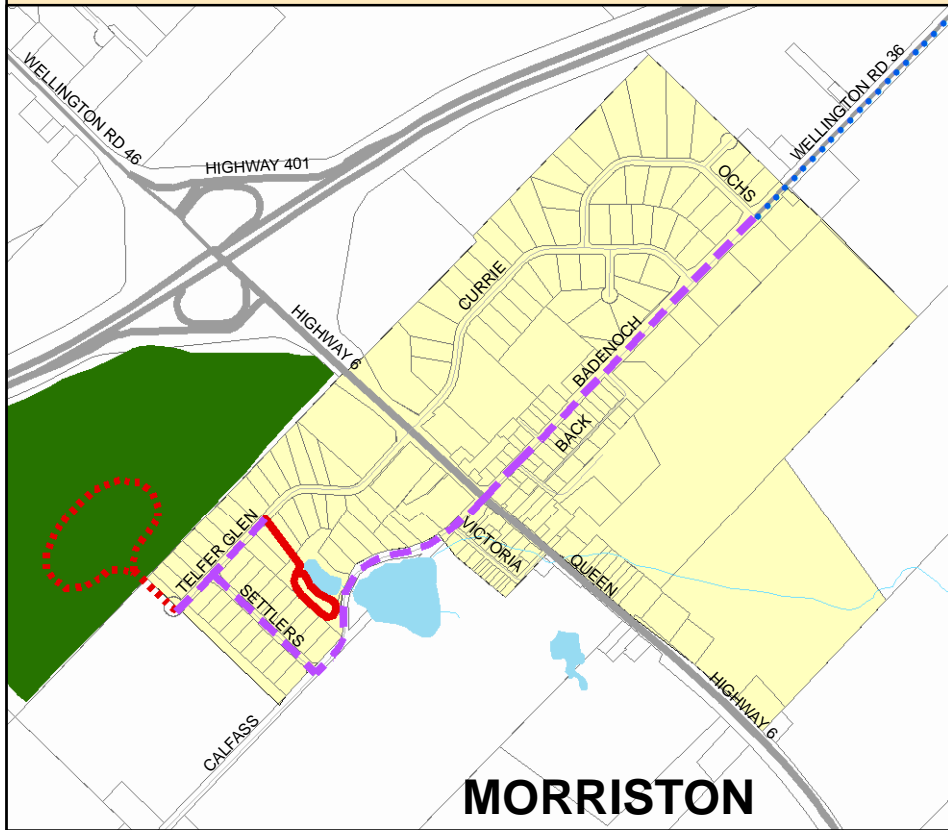
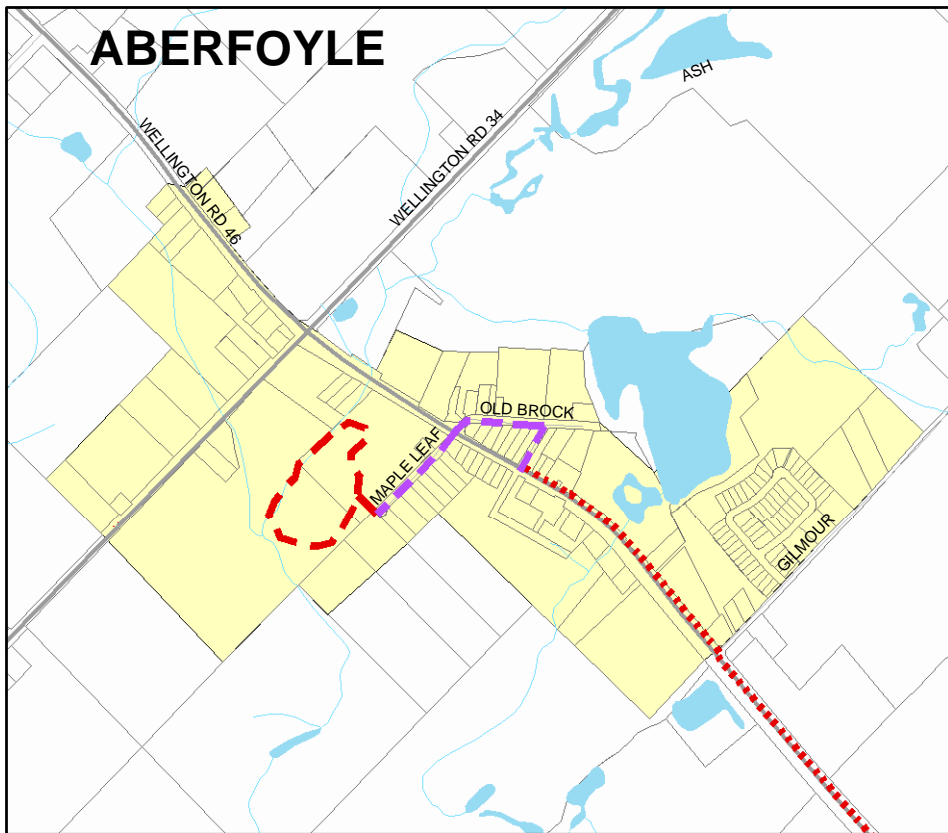
- Develop an off-road trail loop at the Puslinch Community Centre in Aberfoyle and connect Aberfoyle Public School to the Community Centre
- Complete the connection along Downey Road/Wellington Road 35 to Concession 4 and west to Townline to connect south Guelph with Hespeler
- Create a signed route connection in Morriston along Wellington Road 36
- Investigate the potential to develop an off road trail loop in public lands in north east Morriston.
- Investigate reinstatement of Stroy Bridge as a trail connection and part of one of the main side loops in south-west Wellington
- Coordinate with the City of Hamilton and City of Cambridge regarding establishing regional connections

Township of Wellington North Priorities (Map 6.8)

- Concession 11 and Sideroad 3 as part of the North-South Spine Route
- Develop the connection between Harriston and Mount Forest using Lover's Lane and a short section of Wellington Road 6 and Lover's Lane
- Investigate the abandoned railway between Wellington Road 6 and the rear of the new recreation complex as a potential loop route when combined with the route along Lover's Lane
- Investigate status of abandoned rail lines between Sideroad 2 and the south urban area limit in Mount Forest
- Develop the southern leg of the Arthur community trail loop in collaboration with the local trail committee

6.3.4 End of Trip Facilities

Recommendation 6-9:	As part of demonstrating leadership the County and local municipalities should provide bicycle parking facilities at public buildings under their ownership.	Short-term
Recommendation 6-10:	The County in partnership with local municipalities and other local partners should investigate the potential to develop a bicycle parking program whereby bicycle racks would be installed in locations where there is a demonstrated need for bicycle parking facilities.	Short-term

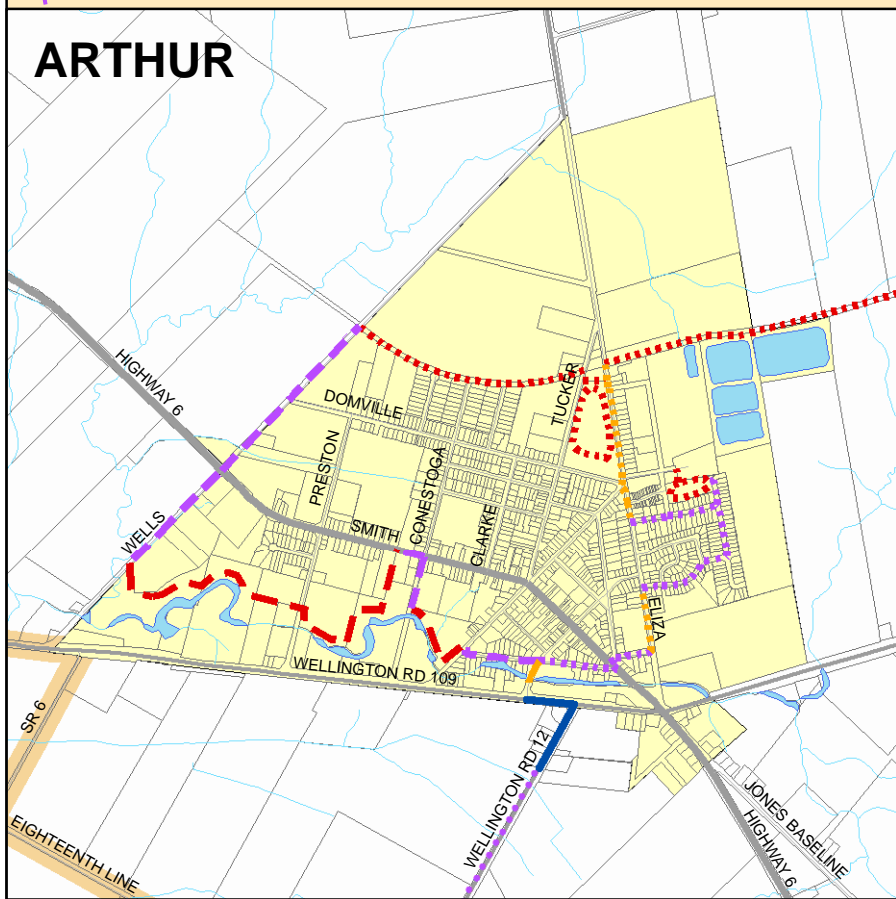
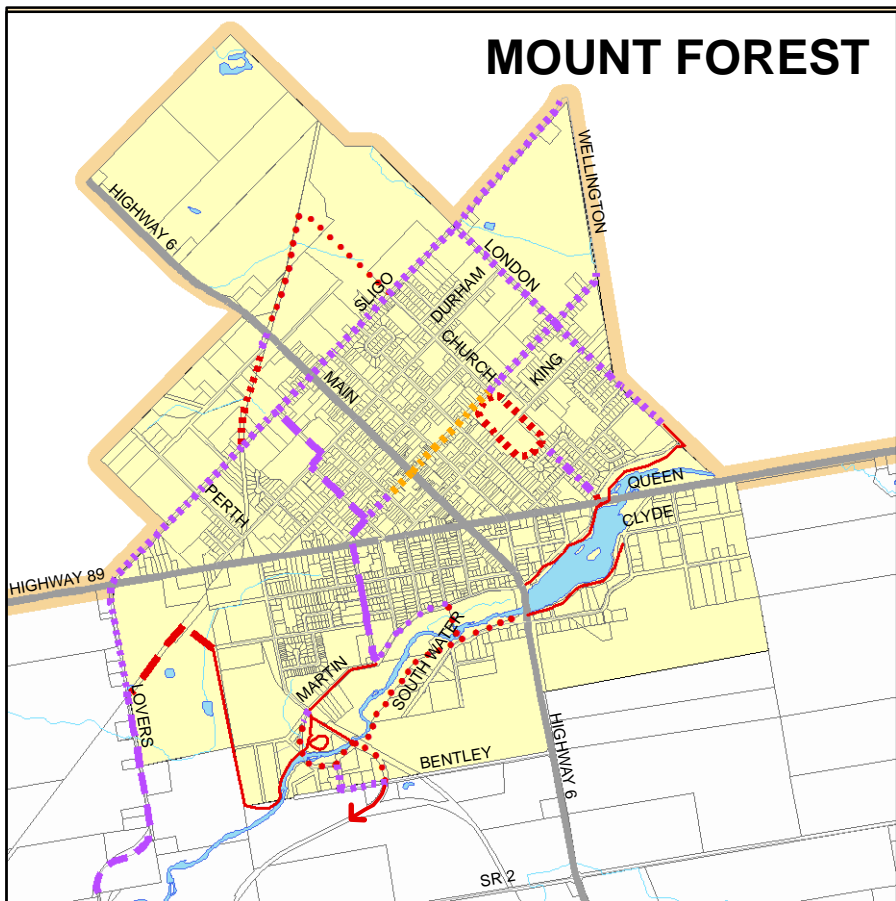


**COUNTY OF WELLINGTON
ACTIVE TRANSPORTATION PLAN
MAP 6.7 - PUSLINCH NETWORK IMPLEMENTATION (ENLARGEMENTS)**

- Legend**
- Existing**
 - Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
 - Years 1-10**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Years 11-20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Beyond Year 20**
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 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
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 - County Roads
 - Provincial Highway / Freeway
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 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
 - Hamlets / Urban Centres
 - Municipal Boundary

SEPTEMBER 2012





COUNTY OF WELLINGTON ACTIVE TRANSPORTATION PLAN

MAP 6.8 - WELLINGTON NORTH NETWORK IMPLEMENTATION (ENLARGEMENTS)

- Legend**
- Existing**
 - Existing Off-Road Secondary Route
 - Existing Multi-Use Trail
 - Existing Paved Shoulder
 - Existing Signed Route
 - Years 1-10**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Years 11-20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - Beyond Year 20**
 - Multi-Use Trail
 - Paved Shoulder Route
 - Signed Route
 - Bike Lane
 - Signed Route with Sharrows
 - County Wide Spine Route
 - Proposed Future Connection on Lands in Private Ownership
 - Proposed Bridge
 - Rail
 - Local Roads
 - County Roads
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 - County Forests
 - Forests Tracts owned by Conservation Authority or MNR
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 - Municipal Boundary





End-of-trip facilities are an important element of the active transportation system. For some users, good end-of-trip facilities can be the key factor in deciding whether or not to make a trip using an active mode (walking, cycling etc.) or their car. The development of end-of-trip facilities should be a priority for the Inter-Municipal Working Group, Public Health, County, Local Municipalities, local staff and respective partners in implementing the Active Transportation Plan. These facilities encourage cycling and pedestrian activities by improving convenience and feasibility.

End-of-trip facilities that encourage active transportation activities include elements such as:

- Convenient and secure bicycle parking and storage, which is a necessity for most cyclists. Bike racks can be provided for short term use, while bike lockers or bike cage style parking facilities are more appropriate for long-term use.
- Showers and change facilities at workplaces, which help to promote cycling for utilitarian purposes. Institutions with more than 20 employees / students should be encouraged to offer these facilities.

End-of-trip facilities will help to reinforce the message that the County and local municipalities are keen to take a lead role in Active Transportation and promote Wellington County as a cycling and pedestrian friendly community. In addition to meeting a critical need for cyclists and pedestrians, end-of-trip facilities can present the opportunity to partner with local service organizations and businesses throughout the County.

6.3.5 Maintenance

Recommendation 6-11:	The County and Local Municipalities should review and revise their annual maintenance budgets to accommodate the maintenance of Active Transportation Infrastructure. These budgets should be increased over time to correspond with the increase in the number of kilometres of Active Transportation facilities.	Short-term
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The Wellington County Active Transportation Plan is both an infrastructure and operations plan. Therefore, it requires infrastructure, program development, operations and maintenance funding to ensure its successful implementation and monitoring.

Operations costs include on-going funding related to implementing the Plan, preparing an annual progress report to Council on progress in implementing the Plan, working with Wellington-Dufferin-Guelph Public Health and other partners to develop and deliver safety, educational outreach and promotional programs, and performing network and infrastructure maintenance to achieve a state of good repair. This also includes staff resources, as well as management, administration and data collection (e.g. usage numbers, etc.).

The recommended County-wide network illustrated in Map 6-1 consists of over 700km of on-road facilities and approximately 160km of Spine off-road multi-use trails. The incremental cost to maintain bike lanes and paved shoulders is relatively low



compared to standard annual road maintenance budgets. Generally, most municipalities adjust maintenance budgets based on the number of kilometres of each facility and increase maintenance budgets relative to the length of new infrastructure added on an annual basis. For example, if five kilometres of pavement markings and bike stencils for bike lanes are added, then the annual maintenance budget is adjusted accordingly based on the owner's maintenance performance measures.

When determining maintenance costs for Active Transportation Facilities the following should be kept in mind:

- An absolute dollar value for maintenance costs was not calculated for either the on or off-road cycling network in Active Transportation Plan as the budget for maintenance will need to grow in an incremental fashion along with the incremental growth of the network. As each new network segment is added (either on or off-road), the impact to the operations budget should be calculated by County staff and local municipal staff.
- Maintenance costs for on-road facilities are estimated to range from \$5,000 to \$9,000 km/year depending on the facility type (paved shoulder with edgelines /signs, bike lane in urban area, painted lines vs. thermo plastic stencils etc.) and economies of scale gained from incorporating cycling facility maintenance in the current road maintenance programs. Annual maintenance can include but is not limited to line and stencil reapplication, replacement of bike lane and bike route signs, minor asphalt repairs (pothole patching and crack sealing), sweeping, snow plowing and replacement of older style catch basic grates with bicycle friendly grates.
- Maintenance of mature off-road multi-use trails in an urban setting, particularly in greenways and parks can range between \$4,000 to \$6,000 per linear kilometre of trail (3.0 m wide), depending on the level of service standard of a municipality. Annual maintenance can include drainage and storm channel maintenance, sweeping, clearing of debris, trash removal, weed control and vegetation management, mowing of grass along shoulders, minor surface repairs, repairs to trail fixtures (benches, signs) and other general repairs. Annual maintenance costs for off road-multi-use trails in rural areas such as those along abandoned railway lines can be significantly less (e.g. as low as \$300 to \$800 per kilometre per year).

It is recommended that the County and Local Municipalities and revise their annual maintenance budgets to accommodate the maintenance of Active Transportation Infrastructure. These budgets should be increased over time to correspond with the increase in the number of kilometres of Active Transportation facilities.



6.3.6 Risk Management and Liability

Exposure to potential lawsuits, and concerns from private landowners who grant easements or who are located adjacent to off-road pedestrian and cycling facilities are sometimes perceived as liability concerns. Bike lanes, paved shoulder bikeways and signed only routes generally fall into the same liability pattern as roadways and sidewalks, meaning that the County or local municipality generally only becomes liable if the facility is improperly designed, constructed, or maintained.

Even though multi-use trails are separated from the roadway, they still may legally fall under the definition of a “highway”, since bicycles are legally defined as vehicles. This is an important point because if the courts make this interpretation, it means that cycling facilities are covered under many of the same basic immunities as other highways. It also illustrates the importance of adhering to provincial, national or other established design and construction guidelines, as this will provide the greatest legal protection. Aside from proper design and operation of pedestrian and cycling facilities, Wellington County and local municipalities should address potential hazards associated with these facilities including accidents, theft, vandalism, and other problems. This becomes much more acute when these facilities are located along waterways and residential backyard fences.

The following methods of reducing risk are proposed for Wellington County the local municipalities and its partners to help minimize the liability associated with providing designated active transportation (pedestrian and cycling) facilities:

- Improve the physical environment, increase public awareness of the rights and obligations of cyclists and pedestrians and improve access to educational programs in order to demonstrate that efforts are being taken to reduce the likelihood of accidents occurring and lawsuits being initiated by injured parties;
- Select, design and designate facilities in compliance with the highest prevailing standards. Regulatory signs, as identified by the MTO Manual of Uniform Traffic Control Devices, should be used to indicate the applicability of legal requirements that might not otherwise be apparent;
- Design concept(s) should comply with all applicable laws and regulations (e.g. Ontario Highway Traffic Act, current County and Local by-laws etc.);
- Maintenance operations should conform to acceptable standards. If a hazard cannot be removed, it must be isolated with barriers or notified by clear warning signage;
- Monitor on a regular basis the physical conditions and operations of roadways and pathway facilities. All reports of hazardous conditions received from cyclists, pedestrians, police or others should be promptly and thoroughly investigated;
- Keep written records of monitoring and maintenance activities;
- Avoid describing or promoting routes or pathways as “safe” or “safer” than alternatives. Industry practices suggest that it is preferable for facility users to assess their capabilities themselves and govern their choices accordingly; and
- Maintain proper insurance coverage as a safeguard against having to draw payment for damages from the public treasury.



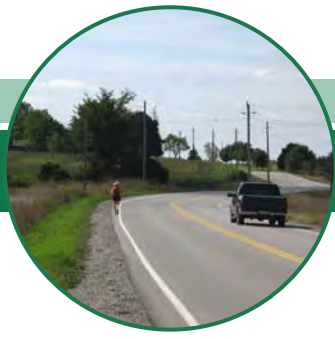
6.4 OUTREACH

A successful active transportation network is one that is actively and properly used. To this end, a complete strategy to promote and facilitate walking and cycling needs to address the “Five E’s”, which include:

- **Engineering:** The way in which walking and cycling facilities and amenities are planned, designed, constructed and maintained;
- **Education:** Informing and educating users of the active transportation system;
- **Encouragement:** Promoting walking, cycling and the use of the active transportation network;
- **Enforcement:** Ensuring that users of the active transportation network adhere to applicable rules and regulations;
- **Evaluation:** Monitoring the success of facilities and programs and making necessary adjustments and improvements

By adopting the Active Transportation Plan Wellington County has the opportunity to create a more cycling and pedestrian friendly environment for all of its residents as well as visitors. Infrastructure such as bike lanes, paved shoulders, trails, benches, pavement markings and sign treatments are all components of this Study, and will assist in creating this supportive environment. However, facilities and the implementation of the proposed network will not alone support a successful active transportation environment. Wellington-Dufferin-Guelph Public Health in collaboration with *WDG in motion* should expand upon their leadership role and work with the County and Local Municipalities and other levels of government to develop and implement an expanded outreach program. The outreach program will be used to help educate residents about the importance of improving air quality and reducing greenhouse gas emissions, pedestrian and cycling safety, and to encourage residents to walk and cycle more often for both utilitarian and recreational purposes. It is anticipated that the County will provide support but not lead the outreach initiatives proposed.

The framework set out in this following section recommends the implementation of new programs and continuation of existing initiatives in the areas of education, encouragement and promotion. These programs will support the many benefits of active transportation, and will help achieve the walking and cycling goals in the Official Plan, and other County and Municipal plans which support the development of active transportation facilities and policies. A key objective of the outreach strategy in this plan is to develop and enhance education programs that are targeted to existing and future active transportation facility users.



6.4.1 Education

<p>Recommendation 6-12:</p>	<p>Wellington-Dufferin-Guelph Public Health and the County and Local Municipal partners should consider the implementation of cycling and pedestrian/trail education programs to educate residents on walking and cycling. This should include a strong focus on educating children and youth on the use of sustainable modes of transportation so they may be more inclined to choose active modes of transportation when they are adults. Initiatives may include enhancements of existing programs and/or the development of new ones.</p>	<p>Short-term, ongoing</p>
<p>Recommendation 6-13:</p>	<p>The Design Guidelines identified in Wellington's Active Transportation Plan Appendix A should be considered by Wellington-Dufferin-Guelph Public Health, the County and Local Municipalities as active transportation educational materials are developed.</p>	<p>Short to medium-term</p>
<p>Recommendation 6-14:</p>	<p>The County in partnership with local municipalities and Wellington Dufferin-Guelph Public Health should develop and distribute hard copy and electronic information on the Active Transportation routes (e.g. newsletters, mapping and promotional materials etc.).</p>	<p>Short to medium-term</p>

Education and promotion can have a positive influence on the behaviour and attitudes of pedestrians, cyclists, motorists and the general public to produce safer conditions for all, and provide incentives to encourage more active transportation. Formal pedestrian and cycling education and training encourages people to use alternative modes, and can shift their transportation choices to walking and cycling. *WDG in motion* should provide support for outreach initiatives.

People of all ages and abilities should be educated on the proper use of the County's cycling network and pedestrian/trail system for both recreational and commuting purposes. Implementing educational programs will teach proper pedestrian habits, improve cycling skills and raise public awareness of the benefits of walking and cycling.

The following sections outline methods of achieving the overall objectives of education in the Wellington County Active Transportation Plan.



Pedestrian and Cycling Education Information

Making active transportation information easily available is a core element of any educational strategy. Wellington-Dufferin-Guelph Public Health along with the County and local municipal partners should consider the implementation of cycling and pedestrian/trail education programs and partner with other not-for-profit organizations, school boards, and agencies to educate residents on walking and cycling. Wellington-Dufferin-Guelph Public Health and *WDG in motion*, the County and local municipalities should look to examples of other successful materials and programs from other jurisdictions across North America and municipalities and organizations across North America in developing a variety of educational materials that are tailored to local needs. Many of these examples have a host of contributing partners, including Healthy Living, Ministry of Transportation of Ontario, Ministry Tourism Culture and Sport, Ministry of Health and Long Term Care, Transport Canada, Health Canada and the Canadian Safety Council, as well as not-for-profit organizations like Green Communities and the Share the Road Coalition as well as private sector sponsors. This underscores the importance of cooperation and the need to share expertise and resources. Educational information should be developed in a language and style appropriate for the age group being targeted, such as children and seniors.

Newsletters or digital e-newsletters could focus on active transportation, with information about existing and planned facilities, statistics, recommended routes and destinations, safety and training information, and tips for pedestrians and cyclists, etiquette and respect for private landowners property, particularly in the rural agricultural areas. They could also include information about initiatives by others, for example walking and cycling events (local trail organizations, charities, etc.), bicycle parking at local destinations (businesses and County / County and Municipal facilities) and the benefits of walking and cycling (Wellington-Dufferin-Guelph Public Health and *WDG in motion*, etc.).

Wellington-Dufferin-Guelph Public Health, local municipalities could also develop guides to active transportation that address specific concerns, such as those related to:

- Implementation of the County Wide Active Transportation Study Plan;
- Pedestrian and cyclist safety;
- Walking or cycling to school or work;
- Winter / inclement weather conditions;
- Particular age groups, such as elderly persons or young children;
- The rules and regulations for pedestrians and cyclists, plus walking / cycling etiquette for on-road and off-road routes;
- The benefits of active transportation (health, financial, environmental, etc.); and
- Intermodal connections, for example between cycling and transit, or walking and carpooling.



Distributing Active Transportation and Recreation Education Information

Information on active transportation education could be provided to residents, employees and visitors to Wellington County through the following methods:

- Wellington-Dufferin-Guelph Public Health, *WDG in motion* and/or the County's website, ideally via a specific web page(s) dedicated exclusively to pedestrian and cycling issues, with posted information, downloadable files, and links to other relevant walking- and cycling-related websites;
- Using local community guides to distribute information about the network as well as educational and promotional information related to Active Transportation;
- The production of hardcopy pamphlets and brochures to inform and educate residents on safe operating procedures for pedestrians, cyclists and other road and trail users, which could be made available at County and local municipal facilities (e.g., community centres, arenas, libraries, etc.), delivered as part of mailings (e.g. Councillor newsletters, resident information mailings, etc.), distributed at events (e.g. County Public Works Week events, Canada Day celebrations, etc.) and circulated through community partners (e.g. local municipalities within Wellington County, Wellington County OPP, Wellington-Dufferin-Guelph Public Health, *WDG in motion*, etc.); and
- The implementation of education programs through partnerships between the Wellington-Dufferin-Guelph Public Health, local municipalities and Wellington County, agencies, and other groups to educate residents on walking and cycling in general.

Cycling, Walking and Children

The mobility needs of children are often overlooked in transportation and land use planning. Wellington-Dufferin-Guelph Public Health should continue educate children on the use of sustainable modes of transportation such as walking, cycling and public transit (where available), and reduce their auto-dependency (as experienced through their parents) so they may be more inclined to choose active modes of transportation when they are adults. The University of Winnipeg-based Centre for Sustainable Transportation has studied these issues and produced *Child and Youth Friendly Land Use Transport Planning Guidelines for Ontario*. This document provides reasons why land use and transportation planning should be made more children and youth friendly, sets out 27 guidelines for municipalities or other agencies and provides a discussion of implementation issues. These guidelines should be considered when active transportation educational materials are developed, particularly for those that specifically target children and youth. Some of the key principles in the guidelines include:

- Identify where children and youth want to go or need to go and, to the extent possible, provide ways of getting there by foot;
- Examine routes being used by children to ensure that they are as safe and usable by them as possible and incorporate the same principles into designs for future routes ;
- For younger children, arrange walking school buses and other means of supervision;
- Ensure that sidewalks are kept clear of snow;



- For older children and youth, ensure important destinations that are more than a comfortable walk away can be easily accessed by bicycle;
- Ensure that sidewalks are suitable for very young children with their tricycles and bicycles;
- Ensure that bicycle riders are well provided for at intersections and have sufficient priority for forward movement; and
- At destinations, provide secure, convenient bicycle parking.

6.4.2 Encouragement

Recommendation 6-15:	Community-Based Social Marketing (CBSM) techniques should be explored as a potential method of delivery for marketing and promotional efforts related to the Active Transportation Plan.	Short-term
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People can be encouraged to adopt more sustainable transportation habits, including walking and cycling more often, through Community-Based Social Marketing (CBSM). CBSM is a practical approach that stresses direct contact among community members and focuses on removing structural barriers that prevent people from changing their behaviour. The County, local municipalities and other key partners such as Wellington-Dufferin-Guelph Public Health should use Community Based Social Marketing in marketing and promotional efforts related to the Wellington County Active Transportation Plan.

A CBSM program involves five main steps:

- Identify the desired behaviour change;
- Identify barriers;
- Design the program;
- Pilot the program with a small segment of the community; and
- Evaluate and improve the program on an ongoing basis as it is implemented.

A number of examples of CBSM programs from other communities show how public attitudes and behaviours can effectively be influenced, and include “tools” such as:

- **Obtaining a Commitment** – People are asked to pledge or agree to carry out a specific action. For example the City of Mississauga’s “Towards an Idle-Free Zone” anti-idling campaign asked drivers to commit to reducing the frequency and duration of engine idling and to declare their commitment by placing a decal on their vehicle’s windshield.



- **Prompts** – Prompts are used to remind people to perform a particular action. For example: the City of Ottawa’s “Walk the Talk” program provided participants with a bright yellow card and memo holder to remind them to track their walking, cycling and transit trips.
- **Personalized Communication** – Information is tailored to a target audience’s specific needs, with particular information and images. For example: the City of Vancouver’s “TravelSmart” program provides a form to interested households with which they can request specific materials on select topics that suit their travel needs, such as transit maps, cycling guides, trail maps, bike shop discount coupons, etc.
- **Norm Appeals** – Making group standards, or the behaviour and attitudes that people observe around them, more apparent to encourage a desired behaviour. For example: the national “Commuter Challenge” encourages the senior staff of participating workplaces to lead by example in adopting more sustainable transportation choices for their commute.
- **Word-of-mouth** – Information that people hear from family, friends or colleagues, which they often respond best to because it comes from someone they trust. For example the City of Seattle’s “In Motion” initiative provided lawn signs to participants who received information about travel options, stimulating conversation within their neighbourhoods about the program.
- **Overcoming Specific Barriers** – Information or initiatives targeted at specific issues or groups that have been identified as significant. For example, British Columbia’s “Bike Smarts” program provided specific information about bicycle safety to parents and children, since this was identified as the primary concern for parents.
- **Incentives and Disincentives** – Rewards for desired behaviour or punitive measures for the behaviour being discouraged. For example the Federal Government’s change to Income Tax legislation to make the cost of monthly transit passes deductible in order to encourage regular transit use.
- **Feedback** – Demonstrating the outcomes, particularly the positive impacts, or behaviour changes. For example: the successes of the City of Boulder’s “Go Boulder” program were publicized in local newspapers and on the community television channel, highlighting the results of the program’s initiatives aimed at encouraging residents to shift to more sustainable travel modes.

Leadership by Example

Expanding the utilitarian active transportation population will be essential to reaching future mode share targets. To achieve this, employers should be motivated to encourage and support walking, cycling and the use of non- motorized vehicles among their employees. Wellington County, the local municipalities and *WDG in motion* can show leadership in promoting active transportation and set an example for others to follow.

A comprehensive approach should be put in place to encourage municipal employees to walk or cycle to work if they live close to their place of work. A Pollution Probe Survey in 2001 provided information on the number of employers in the United States and Canada that have included walking / cycling-supportive initiatives and programs to encourage more employees to walk or ride their bicycles to work and decrease the use of single-occupant motor vehicles for work related trips. Initiatives include bike



racks, showers, lockers, cycling subsidies and transportation allowances etc... In addition to reducing greenhouse gas emissions these programs help to reduce personal expenses, increase workplace morale and can be a valuable employee recruiting and retention tool.

The County, local municipalities and Wellington-Dufferin-Guelph Public Health can lead by example in encouraging walking and cycling by:

- Creating an incentive program and develop contests for employees who walk or cycle to work;
- Organizing a bicycle mentoring program that allows employees who want to cycle to work to find a colleague with whom they can share the ride;
- Making CAN-BIKE or similar courses available to County, local municipal and *WDG in motion* staff to maximize their exposure to safe cycling skills when commuting to work and when cycling for recreation;
- Ensuring bicycle access to municipally-owned buildings by conducting an inventory of trip-end facilities available at these buildings, then create a prioritized schedule to install facilities;
- Incorporating trip-end facilities in building lease negotiations for new leased space; and
- Monitor and evaluate active transportation route usage and public feedback on their experiences to continually improve the usage for on and off-road active transportation routes.

6.4.3 Enforcement

Recommendation 6-16:	The County, local municipal partners and Wellington-Dufferin-Guelph Public Health should work with Wellington County OPP to develop a safe cycling campaign modeled after the “Safely Sharing Halton’s Roadway” campaign	Short-term
Recommendation 6-17:	Enforcement activities of the OPP should be supplemented by local By-Law enforcement officers for issues relating to sidewalk cycling, misuse of bicycle and pedestrian facilities and misuse of trails etc.	Medium-term

Enforcement is a critical element to overall pedestrian and cyclist safety. The main goal of any enforcement program is to encourage users of the network to be aware of their rights and responsibilities which in turn can be an important factor in reducing incidents that cause property damage, injury and death. Enforcement initiatives should be directed at all sidewalk, road and pathway users, not only pedestrians and cyclists, since all should be aware of proper operating procedures in the vicinity of pedestrians and cyclists.



The Ontario Provincial Police (OPP) serves the entire county through Wellington County detachment offices in Palmerston, Mount Forest, Fergus and Rockwood. To strengthen the effectiveness of enforcement in Wellington County, the County, in association with Wellington County OPP, should consider the following:

- The creation of cycling patrols and safety blitzes along walking and cycling routes and pathways enforcing safe operating procedures for pedestrians, cyclists and other sidewalk, road and pathway users;
- The collection of accurate cycling collision data in an effort to help identify any potential problem areas as well as safety and enforcement priorities;
- The development of materials to inform pedestrians and cyclists about the steps they should take if they are involved in a collision; and
- The development and delivery of a Share the Road safety campaign to educate both cyclists and motor vehicle operators on proper and safe cycling. Halton Region in collaboration with Halton Regional Police has developed a safety campaign which includes a brochure called "Safely Sharing Halton's Roadways (http://www.halton.ca/cms/one.aspx?objectId=12599#Share_the_Road). A similar campaign could be developed through collaborative effort with Wellington County OPP.

It is important that police officers receive instruction in the proper training of cyclists and cyclists' rights, and understand the operating characteristics of bicycles to better identify causal factors when investigating cycling collisions. Once trained, officers can aid in the instruction of safe cycling at special events. The Wellington County OPP should build upon current initiatives to be an active member in the development and delivery of cycling safety programs in the County.

Municipal By-Law enforcement should be used to support and supplement the work of the OPP. Educating users about the dangers of sidewalk cycling and enforcing permitted uses on trails and parking regulations near trail access points are two areas where local By-Law enforcement can support and complement the work of the OPP.

6.4.4 Evaluation

Ongoing monitoring and evaluation of the network implementation, facilities, programs and user satisfaction is essential to refining the delivery of Active Transportation in Wellington County. Regular monitoring will enable planners, designers and engineers to remain abreast the AT system across the County and to make improvements over time that are appropriate for the County and local municipalities. Section 6.6 describes potential Performance Measures that could provide some of the background data that will assist staff in making appropriate decisions about priorities, use, facility type etc..



6.5 THE INVESTMENT

Recommendation 6-18:	The County and local municipalities should adopt the proposed network Phasing Plan as the guide for implementing the Active Transportation network.	Short-term
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There are numerous benefits that emphasize why Active Transportation in Wellington County is a sound investment. Chapter 2 of this report details the various benefits of walking and cycling in terms of health and fitness benefits; transportation benefits; environmental benefits; economic benefits and tourism benefits. The County's investment in the Active Transportation Plan can be expected to yield benefits in all of these areas. In addition the costs can be justified as part of the cost of providing a more sustainable, balanced and efficient transportation system in Wellington County. The public and stakeholder input received during the preparation of the Plan indicate strong support for improving pedestrian and cycling facilities and programs to promote these activities in the County.

Appendix D lists unit costs for the construction of various elements of the Active Transportation network. These are based on averages obtained from recent construction projects from across Ontario, and were used to develop the network implementation cost estimate presented in **Table 6.1**. For reference purposes, Appendix D also includes guideline unit costs for individual items/amenities that may be considered on a site specific basis. Unit costs (in 2012 dollars) are based on the following assumptions:

- The unit costs assume typical or normal/average conditions for construction;
- Estimates do not include the cost of property acquisitions, utility relocations, driveway/entrance restorations, permits or approvals for construction;
- Annual inflation, which includes increased cost of labour, materials, fuel etc., is not included;
- Professional services and/or staff time for detailed design; and
- Applicable taxes are not included.

As each network segment becomes a priority for construction, a more detailed assessment as part of the design process will be required to determine site-specific conditions and design details. Detailed cost estimates can then be developed from the more detailed assessment (refer to Section 6.2.3).



Table EX.3: Network Implementation Costs By Phase

Short Term- Years 1-10			
Facility Type		Length (km)	Cost
Short Term (Years 1-10)	Multi Use Trail (Spine Off-Road Route)	11.6	\$1,740,000
	Signed Route	138.4	\$55,360
	Signed Route with Sharrows	5.1	\$35,700
	Paved Shoulder	43.4	\$2,387,000
	Bike Lane	0	\$0
Subtotal Short Term		198.5	\$4,218,060
Mid Term Year- Years 11-20			
Facility Type		Length (km)	Cost
Mid Term (Years 11-20)	Multi Use Trail (Spine Off-Road Route)	43.4	\$6,510,000
	Signed Route	183.8	\$73,520
	Signed Route with Sharrows	12.4	\$86,800
	Paved Shoulder	93.9	\$5,164,500
	Bike Lane	0.8	\$160,000
Subtotal Mid Term		334.3	\$11,994,820
Long Term Year- Beyond Year 20			
Facility Type		Length (km)	Cost
Long Term (Beyond Years 20)	Multi Use Trail (Spine Off-Road Route)	10.2	\$1,530,000
	Signed Route	101.9	\$40,760
	Signed Route with Sharrows	7.8	\$54,600
	Paved Shoulder	102.2	\$5,621,000
	Bike Lane	0	\$0
Subtotal Long Term		222.1	\$7,246,360
Signing of Existing Facilities ⁽¹⁾		120.5	\$48,200
Grand Total-All Phases		875.4	\$23,507,440
(1) Includes an allowance for signing of existing facilities other than the 136.8km of existing Secondary Trails			



Active Transportation facilities in the network can generally be categorized according to whether they are on or off-road and according to the ownership of the right-of-way through which they pass. Table 6.2 is a proposed a cost-sharing program for the implementation of the designated Active Transportation network based on these 2 criteria. The County and local partners should review the details of the cost sharing arrangement for the various scenarios as outlined and refine the scenarios as required.

Table 6.2 Potential Cost Sharing Program for Facility Construction		
	DESCRIPTION	PROPOSED COST SHARE
Scenario 1	On-road facility on a County Road	100% County, 0% Local Contribution
Scenario 2	Off-road facility within a County road right-of-way	100% County, 0% Local Contribution
Scenario 3	On-road facility on a Local road	50% County, 50% Local Contribution
Scenario 4	Off-road facility within a Local right-of-way	50% County, 50% Local Contribution
Scenario 5	North-South or East-West Spine Off-road facility within or outside of a road right-of-way	100% County, 0% Local Contribution
Scenario 6	North-South or East-West Spine On-road facility on a County or Local Road	100% County, 0% Local Contribution
Scenario 7	Off-road facility outside a road right-of-way (other than the North-South or East West Spine)	0% County, 100% Local Contribution

6.5.1 The Active Transportation Partnership Seed Fund

Recommendation 6-19:	The County and local municipal partners should review and refine the proposed Active Transportation Seed Fund and develop a terms of reference for the application process.	Short-term
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The Active Transportation Partnership Seed Fund is proposed as a mechanism to assist local municipal partners with mobilizing the resources necessary to build those portions of the network that are on lands that they own or manage. On an annual basis the County would contribute annual funding to the Partnership Seed Fund that can be accessed by local municipal



partners through an application process. The funds would be available on a first-come-first serve basis with a deadline each year for the application (e.g. March 31). The annual allocation would be divided among the number of successful applications up to a maximum of seven successful applications per year. If there are no successful applications in a given calendar year the fund would be allowed to accumulate for use in upcoming years. In order for a particular project to be eligible for the Active Transportation Partnership Seed Fund several criteria would have to be satisfied, in particular:

- The fund is intended for construction and projects must be “shovel-ready”, therefore any necessary studies and/or design work must be complete and approved by the local municipal Council;
- Any required approvals must be in place (e.g. Conservation Authority); There must be a demonstrated commitment at the local level to be eligible for the fund; therefore the local municipal Council has approved the local contribution of the budget for the project based on the cost sharing arrangement described in Table 6.2; and
- The local municipal Council must have approved the County of Wellington Active Transportation Plan at the local level.

The following example has been prepared for illustrative purposes. Consider an off road route within a local road right-of-way with an estimated construction value of \$200,000 and an annual allocation of \$100,000 to the Active Transportation Seed Fund by the County:

- According to the cost sharing arrangement the County share would be 50% (\$100,000) and the Local share would be 50% (\$100,000)
- The local municipality applies for funding under the Active Transportation Partnership Seed Fund, the application is complete and deemed to be eligible for the funding
- In that particular calendar year the County receives 4 applications by the deadline and all 4 meet the requirements for local commitment etc., therefore funding pool is divided equally (i.e. \$25,000 per project)
- The County share on this project effectively becomes \$125,000 and local contribution becomes \$75,000. The local municipality may choose to reallocate the additional \$25,000 originally committed to complete their share of the project or use it on the project for additional enhancements or increase the length of the route being implemented. Committing the additional original amount to project enhancements or additional route length is preferred.

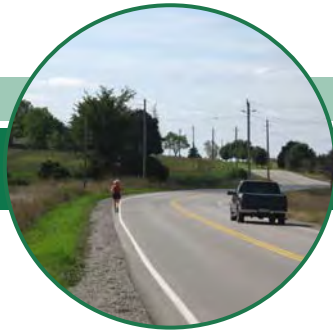
6.5.2 Other Sources of Funding

Recommendation 6-20:	In addition to capital funding the County and local partners should explore other outside partnership, cost-sharing and funding opportunities for the implementation of the Active Transportation Network.	Short-term
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To assist in reducing taxpayer costs outside funding opportunities should be pursued. Recently funding sources made available for Active Transportation, cycling, pedestrian and trail projects have been increasing popularity and the growing importance of their relationship to multi-modal transportation systems and overall community health. It is expected that this trend will continue. Some outside funding opportunities may include:

- Federal / Provincial Gas Tax;
- Transport Canada's MOST (Moving on Sustainable Transportation) and ecoMobility (TDM) grant programs;
- Federation of Canadian Municipalities Green Municipal Fund;
- Ontario Ministry of Health grant programs and partnership streams such as the Healthy Communities Fund and promotional initiatives related to health/active living/active transportation ;
- Ontario Ministry of Environment Community Go Green Fund (CGGF);
- Ontario Ministry of Transportation Demand Management Municipal Grant program;
- Various Federal and Provincial Infrastructure/ stimulus programs that are offered from time to time;
- The Ontario Trillium Foundation that was recently expanded in response to the money collected throughout the Province by casinos;
- The Trans Canada Trail Foundation (currently as part of the Foundation's "Connection Plan"). Only for those sections of the network that are designated as part of the Trans Canada Trail in the city would be eligible);
- Human Resources Development Canada program that enables personnel positions to be made available to various groups and organizations;
- Corporate Environmental Funds such as Shell and Mountain Equipment Co-op that tend to fund small, labour-intensive projects where materials or logistical support is required;
- Corporate donations which may consist of money or services in-kind, and have been contributed by a number of large and small corporations over the years;
- Potential future funding that might emerge from the Province in rolling out the Ontario Trails Strategy;
- Service Clubs such as the Lions, Rotary and Optimists who often assist with high visibility projects at the community level; and
- Private citizens' donations/bequeaths, and this can also include a tax receipt for the donor where appropriate.



6.6 PERFORMANCE MEASURES-MEASURING THE SUCCESS OF THE PLAN

Recommendation 6-21:	The County and local partners should review the performance measures and embark on a program to developing base line data on Active Transportation in Wellington County.	Short-term
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Implementation of the Wellington County's Active Transportation Plan is expected to begin in 2013 (with some initiatives possibly starting in 2012). It is recommended that the County, in partnership the local area municipalities and Wellington-Dufferin-Guelph Public Health implement the Plan in accordance with the proposed phasing taking into consideration potential capital funding made available by the County and local municipal Councils as well as additional funding and partnership opportunities as they arise.

Collecting data to evaluate the different and changing aspects of pedestrian and cyclist behaviour will assist in evaluating the effectiveness and overall contribution of various activities to achieve the stated vision and goals of this plan. Data collection has begun and will continue to be undertaken in 2012 in order to support the Plan's proposed active transportation initiatives. This should include conducting a public attitudes survey in partnership with Wellington-Dufferin-Guelph Public Health or other partners.

Over time, performance monitoring should examine user preference for facilities, levels of use and other key factors that will enable staff responsible for implementing the plan to make adjustments to both infrastructure and programs as recommended in the Plan and to "fine-tune" them to meet local needs and desires.

- **Results may be used to:** Determine the success of implementing various types of pedestrian and cycling facilities.
- **Please note that:** Caution must be used in relying on an immediate response to a given improvement. An extended timeframe should be established to ensure that pedestrian and cycling awareness initiatives are in place to assist in changing travel patterns and habits.

Assessing the impact and cost of the implementation program might be based on information such as:

Data collection could be used to:

- Confirm the overall direction and implementation of the Active Transportation Plan;
- Confirm statistics on the number and type of users in various areas throughout the network;
- Verify the route selection process; and
- Identify the supply and demand for bicycle parking.

The built environment (defined as the human-constructed physical environment) has a significant effect on population health. In order to support the implementation of the Active Transportation Plan and evaluate its' effectiveness, indicators for active transportation are needed. Indicators are a way to assess the status and progress of activities. They are the measured and self-reported numerations of health-related phenomena and action steps that lead to changes in health behaviour.



- Origin/destination counts;
- Screen line counts on a finer scale that are appropriate to pedestrian and cycling travel patterns;
- Intersection counts to coincide with routes on which improvements are proposed, and on parallel routes; and
- User counts on major trail systems.

This information should be collected every two to three years (maximum every 5 years) and during the cycling season. Data collected through evaluation/monitoring programs along with information collected through on-going public consultation exercises, such as user surveys and public attitude surveys conducted every five years, will inform and assist in preparing the list of annual priorities and measuring the performance of the Plan. A component of measuring the implementation of the Plan and its success in meeting objectives is to establish performance measures and targets.

Table 6-3 provides an extensive list of possible performance measures which should be considered by the Inter-Municipal Working Group. A short-list should be developed from this suite of parameters, targets should be established and data collection should begin immediately so that a base line for Active Transportation can be established in Wellington County. In addition to some staff time (e.g. Wellington-Dufferin-Guelph Public Health and *in motion* the establishment of performance measures, collection and analysis of data, development of relevant recommendations and adjustments to performance targets could be part of a scope of work for seasonal staff and/or students from post-secondary institutions who are studying community design and liveability. Results of any such work should be reported to Council (County and local Councils) on a regular basis through an annual information report so they can remain informed about the progress being made on the Active Transportation initiative as well as the challenges encountered along the way and proposed budget for the upcoming year..

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
1. Number of kilometres of built cycling infrastructure Measurement: Kilometres of existing routes	27.5km (e.g. paved shoulders but not yet signed)					X	X
2. Number of kilometres of built trails as part of the Active Transportation Plan Measurement: Kilometres of existing routes	94km (only those classified as Spine off-road routes were included)				X	X	X
3. Number of people within a 2.5 km radius of a trailhead	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X
4. Number of destinations within a 2.5 km radius of a trailhead (i.e. commercial, commuting, business etc.)	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
5. Distance traveled by trail participants to use a trail	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	
6. Number of destination points found along an AT route	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X
7. Number of trail access points	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	
8. Community investment in AT facilities per 1,000 residents	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)					X	X
9. Kilometres of new on and off-road AT and trail facilities implemented as per the County's Active Transportation Plan.	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
Trail Amenity Design Indicators							
10. Available signage along the trail (e.g. trail heads, points of interest, etc.)	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X
11. Features that contribute to overall Trail attractiveness and use (e.g. trail user amenities such as waste receptacles, signage, seating areas etc.)	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	
Walkability & Bikeability Indicators							
12. Percentage of children that walk or bike to school in the County	TBD				X	X	
13. Percentage of reported pedestrian and bicycle collisions per 1,000 population in the County	TBD – Wellington OPP	Reduction	Reduction	Reduction	X	X	X

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
14. Percentage of all County residents who commute to work primarily by walking or cycling	8% (2006 Census)				X	X	X
15. Percentage of elderly residents that undertake day to day activities by walking or cycling	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X		X
16. Number of users on the trail facilities during different times of the day and different days of the week (e.g. weekdays vs. weekends, 7:00am-10:00am, 10:00am-3:00pm, 3:00pm to 7:00pm)	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X		X
17. Number of users on the on-road cycling facilities during different times of the day and different days of the week (e.g. weekdays vs. weekends, 7:00am-10:00am, 10:00am-3:00pm, 3:00pm to 7:00pm)	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X		X

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
18. Number of bicycle parking spaces located at businesses, schools and community facilities	TBD				X	X	X
19. Average amount of time spent on the Active Transportation and trail systems during an average trip/outing	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X
20. Number of visitors on average who come to Wellington County to use the Active Transportation and trail systeml	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X		X
21. Amount of money spent by visitors within a community as a result of Active Transportation and trail facility use	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
Active Transportation & Trail Outreach Indicators							
22. Number of schools and students participating in pedestrian or bicycle safety education programs or events.	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X		X
23. Number of trail / hiking and cycling Clubs per 1,000 residents, or aggregate membership numbers per 1,000 residents	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	X
24. Number of events organized around trail use and Active Transportation	TBD – 2012 Data (Wellington-Dufferin-Guelph Public Health)				X	X	
25. Availability and accuracy of mapping for trail and AT facilities throughout the County	TBD – County of Wellington & Local Municipal Documentation				X	X	

Table 6.3 –Active Transportation Performance Measures

Performance Measures	Existing Benchmarks	Target 1: Phase 1 (0-10 years)	Target 2: Phase 2 (11-20 years)	Target 3: Phase 3 (20+ years)	Relevance to Community Interests	Recognition within the Literature	Application to Trail Initiatives & Programs
26. Consistency of mapping with regard to actual trail and route distances, etc. between all guides, websites, Council documents etc.	TBD – County of Wellington & Local Municipal Documentation				X	X	
27. Consistency of mapping with regard to corresponding trail signage and marking	TBD – County of Wellington & Local Municipal Documentation				X	X	



7.0 SUMMARY OF RECOMMENDATIONS

For ease of reference this section provides a consolidation of all recommendations in Chapters 4, 5 and 6 of the Active Transportation Plan. They are presented in tabular format with the following headings:

- **Recommendation:** The recommended action or strategy presented in the main body of the report
- **Page Number** The page number of the recommendation as found throughout the chapters of the report
- **Timing:** Identifies the proposed timing for the recommended action to be completed. Those that are noted as “ongoing” should begin immediately and will be continued throughout the life Active Transportation Plan
- **Responsibility:** Identifies the agency that will take the lead for the implementation of the proposed initiative
- **Funding:** Identifies a cost for each recommended action
- **Potential Partners:** Identifies potential partners that could be engaged throughout the implementation process

Table 7.1 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-1	The next update to the County Official Plan should include policies related to Active Transportation, specifically: (a) Overarching policies in the Transportation Section of the Official Plan that reference pedestrian, cycling and other forms of active travel as suggested in Section 4.1 of the Wellington County Active Transportation Plan ; and (b) References to the Wellington County Active Transportation Plan as the guiding document for detailed policies and guidelines related to Active Transportation in Wellington County.	4-1	X			County of Wellington	Existing Resources	N/A
4-2	Explore land use planning initiatives and policy development such as mixed land use, higher density urban areas and pedestrian and cyclist friendly streetscapes to promote / facilitate an increased quality of life and liveability within the communities of Wellington County.	4-4		X		County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health
4-3	Strive to continually improve connectivity for pedestrian and bicycle travel through local neighbourhoods, between communities, across the County and to neighbouring municipalities.	4-4		X		County of Wellington	Existing Resources	Local Municipalities Bordering Counties and Municipalities

Table 7.1 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-4	Build upon the existing Safe Routes to School Program throughout the County in collaboration with the WDG Safe Routes to School Committee.	4-4		X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health
4-5	The County and local municipalities should consider adopting a Pedestrian Charter similar to the Town of Minto to help facilitate and promote the development of a walkable and pedestrian friendly environment throughout the County.	4-4		X		County of Wellington	Existing Resources	Local Municipalities
4-6	Staff review the Development Charges Bylaw for the County as well as the local municipalities to ensure that it includes sufficient language / clauses to enable the use of Development Charge funds to build new, and improve existing AT routes and trail facilities in locations where it can be demonstrated that the need is the result of County or municipal growth.	4-6	X			County of Wellington	Existing Resources	Local Municipalities
4-7	The County and local municipalities should develop/refine policies and processes for working with the development community to ensure that Active Transportation facilities are planned, designed and constructed as part of the development process.	4-7	X	X		County of Wellington	Existing Resources	Local Municipalities Local Developers

Table 7.1 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-8	Staff will review the suggested strategies for ongoing public participation related to implementing Active Transportation facilities in existing established areas and prepare a process that is appropriate for the County of Wellington and the local municipalities.	4-9	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health
4-9	Where proposed Active Transportation facilities identified in the Active Transportation network are within the study area of an Environmental Assessment (EA) for other municipal infrastructure projects, the Active Transportation facility or trail shall form an integral component of these projects for review and implementation.	4-9	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table 7.1 – Chapter 4 – Planning for Active Transportation

Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Lead Responsibility	Funding	Potential Partners
4-10	<p>The County and local municipalities should:</p> <p>a) Thoroughly examine the potential to use unopened road allowances as potential Active Transportation routes prior to disposing of them/selling them to adjacent land owners;</p> <p>b) Thoroughly examine the potential to use abandoned railway corridors as potential Active Transportation routes prior to declaring no interest in purchasing or leasing them; and</p> <p>c) Consider and investigate the potential to utilize utility corridors in urban and rural areas as Active Transportation routes.</p>	4-16	X			County of Wellington	To be Determined	Local Municipalities
4-11	<p>The County and local municipal partners should develop an acquisition strategy for proposed Active Transportation routes on privately owned lands as illustrated in the recommended Network Map using techniques as described in Appendix C of the Active Transportation Plan.</p>	4-17	X			County of Wellington	Existing Resources	Local Municipalities Conservation Authorities

Table 7.2 – Chapter 5 – The Active Transportation Network

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
5-1	The design standards and guidelines prepared as part of the Wellington County Active Transportation Plan are the guiding document regarding the construction of cycling and trail facilities throughout the County and are intended to inform and support the details provided in other documents used for implementation.	5-7	X	X	X	County of Wellington	Existing Resources	Local Municipalities
5-2	Staff responsible for the design and construction of Active Transportation facilities should remain current regarding best industry design practices.	5-7	X	X	X	County of Wellington	Existing Resources	Local Municipalities
5-3	Local area municipalities should develop local trail master plans to complement and connect seamlessly with the county-wide active transportation network. This will allow each municipality to respond to their unique trail needs and priorities at a local level.	5-7		X	X	Local Municipalities	To be Determined	County of Wellington
5-4	The active transportation network as identified in the Wellington County Active Transportation Plan should be adopted by the County and local municipalities and consideration should be given to including it as a schedule in future updates of the County and local municipal Official Plans (where local Official Plans exist).	5-20	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table 7.2 – Chapter 5 – The Active Transportation Network

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
5-5	Recognize that the Active Transportation network will change over time as new opportunities offered by unopened road allowances, hydro rights-of-way, existing abandoned rail corridors, open green-space and future roadway improvements become available. To respond to new opportunities changes to the network can be approved at the Director level without the need for an Official Plan Amendment.	5-20	X	X	X	County of Wellington	Existing Resources	Local Municipalities

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-1	The County should adopt the 20+ year active transportation network implementation plan and use it to guide the implementation of the network over time.	6-2	X	X	X	County of Wellington	To be Determined- Subject to Annual Budget Deliberations	N/A
6-2	The County should take the lead in establishing an Inter-Municipal Active Transportation Working Group including but not limited to staff representatives from the County, local municipalities, Wellington-Dufferin-Guelph Public Health and other key agencies as determined.	6-2	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health Municipal Councillors OPP Wellington-Dufferin-Guelph Public Health Conservation Authorities Bordering Counties & Municipalities

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-3	The County should take the lead in establishing an Active Transportation Citizen's Advisory Committee including but not limited to representatives from local advocacy groups, citizens-at-large, local businesses and other key groups as determined.	6-2	X			County of Wellington	Existing Resources	Local Municipalities Local Stakeholders & Interest Groups Citizens At Large & Local Businesses School Boards & Representatives
6-4	The County should coordinate active transportation network implementation with the County's Engineering Services Department Five-Year Road Rehabilitation.	6-2	X			County of Wellington	To be Determined-Subject to Annual Budget Deliberations	County Engineering Services Department
6-5	The County should explore the development of the role of an Active Transportation Coordinator, who would be responsible for the "championing" of AT related issues, initiatives and programming throughout the County. This role could be a new full-time (e.g. 1 FTE) position at the County, or a shared position between the County and Wellington-Dufferin-Guelph Public Health (e.g. 1/2 FTE for each organization).	6-4	X	X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-6	The Active Transportation Coordinator would be responsible for the implementation and follow-up of Wellington's Active Transportation Plan at the County level and provide updates on the progress of the study when necessary to local municipalities, stakeholders and interest groups etc..	6-4	X	X		County of Wellington	To be Determined	Wellington-Dufferin-Guelph Public Health
6-7	The Inter-Municipal AT Working Group, County and Local Municipal staff should review the proposed five-step process tool for guiding the implementation of active transportation network facilities in Wellington County and adapt it as necessary.	6-6	X			County of Wellington	Existing Resources	Inter-Municipal Working Group
6-8	The Active Transportation Plan should be reviewed and given consideration when County Roads (or local municipal roads as identified as part of the AT Network) and other capital infrastructure projects are identified and scheduled.	6-6	X			County of Wellington	Existing Resources	Local Municipalities
6-9	As part of demonstrating leadership the County and local municipalities should provide bicycle parking facilities at public buildings under their ownership.	6-16	X			Inter-Municipal Working Group	Existing Resources	County of Wellington Local Municipalities

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-10	The County in partnership with local municipalities and other local partners should investigate the potential to develop a bicycle parking program whereby bicycle racks would be installed in locations where there is a demonstrated need for bicycle parking facilities.	6-16	X			County of Wellington	Existing Resources	Local Municipalities Local Agencies and Businesses
6-11	The County and Local Municipalities should review and revise their annual maintenance budgets to accommodate the maintenance of Active Transportation Infrastructure. These budgets should be increased over time to correspond with the increase in the number of kilometres of Active Transportation facilities.	6-17	X	X	X	County of Wellington	To be Determined	Local Municipalities

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-12	Wellington-Dufferin-Guelph Public Health and the County and Local Municipal partners should consider the implementation of cycling and pedestrian/trail education programs to educate residents on walking and cycling. This should include a strong focus on educating children and youth on the use of sustainable modes of transportation so they may be more inclined to choose active modes of transportation when they are adults Initiatives may include enhancements of existing programs and/or the development of new ones.	6-21	X	X	X	Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington
6-13	The Design Guidelines identified in Wellington's Active Transportation Plan Appendix A should be considered by Wellington-Dufferin-Guelph Public Health, the County and Local Municipalities as active transportation educational materials are developed.	6-21	X	X		County of Wellington	To be Determined	Local Municipalities Wellington-Dufferin-Guelph Public Health
6-14	The County in partnership with local municipalities and Wellington Dufferin-Guelph Public Health should develop and distribute hard copy and electronic information on the Active Transportation routes (e.g. newsletters, mapping and promotional materials etc.).	6-21	X	X		County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-15	Community-Based Social Marketing (CBSM) techniques should be explored as a potential method of delivery for marketing and promotional efforts related to the Active Transportation Plan.	6-24	X			Wellington-Dufferin-Guelph Public Health	To be Determined	Local Municipalities County of Wellington
6-16	The County, local municipal partners and Wellington-Dufferin-Guelph Public Health should work with Wellington County OPP to develop a safe cycling campaign modeled after the "Safely Sharing Halton's Roadway" campaign	6-26	X			Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington Wellington County OPP
6-17	Enforcement activities of the OPP should be supplemented by local By-Law enforcement officers for issues relating to sidewalk cycling, misuse of bicycle and pedestrian facilities and misuse of trails etc.	6-26		X		Local Municipalities	To be Determined	County of Wellington Wellington County OPP
6-18	The County and local municipalities should adopt the proposed network Phasing Plan as the guide for implementing the Active Transportation network.	6-28	X			County of Wellington	To be Determined – Subject to Annual Budget Deliberations	Local Municipalities
6-19	The County and local municipal partners should review and refine the proposed Active Transportation Seed Fund and develop a terms of reference for the application process.	6-30	X			County of Wellington	To be Determined	Local Municipalities

Table 7.3 – Chapter 6 – Implementing the Plan

Proposed Recommendation		Page Number	Short-Term (0-10 years)	Medium Term (11-20 years)	Long-Term (20+ Years)	Responsibility	Funding	Potential Partners
6-20	In addition to capital funding the County and local partners should explore other outside partnership, cost-sharing and funding opportunities for the implementation of the Active Transportation Network.	6-31	X			County of Wellington	Existing Resources	Local Municipalities Wellington-Dufferin-Guelph Public Health
6-21	The County and local partners should review the performance measures and embark on a program to developing base line data on Active Transportation in Wellington County.	6-33	X			Wellington-Dufferin-Guelph Public Health	Existing Resources	Local Municipalities County of Wellington Wellington-Dufferin-Guelph Public Health



APPENDICES

APPENDIX A: AT & TRAIL DESIGNERS' TOOLBOX

APPENDIX B: ENGAGING THE PUBLIC

APPENDIX C: LAND ACQUISITION STRATEGIES

APPENDIX D: UNIT COST SUMMARY



APPENDIX A – ACTIVE TRANSPORTATION FACILITY DESIGNER’S TOOLBOX

A.1 ABOUT THE GUIDELINES

A well-designed and properly maintained Active Transportation System is a critical part of the user’s experience. For some users the design and maintenance of a facility will influence their decision to use it again at a later date. Active transportation facility users vary widely in age, motivation and physical ability. Therefore a “one size fits all” design approach does not apply. It is important to try and match the AT facility type and design with the type of experience that is desired. The AT network in Wellington County AT Plan has been developed to achieve a predictable and recognizable quality and consistency in the design to enhance the experience, enjoyment and safety for a wide range of active transportation facility users and add value to the communities through which the facilities pass.

A.1.1 How to Use These Guidelines

Purpose: The purpose of these guidelines is to assist County and municipal staff in making informed decisions about active transportation facility design.

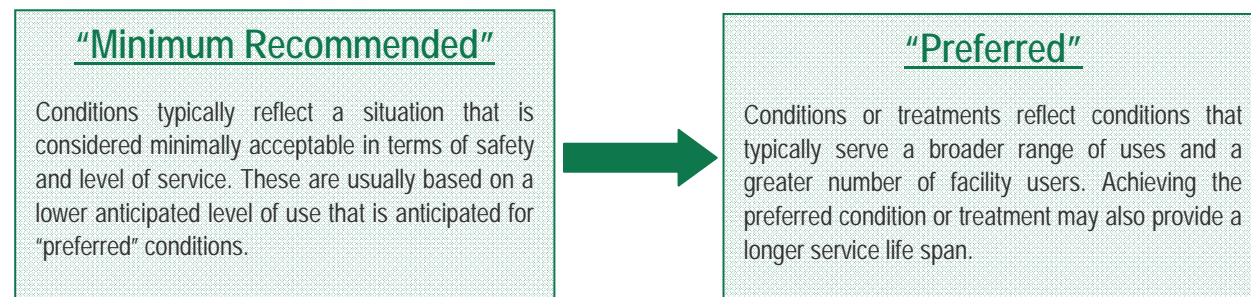
Information Included: The guidelines provide general information on active transportation facility users and their needs. Where appropriate, summary tables are provided to highlight recommended design treatments and / or considerations when addressing key features associated with various active transportation facility types proposed for Wellington County.

The information included in these guidelines is thought to represent current accepted design practices in North America, and incorporates ongoing research and experience gained by the MMM team and other in AT facility design.

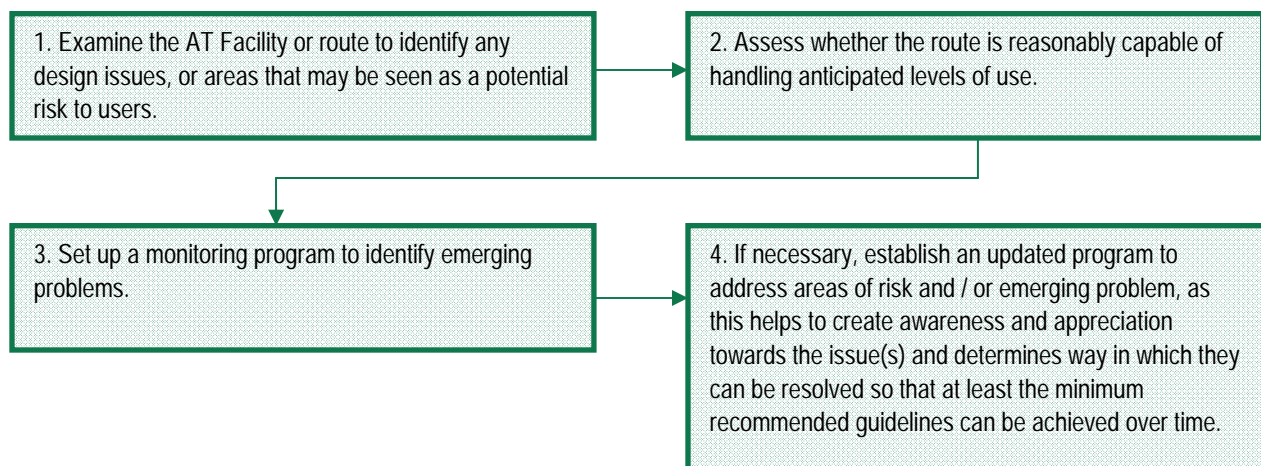


Key Consideration: *The guidelines are not intended to be prescriptive, rather they are guidelines which should be treated as a reference to be consulted during the development and construction of the AT network. They are not meant to be inclusive of all design considerations for all locations, nor are they meant to replace "sound Engineering judgement". The intent is to have regard to the individual guidelines when implementing AT facilities at specific locations to arrive at the most appropriate solution. In some cases an interim solution may be appropriate where the desired long term solution cannot be achieved in the short or mid-term, provided that the interim solution meets users' needs and safety considerations.*

A number of individual guidelines contained in the Network Designer's Toolbox provide an indication of "minimum" and "preferred" conditions or dimensions for proposed trail alignments and facilities.



The application of these guidelines in the development, implementation and operation of individual sites will require specific consideration of a number of factors including public safety, local and / or provincial jurisdiction requirements, building codes and by-laws. Where existing on and off-road AT facilities are to be incorporated as part of Wellington County AT system but do not meet the minimum recommended conditions described in these Guidelines, the approach presented below should be considered.





A.2 AT FACILITY USERS AND NEEDS

When developing and applying guidelines, it is important to consider the characteristics and preferences of potential users. In Wellington County potential user groups are expected to include pedestrians, cyclists, and a variety of other users including those who rely on mobility aids. The following sections briefly describe each of these user groups, how they may tend to use the AT facilities and some of the design parameters/needs that should be considered.

A.2.1 Pedestrians

Pedestrians can generally be divided into three key sub categories. These categories are illustrated in Figure A.1 of the chapter.

Walkers

A study conducted by Environics International on behalf of Go for Green (1998) reported the following top five reasons for walking in Canada:

- Exercise / health (62%)
- Pleasure (30%)
- Practicality / convenience (24%)
- Environmental concern (10%)
- Saving money (9%)

Because walking is a basic activity and a freedom that is enjoyed by the majority of the population, planners and designers should also consider this mode as the base level for facility design in the County's urban/settlement areas. In these locations the needs of walkers with baby strollers or walking aids, carrying picnic baskets or other equipment, and walkers in pairs or in groups, such as a class of school children. Planners and designers need to be aware that potential users may be impatient, inattentive or have sensory, cognitive or ambulatory difficulties.

Walkers represent a wide range of interests and motives such as leisure, relaxation, socializing, exploring, making contact with nature, meditation, fitness, or dog walking. It is also important to consider pedestrians who walk for utilitarian or transportation purposes. This group tends to be community-focused, with trips focusing on shopping and errands and walking to work and school. In addition to using sidewalks, parking lots and plazas, the utilitarian walker will use trails where they are convenient, well designed and properly maintained. In many cases trails provide a convenient "short cut" to traveling the sidewalk network to get to their destination. This group may represent a significant portion of users in the urban areas of Wellington County. Where no sidewalks are provided and there are no shoulders, the Ontario Highway Traffic Act allows pedestrians to walk on the edge of the roadway, facing oncoming traffic. Signs warning motorists of pedestrians ahead are recommended.

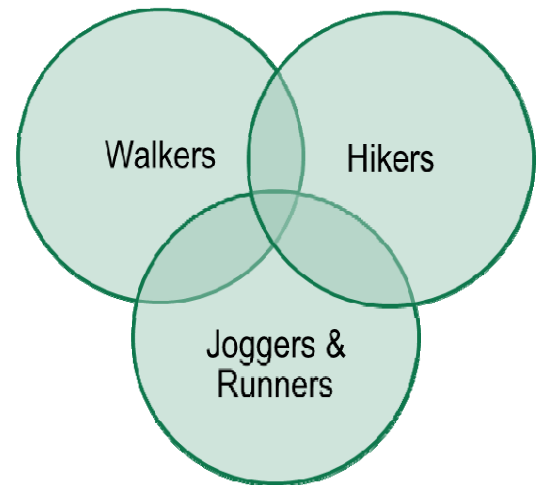


Figure A.1 – Categories of Pedestrian User Groups



Hikers

Hikers are often considered more of the elite of the recreational walking group and may challenge themselves to cover long distances and be willing to walk on sections of rural roadway shoulder considered less safe or less interesting by the majority of leisure walkers. Active Transportation planners should assume that there will be keen pedestrian users, even in remote or highway environments despite the fact that the frequency may be very low.

Runners and Joggers

Although runners' and joggers' primary motivation may be fitness, they may share more in terms of profile characteristics with distance hikers than they do with leisure walkers. They tend to be accomplishment oriented and often enjoy the trails at higher speed and over distances between 3 and 15 km or more. They will often avoid hard surfaces such as asphalt and concrete and prefer to run on granular, natural (earth) and turf surfaces as they provide more cushioning effect.

Hikers:

- Day trips that may range between 5 and 30 km in length;
- They may be more keenly interested in natural features;
- They are often more adept at map reading;
- Are more self-sufficient than leisure walkers;
- May expect fewer amenities; and
- Are often attracted to challenging terrain and rural areas.

Key Consideration: 95% of all pedestrian trips are less than 2.5 km in length (Transportation Tomorrow Survey, in Hamilton Cycling Master Plan 1996), though it is reasonable to expect that some walkers who are out for exercise/health/fitness purposes might make trips that are between 5 and 10 km in length.



A.2.2 Cyclists

The mechanical efficiency of the bicycle allows users of all ages to travel greater distances at a higher rate of speed than pedestrians. Some bicycles, including the "mountain" or "hybrid" can travel easily over stonedust and gravel surfaces, whereas, traditional narrow-tired touring and racing bicycles require very well compacted granular surfaces or hard surface pavements such as asphalt. Distances covered vary widely from a few kilometers to well over a hundred depending on the fitness level and motivation of the individual cyclist. Although cyclists have the right to access the extensive existing public roadway system, with the exception of the 400 series and major highways, many inexperienced cyclists feel unsafe sharing the road with automobiles.



Some do not have the desire or skill level to ride in traffic. Off-road trails, shared with pedestrians offer the less experienced and less confident cyclist a more comfortable environment. Cyclists that travel longer are more likely to focus a significant portion of their route on the roadway network, and often seek out quieter, scenic routes over busier roads.

Although the average travel speed for a cyclist on a trail is in the range of 15-20 km/h and on a road 15-30 km/h, speeds in excess of 50 km/hr can be attained while traveling downhill on roads and some hard surface trails. Where excessive speed is a potential issue on trails, speed limits and warnings should be posted to discourage fast riding and aggressive behaviour. Cyclists other than young children should be discouraged from cycling on sidewalks because of potential conflicts with pedestrians and potentially dangerous intersections with driveways. Many municipalities have prohibited sidewalk cycling through by-laws. However, some municipalities permit the use of sidewalks for those cyclists learning to ride (e.g. the City of Guelph).

***Key Consideration:** When using roads, cyclists generally travel 0.5 – 1.0m from the curb or other obstruction because of the possibility of accumulated debris, uneven longitudinal joints, catch basins, steep cross slopes, or concern over hitting a pedal on the curb or handlebar on vertical obstacles. However, when cyclists use or cross a public roadway they are considered vehicles by law and are expected to follow the same traffic laws as motorized vehicles.*

A.2.3 Skateboarders, Non-motorized Scooter use

Skateboarding and the use of non-motorized scooters are becoming increasingly popular among all age groups, particularly in urban areas. No consistent use guidelines have been widely adopted. In some municipalities, skateboarders and scooter users have been prohibited from using either roadways or sidewalks by local by-laws. Consequently, they are avid users of hard-surface off-road facilities and may travel some distance to reach a facility that suits their needs.

This user group prefers a very smooth, hard surface. Loose sand, gravel, twigs, branches, fallen leaves and puddles can be significant hazards. Though skateboarders and scooter users can quickly become pedestrians by dismounting, they too are vulnerable to the effect of grades (both up and downhill) and require ample maneuvering space. An inability to come quickly to a complete stop can be a significant concern for all but the most experienced users in this group. Long or steep hills with limited visibility may be viewed as either challenging or terrifying depending on an individual's level of experience.

***Key Consideration:** Skateboards prefer a very smooth, hard surface. Loose sand, gravel, twigs, branches, fallen leaves and puddles can be significant hazards.*



A.3 AT NETWORK DESIGN CONSIDERATIONS

A.3.1 Accessibility

Approximately one in eight Canadians suffer from some type of physical disability. Mobility, agility, and pain-related disabilities are by far the most common types, each accounting for approximately 10% of reported disabilities nationally. Disability increases with age: from 3.3% among children, to 9.9% among working-age adults (15 to 64), and 31.2% among seniors 65 to 74 years of age. Disability rates are highest among older seniors (75 and over), with fully 53.3% in this age group reporting a disability.

The Accessibility for Ontarians with Disabilities Act (AODA) states that “The people of Ontario support the right of persons of all ages with disabilities to enjoy equal opportunity and to participate fully in the life of the province.” As required by the AODA, the Minister of Community and Social Services appointed a Standards Development committee to develop a set of Accessibility Build Environment Standards. The draft guidelines were developed and issued in July of 2010 by the committee and provides a definition of the built environment as well as accessibility standards for each. The definition includes buildings, site development, public ways and public parks, trails and playgrounds. As part of the standards developed, specific reference is made to paths and trails under section 11 (recreation elements and facilities) of the report. The accessibility strategy commonly applied to natural environments is to provide appropriate accessibility for persons with disabilities, wherever practical, and to provide relevant information on the grade, cross-slope, width, surface, or length of the trail where it is not practical or appropriate to fully comply with the requirements. More specifically, section 11 focuses on the overall accessibility of trails that are found in the natural environment. As will be outlined in the following sections, the development of trails and active transportation facilities is not a one size fits all approach. Trails facilities are to be developed to accommodate all users including those with a variety of needs and levels of ability. The strategy outlines necessary criteria for the development and design of trails to accommodate such user groups.

When designing and implementing active transportation facilities, Wellington County should utilize the guidelines outlined in the strategy to ensure that the needs of all user groups are accommodated and satisfying the requirements of the AODA to the greatest extent possible, given the context of each trail's location, the surrounding environment and type of trail experience that is desired.

“Opportunities for recreation, leisure and active participation should be available to all members of the community. Outdoor trails and trailways which offer a range of levels of difficulty will allow each individual to choose their preferred route based on their abilities and desired level of challenge.”

AODA Guidelines:

http://www.e-laws.gov.on.ca/html/source/reg/english/2011/elaws_src_regs_r11191_e.htm

AODA criteria includes:

- Operational Experience;
- Width;
- Running Slope;
- Cross Slopes;
- Total Slope;
- Surface;
- Changes in Level; and
- Signage



A.3.2 Personal Security

Guideline A-1:	<p>When implementing the County's Active Transportation network as well as active transportation found within its local municipalities the underlying principles of CPTED should always be considered including:</p> <ul style="list-style-type: none"> ▪ Natural Access Control; ▪ Natural Surveillance; ▪ Territorial Reinforcement; and ▪ Maintenance
Guideline A-2:	<p>Properly located entrances, exits, fencing, landscaping and lighting should direct both foot and automobile traffic in ways that discourage crime.</p>

To the extent that it is possible active transportation routes should be designed to allow users to feel comfortable, safe, and secure. Although personal safety can be an issue for all, women, the elderly, children, are among the most vulnerable groups. Principles of Crime Prevention Through Environmental Design (CPTED) should be considered and applied to help address security issues concerning trail use, particularly in locations where trails are lightly used, isolated or in areas where security problems have occurred in the past. The four main underlying principles of CPTED are:

Natural Access Control: deters access to a target and creates a perception of risk to the offender.

Natural Surveillance: The placement of physical features and / or activities and people that maximizes natural visibility or observation.

Territorial Reinforcement: defines clear borders of controlled space from public to semi-private to private, so that users of an area develop a sense of ownership.

Maintenance: allows for the continued use of space for its intended purpose.

Case Study Example: City of Toronto Safe City Committee & Planning Department
 Specific design considerations identified include:

1. Good visibility by others by having routes pass through well-used public spaces;
2. Provide the ability to find and obtain help: signage that tells users where they are along the trail system;
3. Provide "escape" routes from isolated areas to regular intervals;
4. Maintain sightlines and sight distances that are appropriately open to allow good visibility by users;
5. Provide trailhead parking in highly visible areas;
6. Minimize routing close to features that create hiding places such as breaks in building facades, stairwells, dense shrubs & fences;
7. Design underpasses and bridges so that users can see the end of the feature as well as the area beyond; and
8. Place signs near entrances to isolate areas to inform users that the area is isolated and suggests alternative routes.



A.4 ACTIVE TRANSPORTATION FACILITY TYPES

The County's Active Transportation network has been divided into two classes of facilities:

Off-Road Facilities these refer to routes that are located i) within a road right of way but operate separately and independently of the travelled portion of the road or ii) outside of the road right of way through open spaces, valley and parklands, as well as linear corridors such as abandoned railway lines, unopened road allowances, utility corridors and storm water retention ponds.

On-Road Facilities which refer to network facilities that are located on or along existing roads and are incorporated into the present or future street system.



Source: www.homeaway.com



Source: Township of Woolwich

On and off road facilities can also be described in terms of their degree of separation from motor vehicles. The facility types and categories have been described in further detail below:

Shared Space	Dedicated Space	Separated Facilities
<ul style="list-style-type: none"> ▪ Signed-only Cycling Routes on Local Roads ▪ Signed-only Cycling routes on Wide Lane ▪ Bikeway Boulevard ▪ Signed Route with Sharrow Symbol 	<ul style="list-style-type: none"> ▪ Bike Lanes ▪ Buffered Bike Lanes ▪ Paved Shoulder 	<ul style="list-style-type: none"> ▪ Cycle Tracks ▪ Multi-use Trailways Within the Road Right-of-Way ▪ Multi-use Trailways Outside the Road Right-of-Way

Generally associated with lower volume, lower speed with roads less facility separation



Generally associated with higher volume, higher speed roads with greater facility separation



A.4.1 Facility Selection Tool

The planning and design of active transportation (pedestrian and cycling) facilities has been evolving rapidly, a facility selection tool has been developed to assist staff and those responsible for the future design of active transportation facilities throughout the County in selecting appropriate active transportation facilities for County roads and right-of-ways.

Key Considerations:

- Active Transportation user groups vary widely in levels of skill, experience and confidence;
- No single type of active transportation facility design alternative will suit every user;
- Designers need to gather information on existing and future conditions in order to identify the needs and safety concerns for users in a specific location;
- The choice to provide a separated versus non-separated facility is not a simple “yes or no” answer, it is based on the consideration of a number of factors described throughout this chapter;
- Criteria or thresholds to select one facility type over another need to be flexible to be able to accommodate each site’s unique set of circumstances; and
- No facility design can overcome a lack of operator skill or lack of attention by the user.

Please note that...

- There is no “formula” for appropriate facility selection; and
- It is a process that combines an analysis and understanding of the conditions of the location being considered an application of sound engineering judgement.

An overview of the process recommended for applying the facility-type selection tool is provided in Figure A.2 and is described in further detail on the following page.

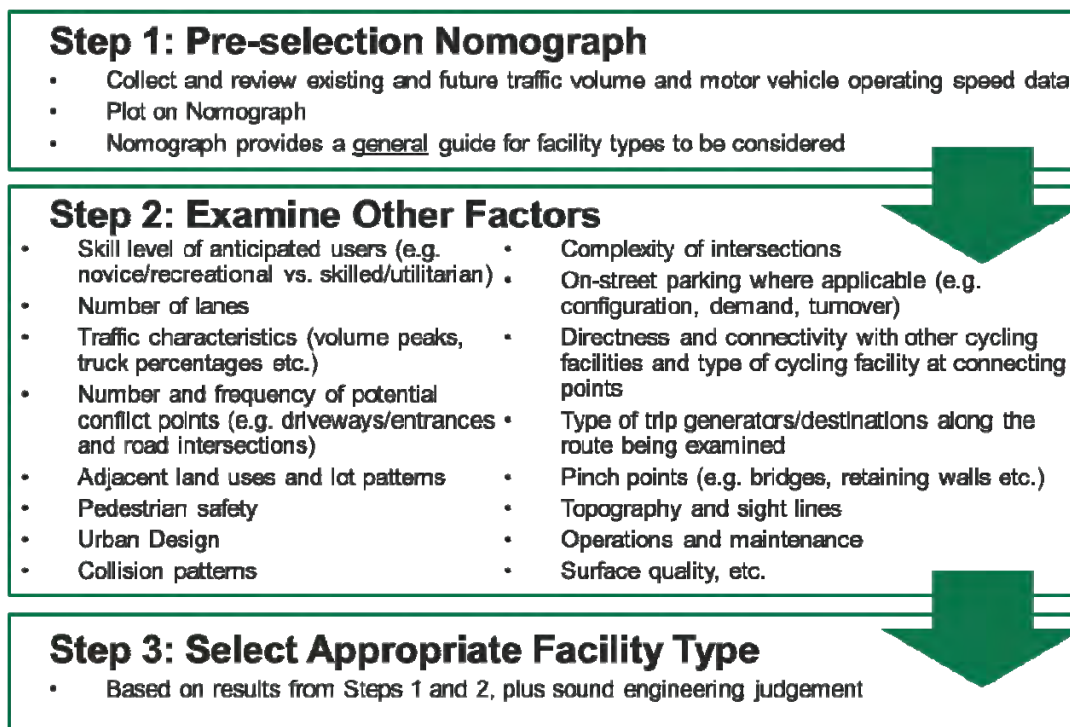
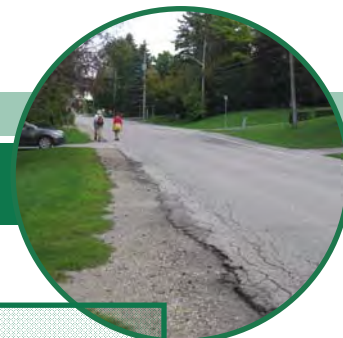


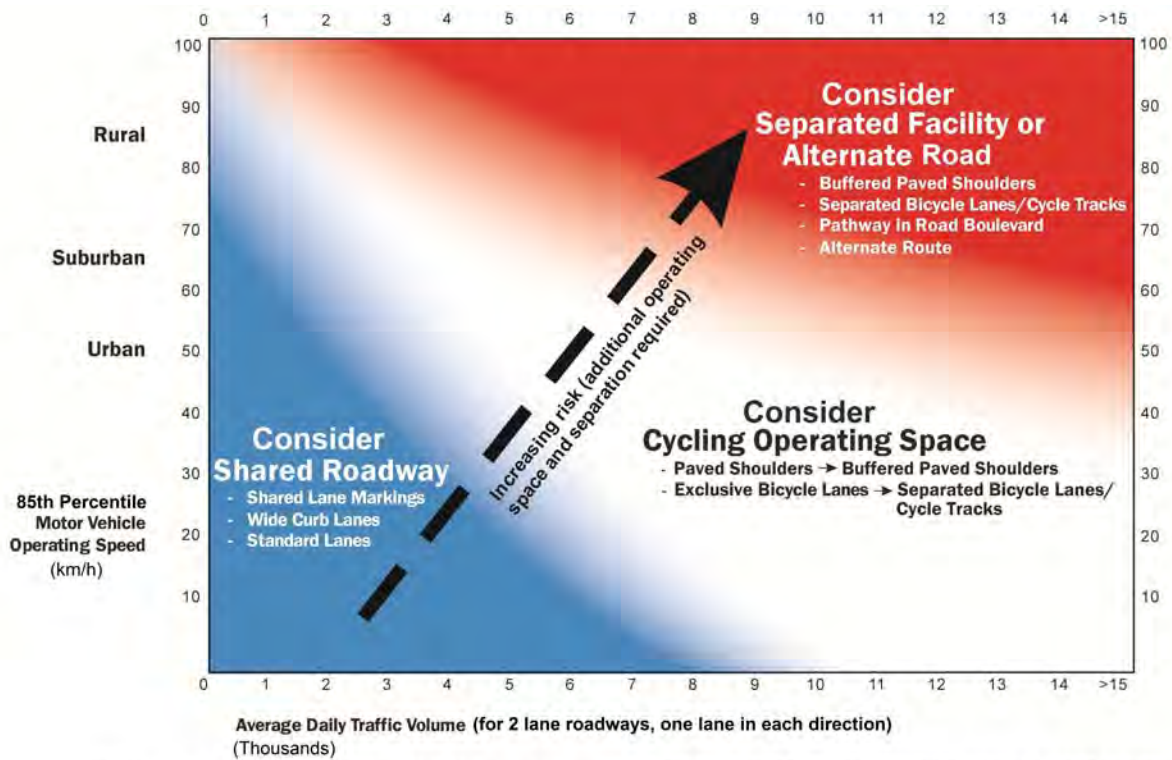
Figure A.2 – An Overview of the Facility Type Selection Tool Process



The technical basis for the facility type selection nomograph is extensive and similar tools have been implemented internationally with success. It is a consistent framework that is easy to apply, technically based, and allows flexibility to account for the differences in physical and operational characteristics from one site to another. The selection tool does not tell designers when and when not to provide a certain facility type. Plotting motor vehicle operating speed against traffic volume is the first step in the process. This step is followed by documentation and analysis of other factors/conditions as part of step 2.

Please note that....

There are no definite thresholds where one particular facility is preferred over another, however, one progresses into higher levels of risk, there is a preference to provide the types of facilities that provide increasing degrees of separation.



Footnotes: -This nomograph is the first of a three step bicycle facility selection process, and should not be used by itself as the justification for facility selection (see Steps 2 and 3). The nomograph simply helps practitioners pre-select a desirable bicycle facility type, however the context of the situation governs the final decision.

-Though the nomograph is founded on international examples and research, which from our understanding may be based on two lane roadways, it is still applicable for multi-lane roadways. For these situations, practitioners should consider the operating speed, total combined traffic volume and traffic mix of the vehicles travelling in the lanes immediately adjacent to the cycling facilities.

-Consider a Separated Facility or an Alternate Road for roadways with an AADT greater than 15,000 vehicles and an operating speed of greater than 50 km/h. For multi-lane roadways, the total combined traffic volume of the two lanes adjacent to the cycling facilities should be considered.

-For rural and suburban locations this nomograph assumes good sightlines are provided for all road users. In urban areas, there are typically more frequent conflict points at driveways, midblock crossings and intersections (especially on multi-lane roads), as well as on road segments with on-street parking. This needs to be considered when assessing risk exposure in urban environments since it will influence the selection of a suitable facility type.

Figure A.3 – Facility Pre-selection Nomograph

Guideline A-3:

That the Facility Selection Nomograph be considered by Wellington County as a tool for pre-selecting a candidate active transportation facility type.



A.4.2 Shared Space On- Road Cycling Facilities

In terms of public policy, it is important to acknowledge that *a bicycle is formally recognized as a vehicle by the Province of Ontario, as outlined in the Highway Traffic Act, R.S.O., 1990.*

Therefore, cyclists have the right to share all classes of roadways, including highways, arterials, collectors and local streets, with the exception of the 400 series highways or other highways/roads where cycling has been prohibited by municipal by-laws. Motorists are prohibited by municipal by-law from driving or stopping in designated bike lanes, except for emergency avoidance manoeuvres or breakdowns.

Key Principle for Roadway Design: "Every road is a cycling road"

Therefore, the County and local municipalities should consider bicycle friendly design guidelines for all streets, whether a road is designated as part of the cycling network or not.

Bicycle friendly roadway features typically include among other things:

- Wide curb lanes;
- Drainage grates that are bicycle friendly;
- Are ideally located out of the desired path for cycling; and
- Traffic control devices that are programmed with bicycles in mind, particularly detector loops that have their sensitivity adjusted to allow bicycles to actuate a traffic signal.

On designated AT network routes in urban and built up areas throughout Wellington County provisions for pedestrians such as sidewalks should be provided where cyclists are being directed to use roadways.

Guideline A-4:

When designing or redesigning roadways consideration should be given to the application of bicycle friendly design principles even if they are not part of the designated county wide AT network.

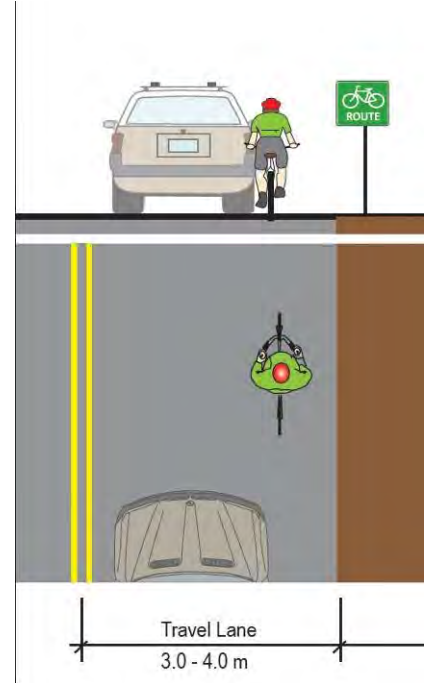


A.4.2.1 Signed-only Cycling Routes on Local Roads

Definition: Signed-only Cycling Routes are routes marked with bicycle route signing along a street. They are typically installed on quiet, residential Local / Collector streets. Apart from “bicycle route” signs, there are generally no changes made to the roadway except when edge lines are included.

Key Considerations:

- Bicycles and motor vehicles share the travel lane, no physical space is created for bicycles;
- No pavement markings for bicycles;
- Should typically only be signed as on-road bike routes where acceptable motor vehicle operating speed and traffic volumes exist;
- Should be supported by education programming for both cyclists and motorists;
- Supplemented by optional Share the Road signs; and
- Includes “Bike Route” signs.



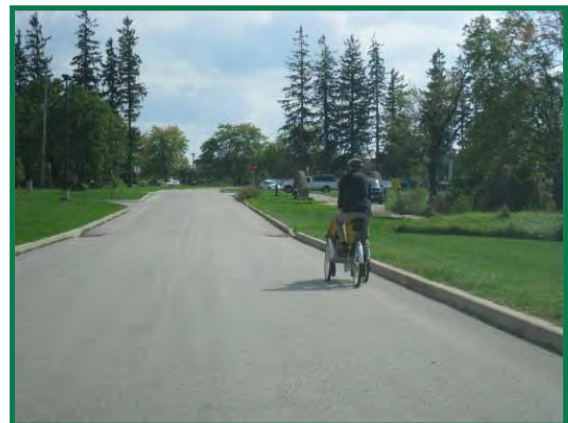
Location for Implementation: Typical for residential streets where motor vehicle traffic volumes and speeds are low, and rural roads where traffic volumes are low.

Pedestrian Considerations: Pedestrians use the sidewalk in residential areas, and may use the road shoulder in rural areas.

Experience in other municipalities: Suggests that by adding edge lines (where feasible) a minimum of 1.2 m from the curb face along with implementation of parking restrictions during weekday commuting and school travel hours there may be also be a positive traffic calming effect through a reduction in vehicle speed and increased level of comfort for cyclists.



Recommendation: Signed routes can be used on local and County roads where traffic volume considered relatively low and adequate sightlines exist. Adding edge lines in urban areas may be a suitable where a road segment has insufficient width or where the removal of on-street parking to implement a designated bike lane is not supported by the local neighbourhood.





Guidelines for Signed-only Cycling Routes

<i>Guideline A-5:</i>	Signed-only bicycle routes are appropriate for local urban streets where traffic volume and speeds are low.
<i>Guideline A-6:</i>	On low volume rural roads with limited truck traffic, good sight lines and physically constrained rights-of-way, the route may be designated as a cycling route, with cyclists and motorists expected to share the same lane. “Share the Road” signs should be erected at strategic locations to communicate this message to all road users.



A.4.2.2 Signed-only Cycling Routes on Wide Outside / Curb Lane

Definition: Signed-only routes within wide curb lanes are similar to signed-only bicycle routes with the exception that the travel lane shared by motorists and cyclists is wider than a standard motor vehicle travel lane (e.g. greater than 4.0 m).

Key Considerations:

- Bicycles and motor vehicles share the travel lane, no physical space created for bicycles and no pavement markings for bicycles;
- Supplemented by Bicycle Route signs;
- Can often be retro-fitted on a 4-lane cross-section by narrowing the inside travel lanes;
- Consider “Share the Road” signs and / or sharrow markings at pinch points to make both cyclists and motorists aware of narrow zones;
- Wide curb lanes should have sufficient width to allow motorists to pass cyclists without encroaching on an adjacent travel lane (if one exists); and
- The wider travel lane provides more space for cyclists traveling adjacent to the curb.

Location for Implementation: On multi-lane roads with wide curb lanes which may be created by narrowing the inside travel lanes.

Pedestrian Considerations: Pedestrians use the sidewalks in urban areas, and may use the road shoulder in rural areas.

Research Indicates: That as lane widths begin to exceed 5.0 m this tends to increase confusion and improper lane use by motor vehicles in congested urban environments, and may encourage unsafe passing on the right.

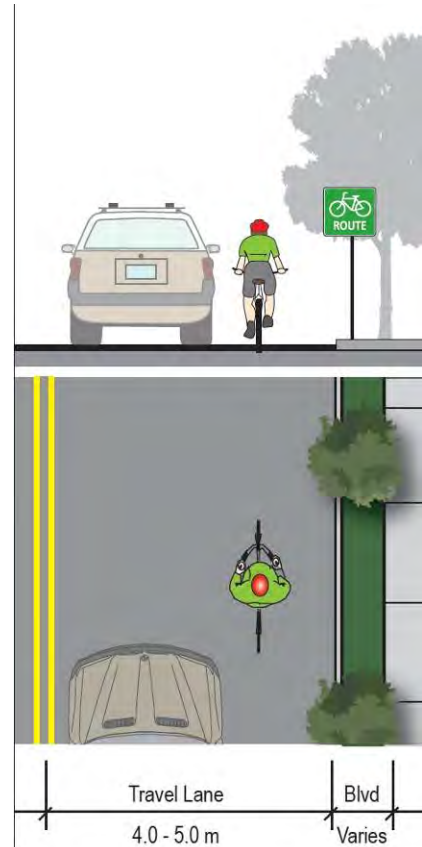
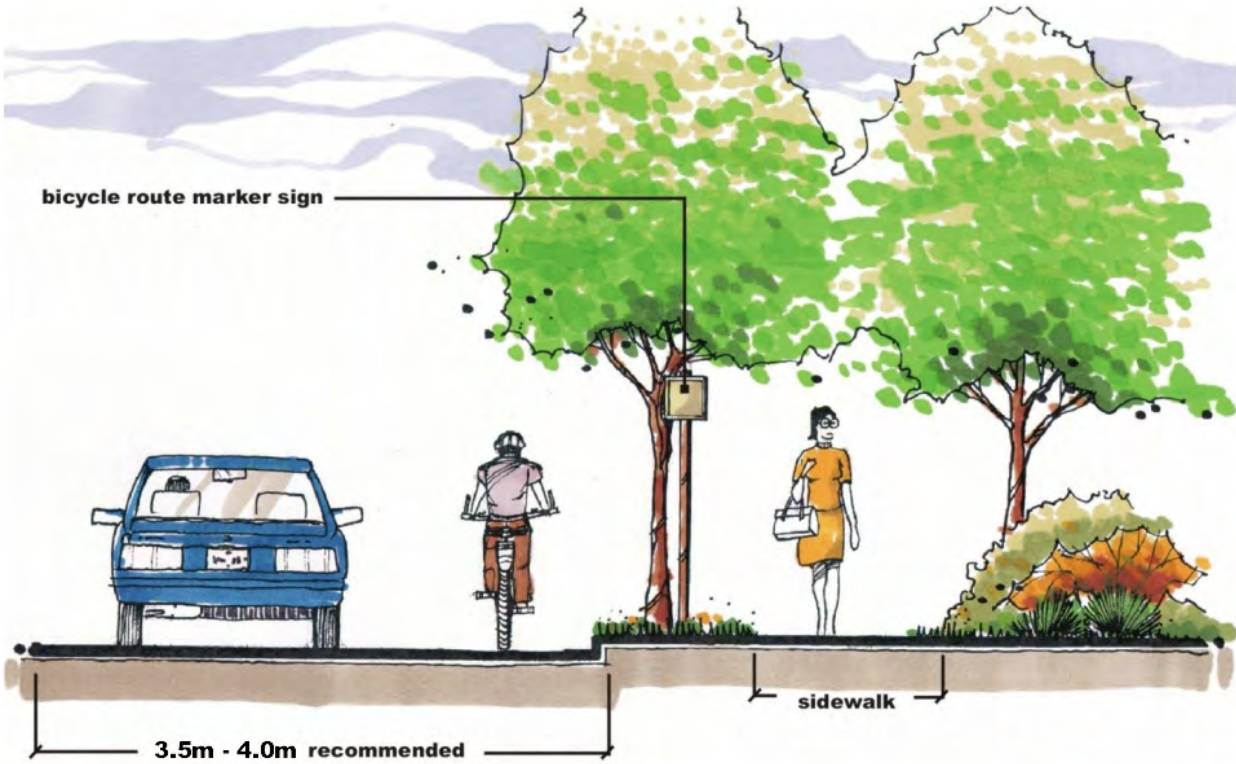




Figure A.4 – Signed-only Cycling Route Along a Wide Curb Lane



Signed Route on Wide Lane Guidelines:

Guideline A-7:	The minimum recommended width for a wide curb lane route is 4.0 m.
Guideline A-8:	Where the width of a wide curb lane exceeds 5.0m along a designated cycling route, the application of shared use lane pavement markings or bike lane markings should be considered to indicate the presence of cyclists on the roadways to motorists (see s. A.4.1.4).



A.4.2.3 Bikeway Boulevard (Bicycle Priority Streets)

Definition: In some areas, particularly residential neighbourhoods, traffic calming techniques such as through travel restrictions for cars, traffic circles and reduction in the number of stop signs can be used to create “bicycle priority streets” which allow the cyclist to travel more efficiently by not having to break momentum and stop at frequently placed four way stops.

Key Considerations:

- Design strategies and elements are employed to encourage through-travel for cyclists and enable them to maintain momentum, yet discourage or restrict through travel by motorists.

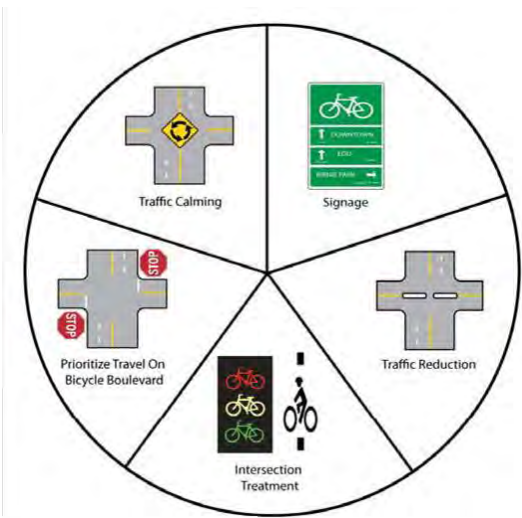
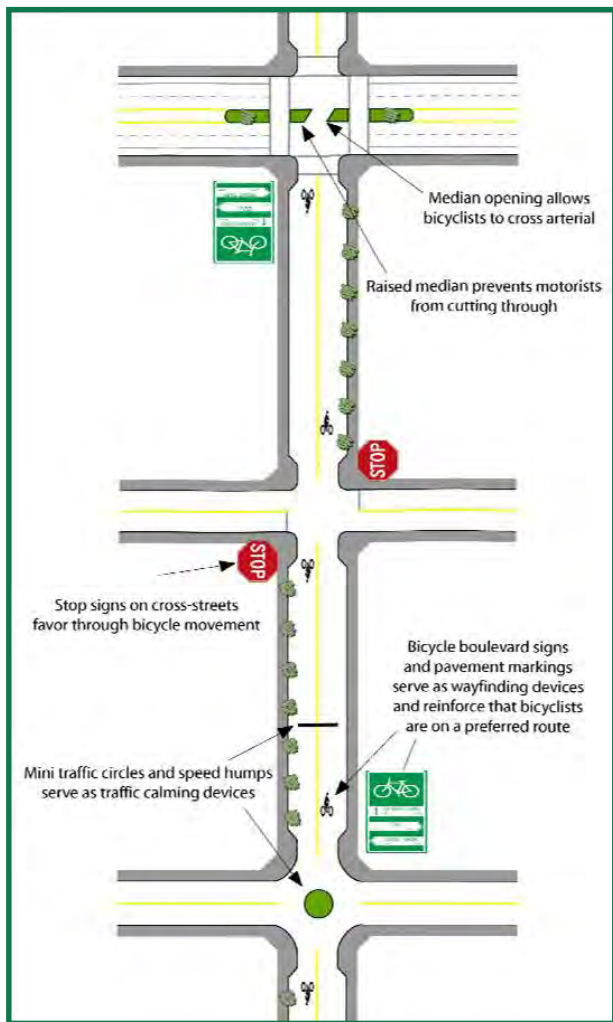


Figure A.5 - Fundamentals of Bikeway Boulevard Planning and Design, 2009

Source: TAC Design Guidelines



A.4.2.4 Signed Route with Sharrow Symbol

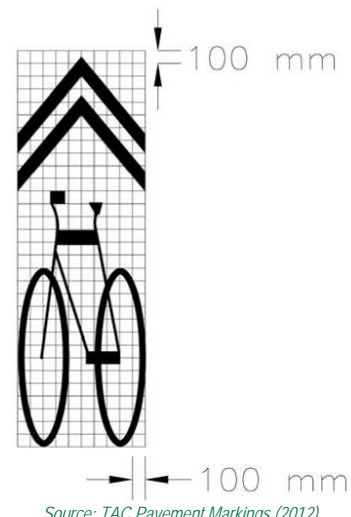
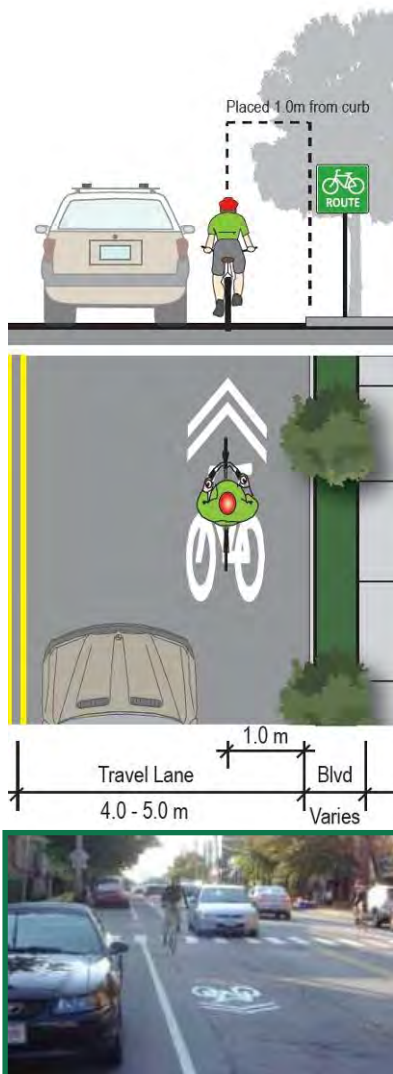
Definition: Shared use lane markings, also called “sharrows”, are symbols placed on the pavement surface in the intended area of bicycle travel and may be appropriate for application along some signed only bicycle routes with wide curb lanes. The symbols raise awareness to both cyclists and motorists of the correct cyclist positioning in the lane and help to deter unsafe passing manoeuvres by motorists and increase driver awareness of cyclists on the road.

Key Considerations:

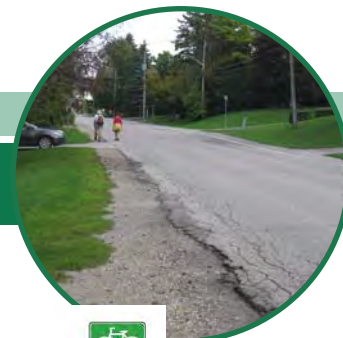
- Similar characteristics to the Signed Route on a regular width lane and / or the signed route on a wide lane, bicycles and motor vehicles share the travel lane;
- Pavement markings indicate appropriate positioning for cyclists. Cyclists align their front wheel with the point on the chevron;
- Especially useful in congested areas where traffic is generally moving slowly (e.g. a “downtown” street or urban centre);
- Clear pavement markings and signs illustrate the concept of “Share the road” within space-confined roadways; and
- Good solution for urban downtown / main street areas where on-street parking can’t be removed to implement bike lanes and motor vehicle traffic is moving slowly.

Location for Implementation: Placement of the Sharrow symbol indicates to cyclists where they should be traveling on the road (e.g. approximately 1.0 m from the curb where there is no on-street parking, 3.4 m from the curb where there is on-street parking on a multi-lane road).

Pedestrian Considerations: Pedestrians use the sidewalk in urban areas.

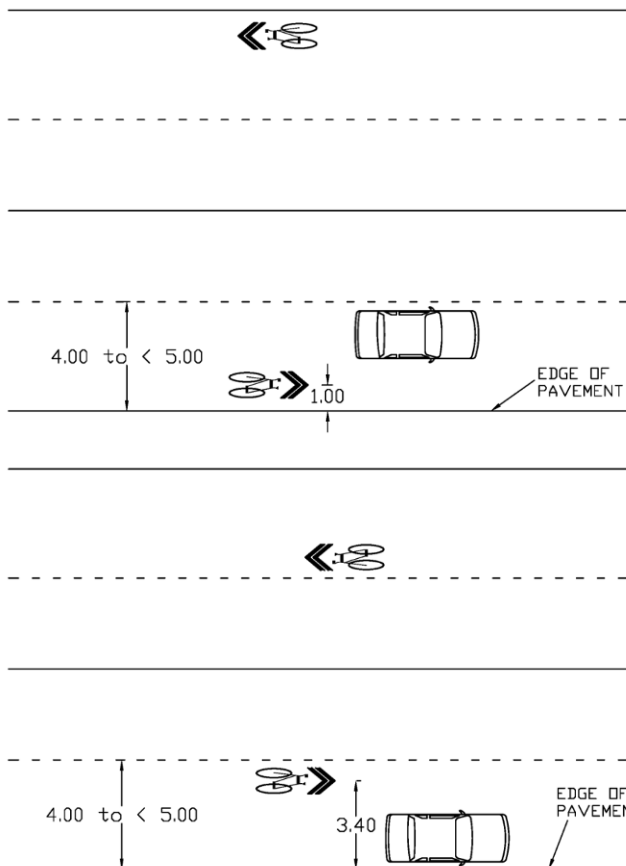
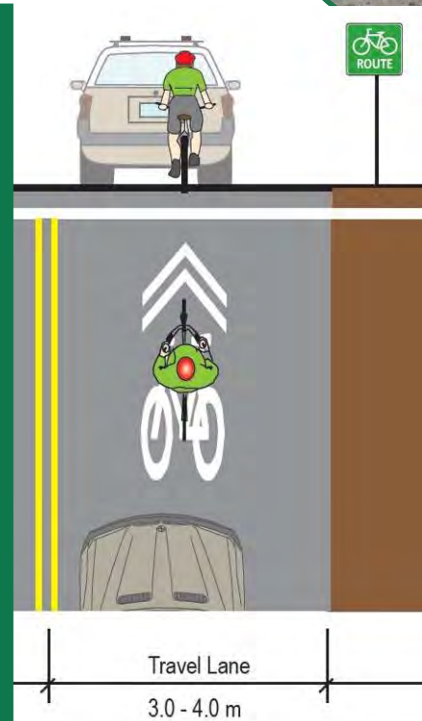


Source: TAC Pavement Markings (2012)



The TAC Bikeway Traffic Control Guidelines for Canada (2012) provides guidance on the application of shared use lane markings, including the following recommendations:

- Place immediately after an intersection and 10m before the end of a block;
- Space longitudinally at intervals of 75m (this spacing may be decreased but should not be increased, thus allowing drivers and cyclists to identify at all times, where they should be situated in relation to one another);
- In conflict zone application, the minimum symbol spacing is 1.5m;
- The marking may be used on roadways with lanes that are wide enough for side-by-side bicycle and vehicle operation but not wide enough for a standard bicycle lane. These markings should be used on roadways with posted vehicle speeds of 60 km / h or less; and
- On roadways without on-street parking, place so that the centre of the marking is 1.0m but a minimum of 0.75m from the edge of the pavement or edge of the curb.



Sharrow Markings without On-Street Parking:
The off-set encourages cyclists to maintain an appropriate distance from the curb.

Sharrow Markings with On-Street Parking:
The off-set encourages cyclists to maintain a clear distance from open doors of parked cars.



A.4.2.5 Paved Shoulders

Definition: A paved shoulder cycling route can be located on roads with rural cross sections and no curbs to allow for cyclists to travel on the paved asphalt shoulder beyond the white edge line.

Key Considerations:

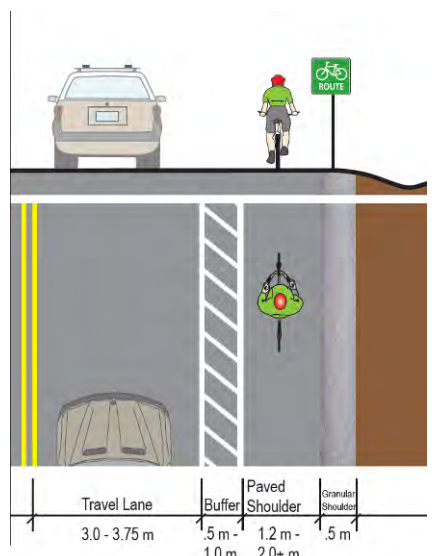
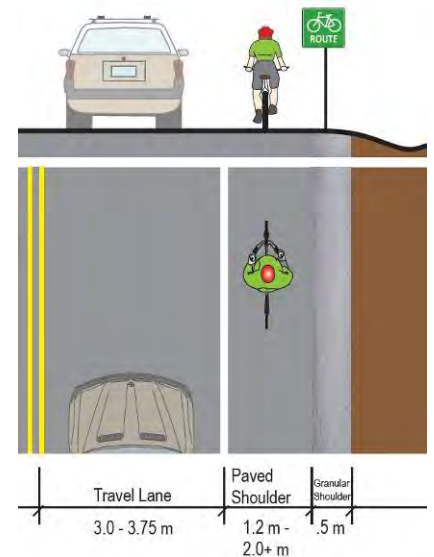
- Provides a space for cyclists on rural cross-section roads (with shoulders, no curb and gutter);
- Where motor vehicle speeds or volumes are high, a wide shoulder and / or painted buffer enables more separation between the cyclists and the motor vehicle, and also reduces the impact of wind-shear on the cyclist;
- Although not a designated space the paved shoulder provides a convenient location for cyclists to travel;
- Rumble strips can be added to the painted buffer as an additional cue, provided that there are clearly marked breaks at regular intervals, allowing the cyclists to move in or out of the paved shoulder areas to overtake slower moving cyclists or to make a left turn; and
- Paved shoulder routes can be supplemented with Bike Route Signs and / or Share the Road signs.

Location for Implementation: Typically implemented on rural cross-section roads (no curbs) where motor vehicle traffic volume and speeds are higher.

Pedestrian Considerations: Pedestrians may use the paved shoulder or the remaining portion of the gravel shoulder. Pedestrians must walk facing oncoming traffic in accordance with the Highway Traffic Act.

Benefits of Paved Shoulders:

- A reduction in the amount of maintenance costs associated with the grading of gravel shoulders;
- Serve as a refuge for disabled vehicles;
- Paved shoulders can extend the service life of the road as heavy vehicles traveling further away from the road edge; and
- A reduction of run-off-the-road motor vehicle incidents.



A painted buffer could be applied where motor vehicle speeds and / or volumes are high to increase separation distance between cyclists and passing motor vehicles.



If shoulders are to be provided as part of a new road construction project, the pavement structure design should be the same as that of the roadway. During shoulder widening projects, some opportunities to reduce costs can be made available by building a thinner pavement thickness under certain conditions.

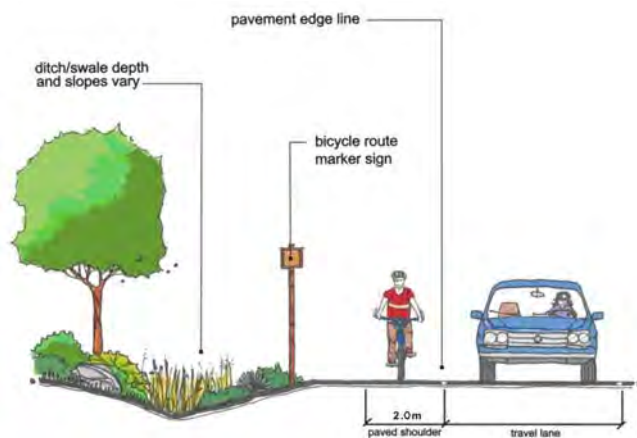


Figure A.6 – Typical Paved Shoulder Bikeway

A reduced pavement thickness could be considered for implementation where:

- No future widening is planned within the 10 year road program;
- Existing shoulder area and road structure is structurally stable and well drained;
- Existing travel lanes have suitable width and are in safe and desirable condition;
- Horizontal control (curvature) is not excessive; and
- Existing and projected traffic volume and heavy truck traffic is not considered excessive.

Paved Shoulder Construction Details:

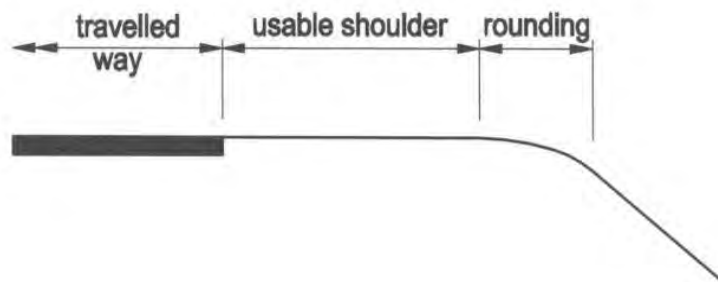
- **Saw Cutting:** A saw-cut 0.3 m inside the existing edge of pavement provides for a tight joint. This eliminates a ragged joint at the edge of the existing pavement;
- **Feathering:** Feathering the new asphalt onto the existing pavement can work if a fine mix is used and the feathering technique does not extend across the area of the travelled bicycle facility; and
- **Grinding:** Where there is already some shoulder width and thickness available, a pavement grinder can be used to make a clean cut at the edge of travel lane, grade the existing asphalt to the right depth and cast aside the grindings in one operation. Grinding offers these advantages:
 - Less of the existing pavement is wasted;
 - The existing asphalt provides additional pavement base;
 - There will not be a full-depth joint between the travel lane and the shoulder;
 - The grindings can be recycled as a base for the widened portion; and
 - New asphalt can then be laid across the entire width of the shoulder lane with no seams.

Consideration: Paved shoulder bikeways (a paved shoulder on a road signed for cycling) may form part of the AT network along rural cross-section roads. On rural roads, a marked edge line is typically used to designate a paved shoulder. Signs are used to designate the route and indicate the presence of a cyclist.



Both MTO (Geometric Design Standards for Ontario Highways, GDSOH) and TAC (Geometric Design Guide for Canadian Roads, GDGCR) provide standards for shoulder widths for undivided rural highways that are based on design speed and AADT volumes.

Figure A.7 – Typical Roadway Shoulder



Recommendation(s):

1. That the width of the paved shoulder is sufficient to accommodate a 1.2m to 2.0 m paved shoulder cycling routes and 0.5m for additional granular shoulder width.
2. That paved shoulder cycling routes on roads having posted speed limits up to 60 km / h should have a preferred design width of 1.2m
3. That on roads with a high percentage (e.g. greater than 10%) of commercial traffic, and speeds between 60 km / h and 80 km / h a design width of 1.5 to 2.0 m is preferred.
4. That in constrained areas, shoulder cycling routes with a width of 1.5m may be used if adjacent to a granular shoulder.
5. If the preferred design width cannot be achieved, any additional paved shoulder width is better than none at all.
6. If the paved shoulder width is less than the desired 1.5 m, and a cyclist chooses to ride to the right of the edge line, an adjacent gravel shoulder could be implemented to provide the cyclist with a "recovery" area.
7. Paved Shoulders on rural roads should not be designated/signed as reserved bicycle lanes since they must still be used as refuge for disabled vehicles. Paved shoulders should only be designated as signed only bicycle routes.
8. If a rural road is upgraded to an urban section (with curbs) the paved shoulder should be converted into bike lanes or separated bike lane / cycle track.



The decision on whether to sign a road with paved shoulders that are less than the desired width as a signed only bicycle route should be based on sound engineering judgement. Roadway characteristics and factors to be considered when making this decision include:

- AADT volumes;
- Percentage of commercial vehicle traffic;
- Roadway geometry;
- Gradients;
- Horizontal/vertical curves; and
- Sight lines

The County may elect to designate some roads as signed only bicycle routes that do not currently meet the suggested minimum shoulder width criteria, as an interim condition. When these roads are scheduled for an overlay or widening, the preferred width should be provided.

Segments of Proposed Cycling Routes on Roads with Rural Cross-Sections (No Curb): When it is difficult to accommodate even a minimum 1.2 m paved shoulder, edge lines (pavement markings) may be provided to mark the vehicle lane width and to delineate as much additional shoulder width as possible for cyclists to use.

Paved Shoulder Guidelines:

<i>Guideline A-9:</i>	Paved shoulder bikeways are the preferred facility type for creating connections between rural communities on rural cross section roads where traffic volumes and/or speeds exceed threshold levels.
<i>Guideline A-10:</i>	Paved shoulder bicycle routes on roads with a speed limit of greater than 60 km / h should have a preferred design width of 1.5m. In locations where this width cannot be achieved, especially in constrained rights-of-way, a minimum paved shoulder width of 1.2m with an adjacent granular of at least 0.5m may be a reasonable compromise, depending on the characteristics of the subject road.
<i>Guideline A-11:</i>	Paved shoulder cycling facilities should be separated from the motor vehicle travel portion of the road by an edge line (pavement marking), and should be clearly identified through bicycle route and/or Share the Road signage. Edge lines should typically only be used on rural roads where there are no curbs, and should be a single line placed on the right side of the travel lane to delineate the paved shoulder.
<i>Guideline A-12:</i>	Paved shoulders on rural roads should not be designated as reserved bicycle lanes as they must remain available for disabled motor vehicles.



A.4.3 Dedicated Space On-Road Cycling Facilities

A.4.3.1 Bike Lanes

Definition: Bikes lanes are facilities located in the travelled portion of the street or roadways which are designed for one way cyclist traffic.

Key Considerations:

- Motor vehicles are typically not permitted to park or stand in the bike lane, but right turning motor vehicles can enter the lane at intersections to complete their turn (enforced through municipal bylaw).
- Width of bike lane (or adding a buffer zone) should be increased (to a maximum of 2.0m) where motor vehicle traffic volumes, percentages of trucks and commercial vehicles and motor vehicle speeds are higher;
- Ensuring consistency in the design and signing of bike lanes and other bikeway facilities is crucial to educate and inform cyclists and motorists on their proper use.

Location for Implementation: Typically implemented on a cross-section road where motor vehicle traffic volume and speeds are higher than typical threshold values for shared space routes.

Pedestrian Considerations: Pedestrians use sidewalks in urban areas (sidewalks would be installed at least on one side of the road along designated AT routes where none currently exist in the urban area).

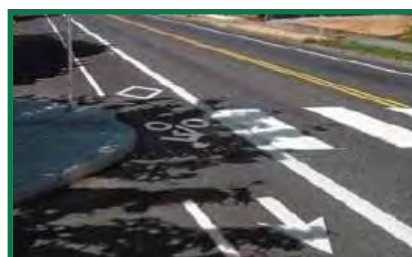
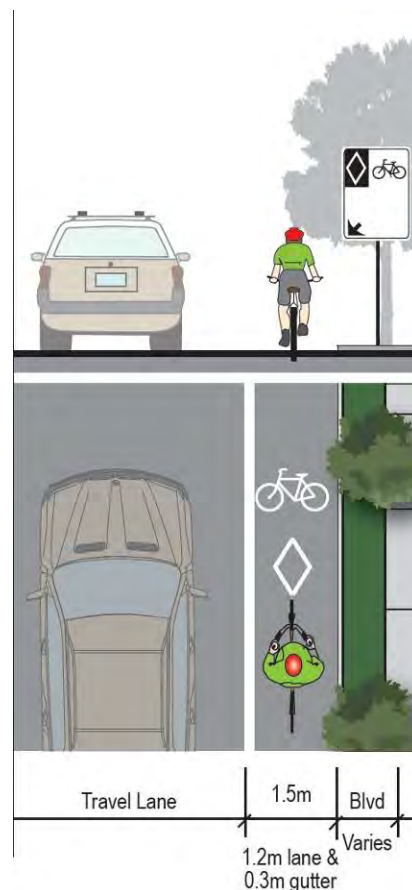
The following table summarizes the widths of bike lanes recommended for Wellington County.

Classification	Minimum Width ^(c)	Desired Width ^(c)
Standard Bike Lane	1.5m	1.8m
Bike Lane Adjacent to On-Street Parking Aisle	1.8m	2.0m
Bike Lanes on Curbed Roads in Rural Areas with Posted Speed Limit between 60 – 80 km / h ^(a)	1.5m	2.0m
Bike Lanes on Constrained Right-of-Way Width	1.2m ^(b)	1.5m

^(a) Note: On-road cycling facilities are not recommended on roadways with posted speed limited greater than 80 km / h

^(b) Please note that this should not be considered along high-speed roadways with high AADT volumes and commercial vehicle volumes

^(c) Width is measured to the face of the curb and includes the gutter pan where one exists.



“Desired Width” – is recommended for roadways with higher average annual daily traffic (AADT) volumes, speed limits, and commercial vehicle volumes (trucks / buses) such as those on busy arterial roadways. This is consistent with both Ministry of Transportation (MTO) and TAC Guidelines.



If the edge line does continue along a roadway following the termination of a bike lane along with the cycling route, and the available lane width between the edge line and the shoulder/curb of the roadway is less than 1.2 m, then the edge line should be removed or, as a minimum, be allowed to wear off. The risk is that cyclists may attempt to ride in the space provided by the edge line although it is less than 1.2 m in width. Cyclists should not be encouraged to ride in this constrained space since a cyclist could strike a curb and may “bounce” back into the motor vehicle travel lane. Therefore, curbed roadways with edge lines less than 1.2 m from the face of the curb should not typically be signed or marked as bike lanes. Once the edge lines have been removed or have worn away, bicycle route signs supplemented by “share the road” sign tabs should be implemented. That said, the use of edge lines 1.2 m to 1.5 m from the curb can serve as an alternative to formal bike lanes and could be combined with time of day parking restrictions to improve conditions for cycling, especially when children are travelling to and from school and peak commuting hours.

In some cases a wider bike lane is needed beside parked cars.

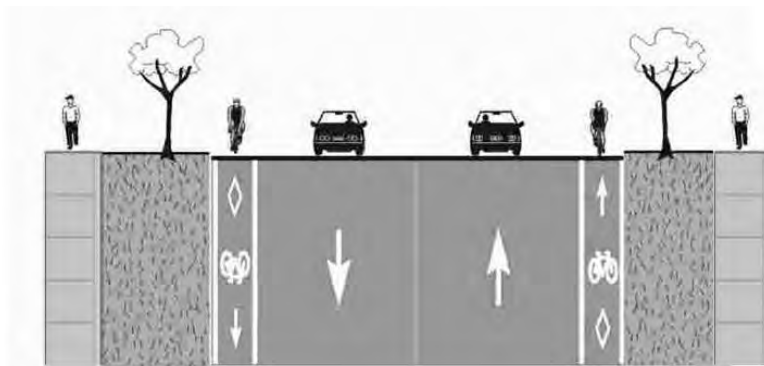
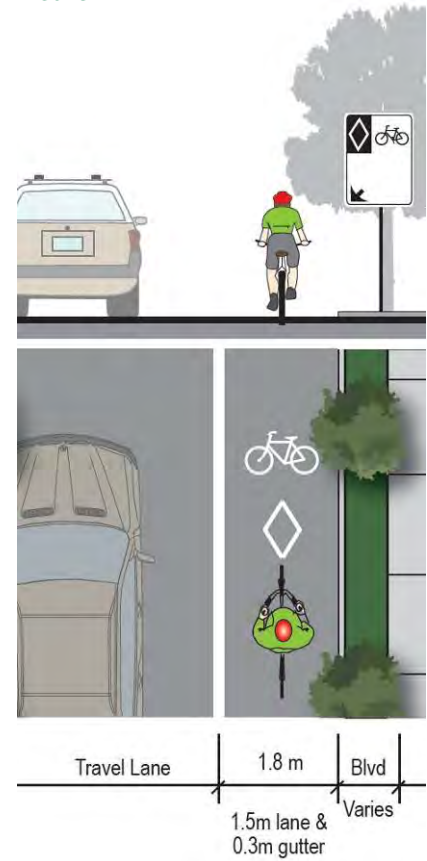


Figure A.8– Example of Urban Road Cross Section with Bike Lanes

Recommendation(s):

1. Bike lanes should be provided on urban arterial and major collector roads that are part of the AT network where traffic volume and speed exceed threshold levels.
2. Bike lanes should be clearly identified on roadways with bicycle symbol pavement markings and bike lanes signs.
3. In locations where a bike lane may not be deemed feasible, consideration should be given to providing a signed only bicycle route with sharrow pavement symbols or edge lines where appropriate.



Bike Lanes with On-Street Parking:

Definition: Bike lanes on roads with on-street parking can be located to the left or right of and adjacent to parked vehicles along the curb. Designing this type of cycling facility must take into consideration the potential hazard to cyclists of car doors (“dooring”) opening into the travelled portion of the bike lane and impacting a cyclist.

Key Considerations:

- The combined bicycle / parking lane should be a minimum of 4.0 m wide to allow clearance for vehicle doors, and to minimize collisions with cyclists (the width allows for a 1.8m bike lane and a 2.2m wide curb side-parking stall. The extra distance added to the typical 2.0 m wide parking stall provides space for the opening of car doors, and encourages cyclists to travel a safe distance from the parked vehicles;
- Bike lanes on roads with on-street parking should be considered in commercial and residential areas where the demand for and turnover of parking is high, and where commercial and residential property owners may not accept the reduction or prohibition of on-street parking.
- Where it is not feasible to install dedicated bike lanes, a signed bicycle route with sharrow pavement markings should be considered. Other route alignments may also need to be considered.
- Where the road right-of-way or other factors limit the opportunity to provide parking spaces, standard on-street curb parking should be assumed. For both applications, the desired width of the parking lane should be a minimum of 2.2m, with the adjacent bike lane 1.8 m.

Potential Alternative: the width of the bike lane may be reduced to 1.5 m if the parking aisle is greater than 2.4 m wide.

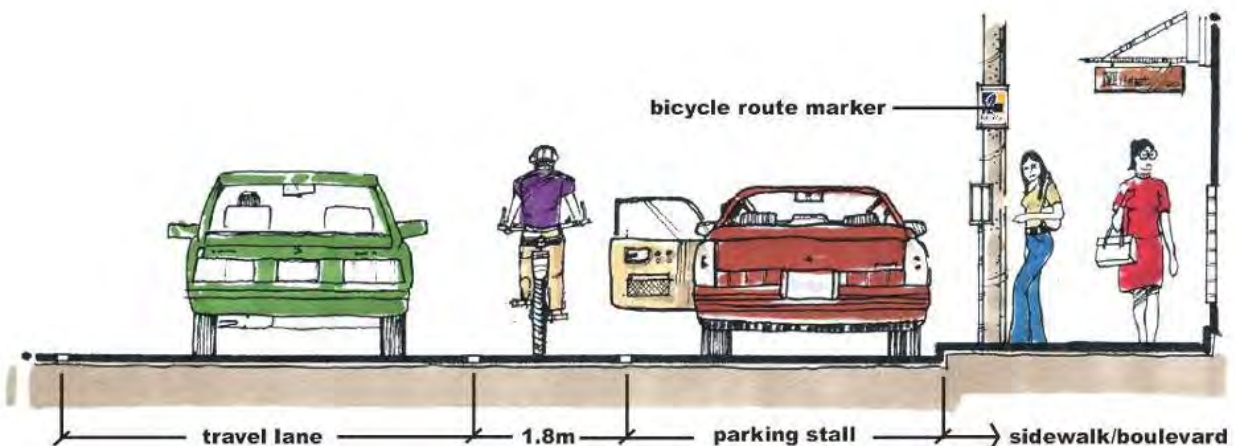


Figure A.9 – Typical Bike Lane with On-street Parking



Bike Lane Guidelines:

<p><i>Guideline A-13:</i></p>	<p>Bike lanes with a minimum width of 1.5 m are recommended as a standard, while a preferred width of 1.8 m should be considered on roadways with higher AADT volumes, speed limits, and commercial vehicle truck volumes.</p>
<p><i>Guideline A-14:</i></p>	<p>Bike lanes should be clearly identified on roadways through bicycle symbol pavement markings and bike lane signs.</p>
<p><i>Guideline A-15:</i></p>	<p>In locations where a bike lane is not deemed feasible following a review, consideration should be given to providing a wide curb lane with sharrow pavement markings. If this is not possible, as a minimum, a signed only bicycle route should be provided if thresholds permit.</p>
<p><i>Guideline A-16:</i></p>	<p>On proposed bikeway routes where on-street curb parking exists, an assessment should be undertaken to determine whether the parking can be removed or relocated. In the event that on-street parking is seen as a priority, parking bays should be considered.</p>
<p><i>Guideline A-17:</i></p>	<p>The desired width of the parking lane and bike lane taken together should be a minimum of 4.0 m (e.g. 2.2 m, with the adjacent bike lane 1.8 m). Where the road right-of-way or other factors limit the opportunity to provide parking bays, standard on-street curb parking widths should be assumed.</p>



A.4.3.2 Buffered Bike Lanes

Definition: Buffered Bike Lanes provide additional space / separation between the cyclist and motor vehicles and can use a number of separation alternatives to address this including pavement markings, rumble strips, planters etc.

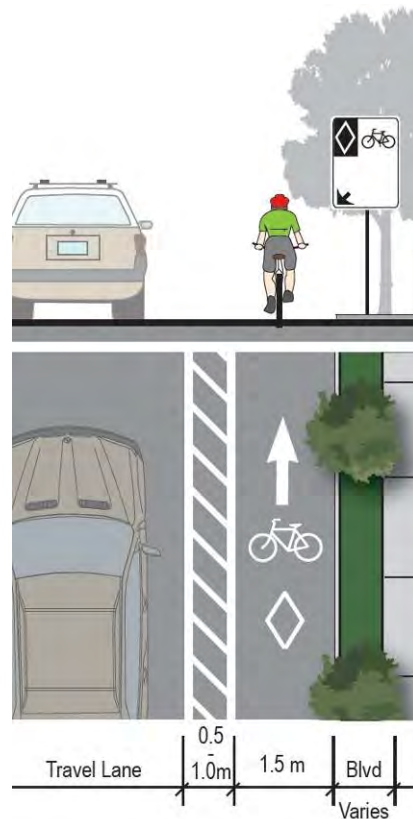
Key Considerations:

- There are various types of physical buffers that are available and can be used to create this separation but not all barrier types completely restrict the encroachment of motorized vehicles into the bicycle lane.
- For a separated bicycle facility, a designated buffer space separates the bicycle lane from the adjacent motor vehicle travel lane.
- Signage and wayfinding provide additional guidance to cyclists, motorists and other road users.

Location for Implementation: Typically implemented along urban roadways with high motor vehicle volumes and / or speed where increased separation is required. Could also be implemented on roadways with on-street parking and high parking turnover where double parking is an issue or major corridors that provide direct and convenient access to key destination points (i.e. corridors with heavy cycle traffic) or in front to schools.

Pedestrian Considerations: Pedestrians use sidewalks in urban areas (sidewalks would be installed at least on one side of the road along designated AT routes where none currently exist in the urban area).

Classification	Suggested Minimum Width	Desired Width
Buffered Bicycle Lane (pavement markings only)	1.5 m lane + 0.5 m buffer	1.5m lane + 1.0 m buffer
Buffered Bicycle Lane with Flex Bollards	1.5 m lane + 0.5 m buffer	1.5 m lane + 1.0 m buffer
Buffered Bicycle Lane with Parking	2.0 m lane + 1.0 m buffer	2.0 m lane + 1.5 m buffer
Buffered Bicycle Lane Tracks with Barrier	2.0 m – 2.5 m lane + 1.5 m buffer	2.0 m – 2.5 m lane + 2.0 m buffer



Buffered Bicycle Lane:

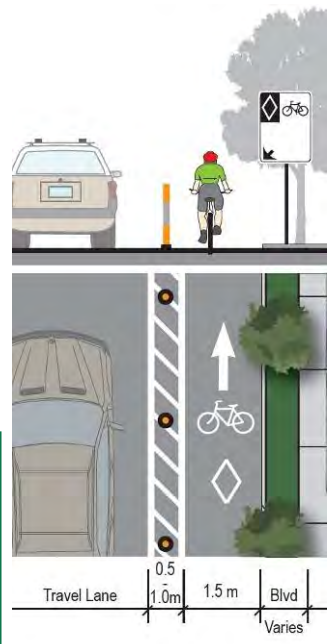
- Designed to increase the space between the bike lane and the travel lane or parked car.
- Appropriate where bike lanes are located on streets with high speeds (e.g. ≥ 50 km / h).





Buffered Bike Lane with Flex Bollards

- Designed to increase the space between the bike lane and the travel lane or parked car.
- Appropriate where bike lanes are located on streets with high speeds (>50 km / h).



Buffered Bike Lane with Barrier

- Use along roadways with high motor vehicle volumes and / or speeds (>50 km / h)
- Best on streets with long blocks and few driveways or mid-block.



Buffered Bike Lane with Parking

- Use along roadways with high motor vehicle volumes and / or speeds (>50 km / h)
- Best on streets with parking lanes with a high occupancy rate.





A.4.4 On-Road Separated Facilities

A.4.4.1 Cycle Tracks

Definition: A raised cycle track is a bicycle facility adjacent to but vertically separated (typically raised and curb separated) from motorized vehicular traffic lanes. A cycle track is designated for exclusive use by cyclists and distinct from the sidewalk.

Key Considerations:

- Separation may be created by different methods including a rolled curb, bollards, a median, a row of on-street parking or landscape treatments;
- Facility may be one-way on each side of the road or two-way on one side of the road, one-way facilities on each side of the road have fewer operational issues at intersections.
- Maintenance and operations (e.g. winter snow clearing and snow storage) need to be carefully considered in the design of the cycle track.
- Signage and wayfinding provide additional guidance to cyclists, motorists and other road users.

Location for Implementation: Can be used on an urban cross-section road where cycling demand is high (e.g. to create a cross-town priority cycling route).

Pedestrian Considerations: Pedestrians use the sidewalks.

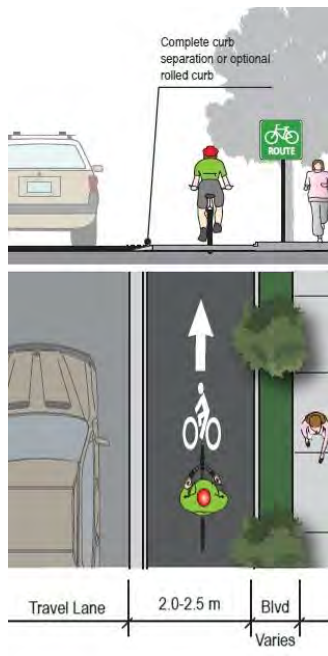
Classification	Suggested Minimum Width	Desired Width
Cycle Track: Raised & Curb Separated	2.0 m	2.5 m
Two Way Cycle Tracks	3.0 m	3.5 m +

One-Way Cycle Track (raised and curb separated) Pavement Markings: Should be marked with a directional arrow followed by a bicycle symbol to indicate the direction of travel which should be the same direction as vehicular traffic

Two-Way Cycle Track (raised and curb separated) Pavement Markings: Should be marked with a directional arrow followed by a bicycle symbol for both directions of travel. In addition, a painted delineation (yellow line) should be used to separate bidirectional travel. A continuous centre line should be provided along segments with reduced sightlines and visibility to prohibit passing and a broken centre line should be provided along segments where passing is permitted.



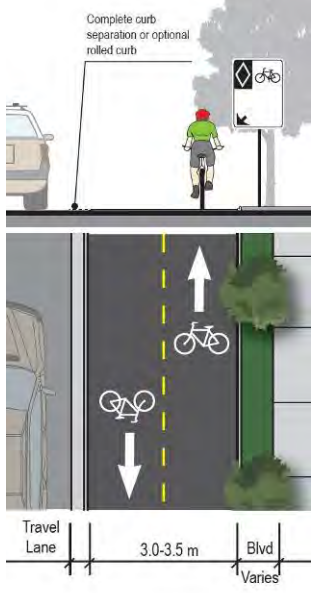
Cycle Track: Raised & Curb Separated



- Use along roadways with high motor vehicle volumes and / or speeds (>50 km / h)
- Where cyclists may enter / leave, or where motorists cross at a driveway, the curb should be rolled with a small 45 degree ramp



Two-way Cycle Track



- Desirable when there are more destinations on one side of a street if the cycle track will connect to a shared-use trail or bicycle facility on one side of the street

Case Study: Ottawa, ON (2010)

In Canada, on-street two-way bikeways have been implemented in a number of locations in the City of Montreal and one location in Ottawa. On Percy Street in the City of Ottawa, there is no buffer or physical barrier but it does have the bikeway elevated slightly through an additional lift of asphalt compared to the motor vehicle travel way. This type of facility is not recommended without the provision of a minimum buffer or physical barrier.



Case Study: Eugene, OR

A unidirectional raised bicycle lane implemented in Eugene, Oregon, separates the raised bike lane from the vehicle travel lane with a mountable curb.



Example of a Raised Bicycle Lane on Ayres Road
 Source: "Cycle Tracks: Lessons Learned", Alta Planning + Design 2008



Please note that... Although separated bike lanes (on-street bikeways) can provide a higher degree of separation between bikes and vehicles, may reduce the risk of conflicts with parked vehicles and may be more appropriate for novice cyclists, there are considerations that need to be recognized. Intersection crossings may require special treatments, such as traffic control and/or traffic calming facilities. Pedestrians may use the bikeway as an extension of the sidewalk in busy commercial areas and when on-street parking is present, a motorist's ability to see cyclists may be compromised. In addition, motor vehicles will need to yield to bicycle traffic, particularly right-turning vehicles at intersections. The cost to implement the facility, educate users and maintain it, including snow clearing in winter months, are also areas that need to be carefully considered prior to implementation.

Recommendation:

1. That the County, perhaps in partnership with its local area municipalities as well as WDG Public Health, consider implementing an on-street one-way cycle track segment with the facility separated from adjacent travel lanes by a physical barrier as a pilot project. One way of achieving an on-road bikeway boulevard is through the conversion of an existing vehicle lane by adjusting pavement markings similar to the approach adopted by New York City. County staff may want to follow-up with other jurisdictions that have implemented and monitored the use of these types of facilities to determine whether such facilities may be appropriate in the County of Wellington.

Case Study: New York City (2006)

New York City announced its plans to install 200 miles of bicycle facilities, including five miles of Class 1 Separated Paths (on-road separated bike lanes) as well as 150 miles of standard bike lanes and 45 miles of Class III signed-only routes. As of 2010 they had implemented all proposed cycling facilities within the City of Manhattan.



Source: *New York Cycle Tracks, Bettercities.net*

Cycle Track Guidelines:

Guideline A-18:	Separated bike lanes or on-street bikeways should be separated from regular motor vehicle travel lanes through the use of buffer zones and/or physical barriers.
Guideline A-19:	Appropriate signing at intersections where bikeways are present is very important to warn and provide clear direction to both motorists and cyclists how they should travel through an intersection.



A.4.5 Off-Road Separated Facilities

A.4.5.1 Active Transportation Pathway Within the Road Right-of-Way

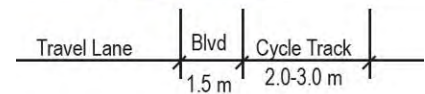
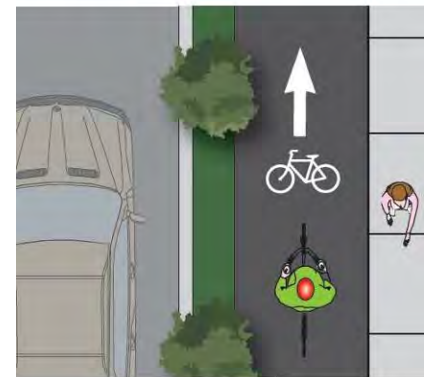
Definition: are uni or bi-directional off-road trails that are located within the boulevard of a road right-of-way and parallel to motor vehicle travel lanes. They are typically designed for a wide range of users including pedestrians, cyclists, in-line skaters and skateboards.

Urban Cross-Section Roads: a two-way multi-use trail for pedestrians and cyclists above the curb which can include the multi-use trail on one side of the road and a pedestrian sidewalk on the other side.

Rural Cross-Section Roads: a two-way multi-use trail for pedestrians and cyclists that is within the road right-of-way but set back from the edge of the road shoulder.

Key Consideration:

- Surface may be compacted granular (e.g. Limestone Screening) or hard surface (e.g. Asphalt). A hard surface will accommodate a wider range of users.
- Yellow centre line may be used on busier asphalt surface trails to help delineate travel lanes.
- Although constructed within the road right-of-way, boulevard trails are separated from regular motor vehicle travel lanes through either a change in roadway elevation (a boulevard trail is usually placed at the same height as a sidewalk) and / or by barriers or medians.
- Not a good facility choice where lot frontages are narrow and numerous intersections per kilometre.
- Separation or setback from the road is a very important consideration. Where separation cannot be achieved it requires one direction of cycling traffic to ride against motor vehicle traffic, contrary to normal rules of the road;
- When the trail ends, cyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, cyclists approaching a shared-use trail often travel on the wrong side of the street in getting to the trail. Wrong-way travel by cyclists is a major cause of cyclist / automobile collisions and should be discouraged at every opportunity;
- At intersections, motorists entering or crossing the roadway often may not notice cyclists approaching from their right;



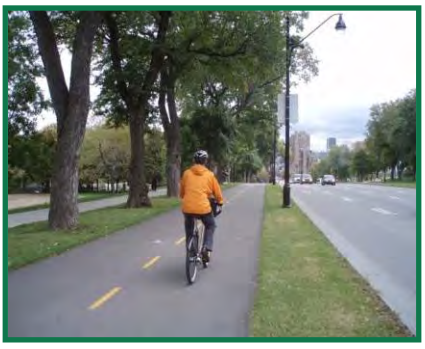
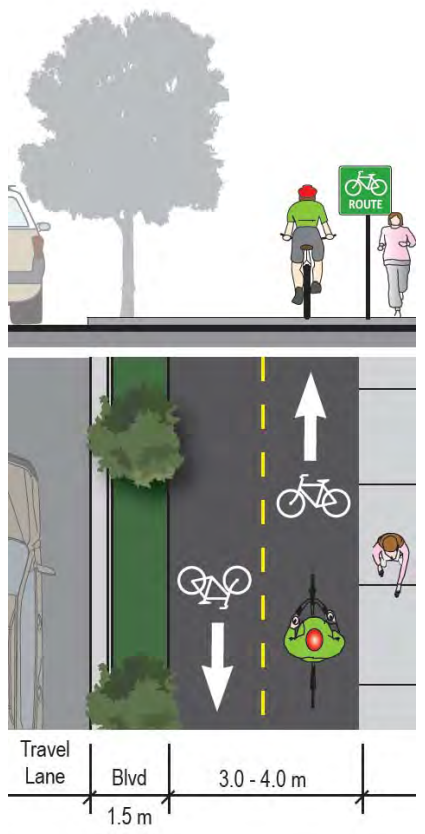


- Signs posted for roadway users are backwards for contra-flow cycling traffic; therefore these cyclists are unable to read the information without stopping and turning around;
- When the available right-of-way is too narrow to accommodate all roadway and shared-use trail features, it may be prudent to consider a reduction of the existing or proposed widths of the various road (and trail) cross-sectional elements such as travel lane and shoulder widths, for example. However, any reduction to less than MTO, TAC, AASHTO or municipal approved design criteria should be supported by a documented engineering analysis;
- Some cyclists may continue to use the roadway instead even if an in-boulevard trail is provided and this may lead to conflict between motorists who feel all cyclists should be on the trail where a trail has been provided;
- Although shared-use boulevard trails should be given the same priority through intersections as the parallel roadway, motorists falsely expect cyclists to stop or yield at all cross-streets and driveways. Efforts to require or encourage cyclists to stop or yield at each cross street and driveway, as required under the Highway Traffic Act, are frequently ignored by cyclists; and
- Stopped cross-street motor vehicle traffic exiting side streets or driveways may block the trail crossing.

Location for Implementation: A good facility choice where there is high cycling demand and a large proportion of the users are youth or seniors with a low to moderate level of experience and where there are few intersections / conflict points per kilometre.

Pedestrian Considerations: Pedestrians are able to use the facility type along with cyclists and other user groups (e.g. cyclists, in-line skaters, skateboarders etc.).

Please note that... Some motorists are thought to prefer boulevard trails because they get cyclists off of the roadway, but pedestrians tend not to like them because they place faster moving bicycle traffic into a space that is traditionally reserved for walking. There are also cyclists who are uncomfortable operating in traffic that believe boulevard trails provide increased safety as cyclists are removed from the motor vehicle traffic stream on a roadway. However, safety professionals and experienced cyclists tend to disagree because collision statistics suggest that cyclists using boulevard trails are more frequently involved in bicycle/motor-vehicle collisions at intersections as compared to cyclists riding on road.



Example: Multi-use Boulevard Trail; Toronto, ON



Factors to Consider for In-Boulevard Multi-use Trails:

Available Rights-of-Way:

- To accommodate the minimum standard for a multi-use boulevard trail, there should be a 6.0m of available right-of-way beyond the curb/edge of roadway including:
 - 1.0 m clear zone from obstructions;
 - 3.0 to 4.0 m wide trail for Spine routes may be narrower for local trails (i.e. can be reduced as low as 2.4 m where 2-way cyclist travel is expected); and
 - 1.5 m buffer / open space that separates the trail from the road.
- AASHTO standards suggest if there is a less than a 1.5 m buffer width, a 1.4 m high physical barrier is required

Number of Street and Driveway Intersections:

- Studies show that cyclists who ride on multi-use trails incur 1.8 times greater risk of being involved in a collision with a motor vehicle than those who ride on a roadway.
- Multi-use boulevard trails should not be considered when there are frequent intersections. The following thresholds are suggested:
 - More than 12 residential driveways; or
 - 6 commercial drives / minor streets; or
 - 3 major street intersections per kilometre.
- Beyond these thresholds, cyclists would face more than 1 driveway every 30 seconds, or 1 street every minute, whereby the safety and utility of the trail deteriorates. Commercial strips and other areas with heavy vehicular turning movements can also be a risk management concern.

Detail Design Considerations:

- Detail design considerations may include:
 - Providing access to destinations located on the opposite side of the street from the trail;
 - Modifying signal timing to permit non-motorized users to move through an intersection;
 - Removing obstructions from sight triangles;
 - Locating crosswalks at a proper distance from the parallel roadway, and providing curb cuts; and
 - Transition areas so that cyclists may access the trail from both the parallel and intersecting streets.

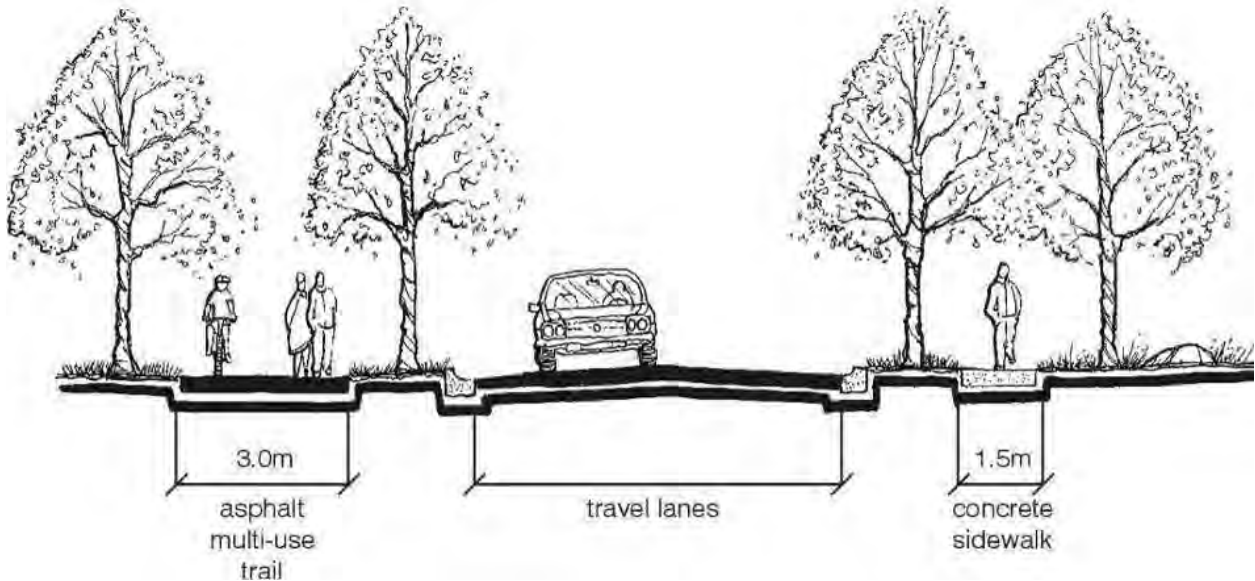


Figure A.10 –Cross-Section of Multi-use Boulevard Trail

Multi-use Trailway Guidelines:

<p>Guideline A-20:</p>	<p>Multi-use trails should be constructed to a minimum width of 3.0 m to accommodate bi-directional flow. On popular, heavily traveled multi-use trails, widths of 3.0 m to 4.0 m are suggested to allow for a wider variety and greater number of users. Local trails may be narrower depending on the location. Width can be as low as 2.4m where 2-way cyclist travel is expected.</p>
<p>Guideline A-21:</p>	<p>Trail surface type is dependent on requirements of planned trail users (e.g. accommodating in-line skaters) and can vary from asphalt to granular surfaces (limestone screenings).</p>
<p>Guideline A-22:</p>	<p>The application of multi-use boulevard trails immediately adjacent to a roadway, especially as a cycling facility, should only be considered for cycling when an on-road facility is not feasible or when a municipality seeks to provide a primarily recreational multi-use boulevard trail and cannot or chooses not to provide a parallel on-road facility for cycling.</p>

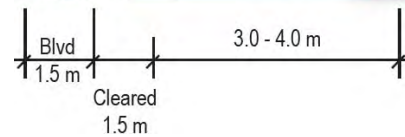
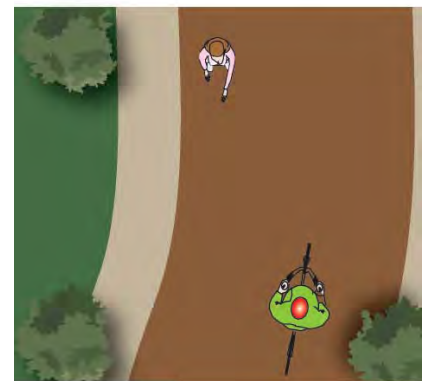


A.4.5.2 Multi-use Trailways Outside the Road Right-of-Way

Definition: is a multi-use trail facility located outside of a road right-of way.

Key Considerations:

- Generally used to provide a recreational opportunity and may also be appropriate in providing a direct cycling commuter route in corridors not served directly by on-road facilities.
- Surface may be compacted granular (e.g. limestone screening) or hard surface (e.g. asphalt).
- Surface may vary, may be granular in rural areas and asphalt in urban areas to accommodate a wider range of users.
- Local Municipal multi-use trails that connect to the County-wide network may be narrower to respond to local Municipal guidelines. Surface types may also include a wider range of materials (e.g. may include earth surface on local connector trails).
- Designers must consider the specific users when determining the operating and design characteristics of the off-road facility.
- Signage and / or painted centrelines can be utilized to identify separate lanes for opposing directions of travel and encourage the practice of keeping to the right side of the trail.



Location for Implementation: in a location outside of the road right-of-way through a park, public open space corridor, along a utility corridor or other linear facility such as an abandoned railway line.

User Group Considerations: Multi-use trails accommodate the widest range of Active Transportation user groups including cyclists, pedestrians, in-line skaters, skateboarders, wheelchair users depending on the trail surface. Equestrians and recreational motorized vehicles including snowmobiles and all-terrain vehicles may also be permitted to use certain sections of a multi-use trail outside of the road right-of-way.



Shared Trailway Signage 0.6 m x 0.3 m

Source: MTO, 1996; TAC, 2009; AASHTO, 2010; ALTA, 2011





Please note that...

A suggested minimum width is 3.0 m, which allows for bi-directional flow. 2.4m is also acceptable in constrained areas. Widths should be increased (3.5-4.5 m +) where use is very high. With such a wide spectrum of users, a variety of trail width and surface treatments can be implemented.

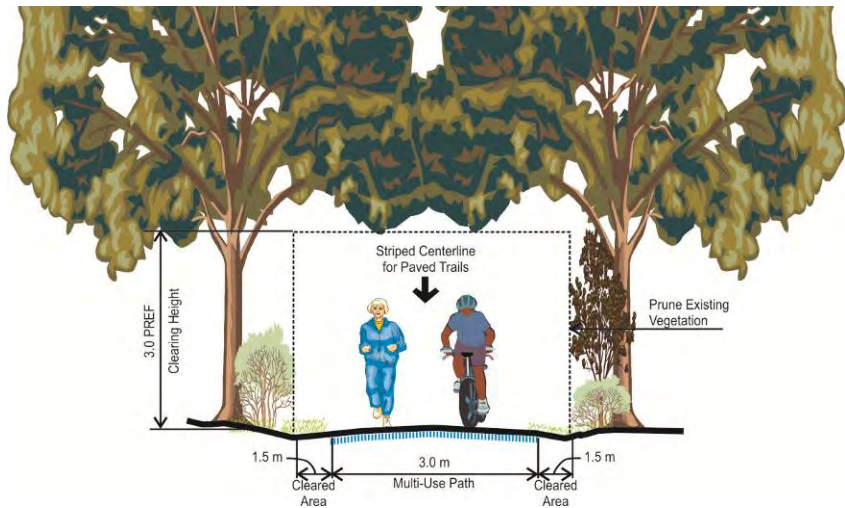


Figure A.11 – Cross-Section of a Multi-use Trail

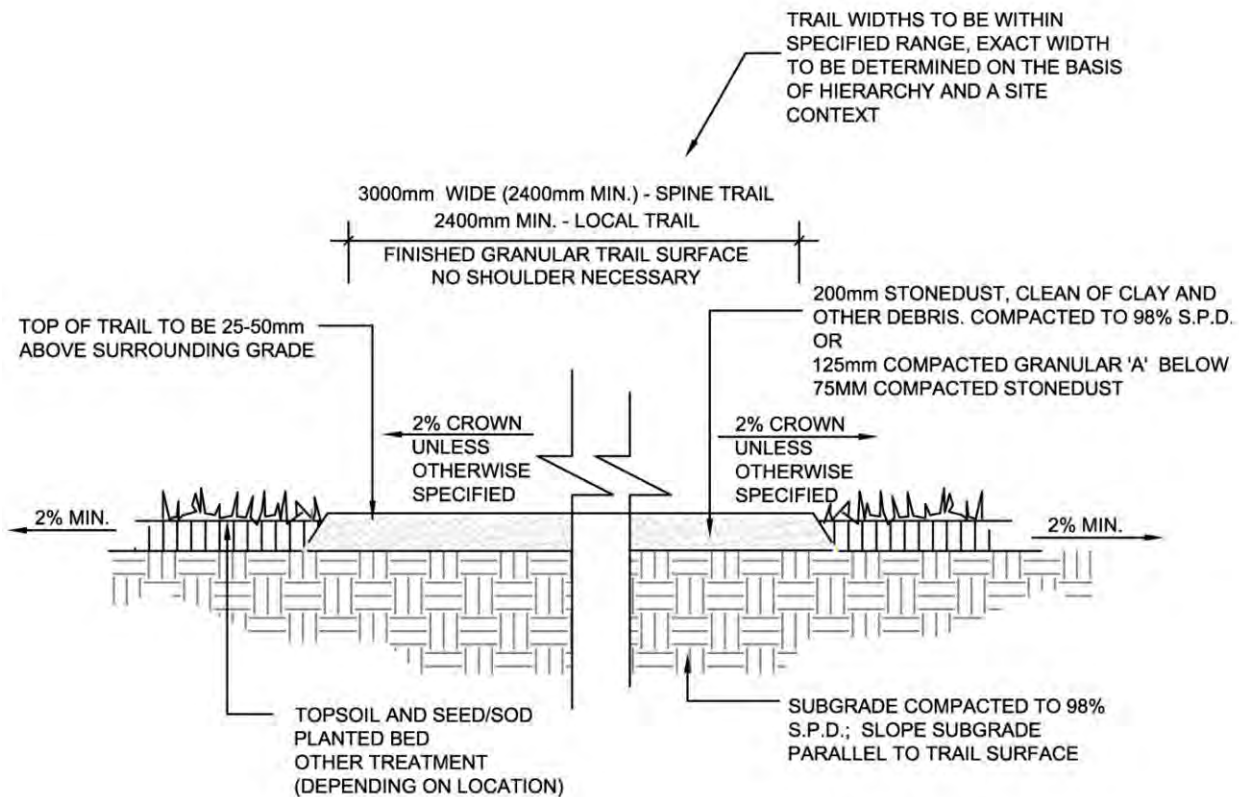


Figure A.12 – Typical Granular Surface Trail Design Detail

Source: City of Aurora Trails Master Plan, MMM Group 2011



A.4.5.3 Rails with Trails

Definition: Under certain conditions active rail rights-of-way may also be able to accommodate an active transportation function. Candidates for “rails with trails” are those with a wide enough right-of-way to safely accommodate a multi-use trail in addition to existing rail operations, low speed, and low frequency railways. In cases where abandoned rail lines currently host multi-use trails and need to be converted to active rail use in the future consideration should be given to reinstating rail infrastructure without losing the use of the multi-use trail by moving the trail to the edge of the right-of-way.

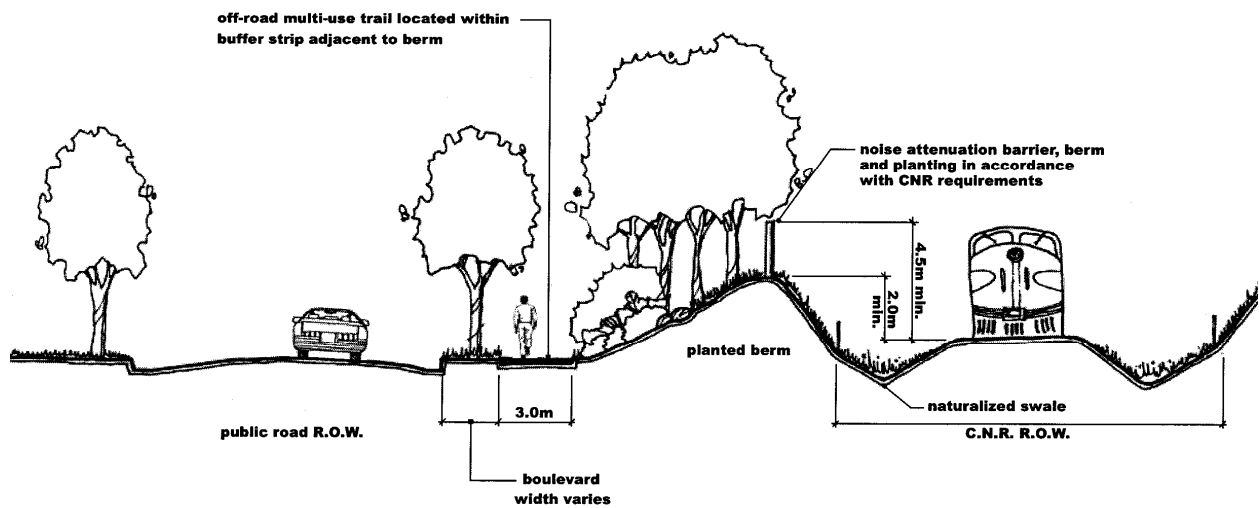


Figure A.13 – Typical Cross-Section of a Trail Facility Adjacent to a Rail Corridor Separated by a Planted Berm
 Source: ESG International Public Open Space Plan, Town of Whitchurch, Stouffville, Functional Servicing Study, Southeast Quadrant OPA 101 Secondary Plan, May 2002

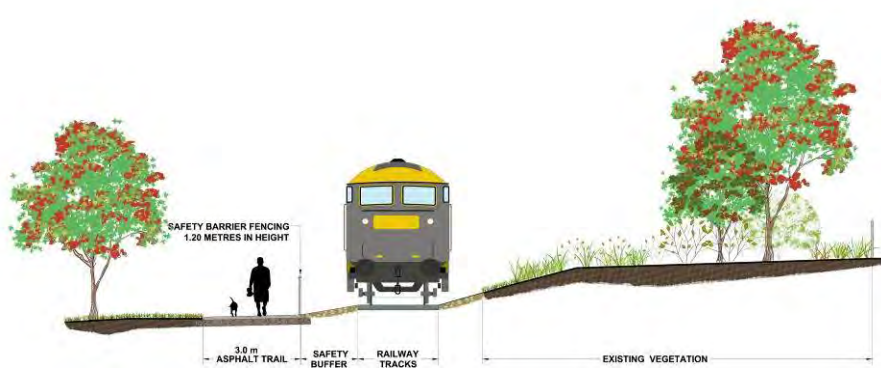


Figure A.14 – Typical Cross-Section of a Multi-use Trail Facility Adjacent to a Rail Corridor Separated by a Fence
 Source: Guelph, ON



Source: Guelph, ON





A.5 NETWORK DESIGN FEATURES

A.5.1 On-Road Design Features

A.5.1.1 Pavement Markings for Cyclists

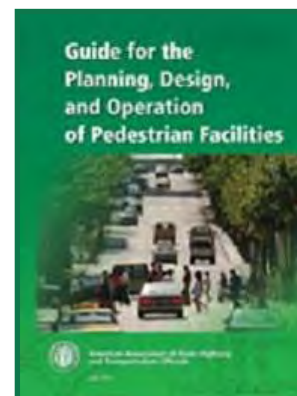
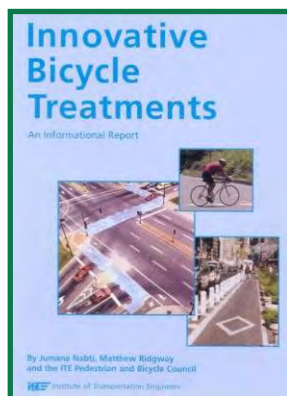
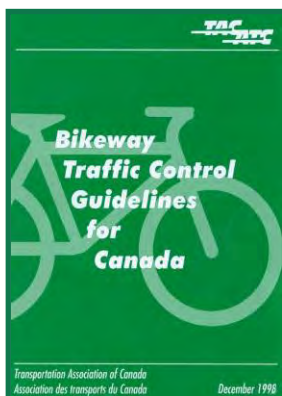
Purpose of Application: The application of appropriate pavement markings helps to direct both motorists and cyclists to safely manoeuvre through intersections as well as directing them along roads. The application becomes even more important at complex intersections or at locations where there is a significant volume of cycling traffic.

Ontario References for Pavement Markings:

- *Ontario Traffic Manual – Book 11 (MTO, 2000)* – please note that this does not address the diamond reserve symbol in its recommended bikeway pavement markings;
- *Ontario Traffic Manual – Book 5 (Regulatory Signs, 2000)* – requires on-road lanes reserved for bicycles to be signed with Reserved Bike Lane signs;
- *Transportation Association of Canada's (TAC) Guidelines for the Design and Application of Bikeway Pavement Markings (2007)*;
- *TAC's Geometric Design Guide for Canadian Roads 1999*;
- *TAC's Bikeway Traffic Control Guidelines (2012)*;
- *MTO's Bicycle Facility Design Guidelines (2012)*; and
- *Ontario Traffic Manual - Book 18 (2012)*.

International References for Pavement Markings:

- *AASHTO Guide for the Planning, Design and Operation of Bicycle Facilities (2010)*;
- *NACTO Urban Bikeway Design Guidelines (2010)*;
- *CROW Design Manual for Bicycle Traffic (2007)*; and
- *Manual for Uniform Traffic Control Devices (MUTCD), 2000* – please note that the diamond symbol has been removed from the recommended pavement markings for bike lanes which has been done to eliminate any potential confusion for motorists regarding the difference between a High Occupancy Vehicle (HOV) lane and bike lane. The document also requires that all jurisdictions in the US comply with this new standard by 2006.





On-Road Cycling Facility Pavement Marking & Signage Comparison:

	Shared Roadways / Signed Bike Route ¹	Shared Roadway / Signed Bike Route – Wide Travelled Lane	Signed Bike Route with Paved Shoulder
Pavement Markings	<p><i>*Stencil Optional</i></p>	<p><i>*Stencil Optional</i></p>	N/A
Signage	IB-23	IB-23	IB-23
	Bicycle Lane	Separated Bicycle Lane	Cycle Track
Pavement Markings			
Signage	RB-91	RB-91	RB-91

¹Share the Road signs are optional on signed routes

Source: Based on information from MTO Bikeways Planning and Design Guidelines, 1996; TAC Bikeway Traffic Control Guidelines, 2012; and AASHTO Guide for the Planning Design and Operation of Bicycle Facilities, 2010

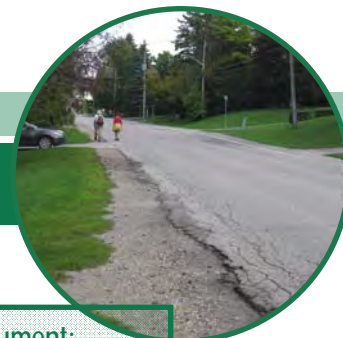


In-boulevard AT Facility Type Pavement Marking

Shared Use Multi-use Trailway	
Pavement Markings	
Signage*	0.6 m x 0.3 m

Recommendation:

1. It is recommended that the Wellington County adopt the pavement marking alternatives identified in the tables above consistent with those outlines in the OTM Pavement Marking Guidelines, the MTO Bikeway Planning & Design Guidelines, TAC's Bikeway Traffic Control Guidelines and AASHTO's Guide for the Planning, Design and Operation of Bicycle Facilities.
2. It is recommended that the addition of a directional arrow above the bicycle stencil is recommended to communicate to cyclists that bicycle lanes are one-way and users are not to cycle in the opposite direction facing motor vehicle traffic.
3. It is recommended that the County's future by-law for bicycle lanes should state that any cyclists may be ticketed if travelling in the wrong direction



Lane Lines: Bicycle lane lines delineate the edge of a travelled lane dedicated for bicycle use, where travel is permitted in the same direction on both sides of the line. Bicycle lane lines direct motor vehicles and bicycles into appropriate lanes, and provide for efficient and safe use of the road.

Key Considerations:

- For paved shoulders it is recommended that they be marked using a standard edge line to separate the travel lane from the paved shoulder, complemented by bikeway route signing and/or share the road signing.
- In urban areas on multi-lane roads, or where traffic volumes exceed the suggested thresholds for a signed-only route and where a bike lane is not feasible, edge lines may be added to the road as a traffic calming measure.
- In situations where roadway width is limited and bike lanes are not appropriate because of a demand for on-street parking, a signed-only bike route combined with edge lines is an alternative approach that some cyclists believe is better than a signed-only route with no edge lines. This treatment should also be considered in conjunction with the posting of seasonal peak hour on-street parking restrictions.
- Consistent with TAC's Guidelines for the Design and Application of Bikeway Pavement Markings, edge lines located less than 1.2 m from the edge of pavement are not recommended on urban roads with curbs due to the risk of cyclists striking the curb and "bouncing" back into the motor vehicle travel lane and potentially colliding with a motorist.
- Existing urban cross-section roads with edge lines less than 1.5 m from the face of curb should not be signed as bike lanes. Should a cycling route be preferred on this type of road, consideration should be given to providing a signed-only route.

Lane Line Reference Document:

TAC's Bikeway Traffic Control Guidelines for Canadian Roads (1998) suggests bicycle lane lines should be solid, white in colour, with a width of 100 mm. This guideline is confirmed in TAC's Guidelines for the Design and Application of Bikeway Pavement Markings (2007). Edge lines used to delineate a curb lane from a paved shoulder bikeway should conform to the requirements of the OTM.

Bike lane lines and edge lines should be solid, except where motor vehicles are permitted to move into or cross the lane to perform a turning movement (for example at intersections). In such situations, a 15 m minimum broken line is used, with 1.0 m line segments and 1.0 m gaps.

What are the effects of adding edge lines on both sides of an urban residential street?:

- Acts as a traffic calming measure by narrowing the motor vehicle traffic lane to help reduce vehicle speeds and by directing vehicles away from the boulevard and sidewalk;
- Reduces wear-and-tear on curb-side catch basins by reducing the incidence of vehicles "hugging the curb" and travelling directly over catch basins; and
- Provides an informal but delineated space on the street that many on-road cyclists are comfortable using.



Pavement Marking for Cyclist Guidelines:

<p><i>Guideline A-23:</i></p>	<p>Wellington County should consider adopting the pavement markings specific to each proposed cycling facility type consistent with the specifications outlined in the OTM Pavement Marking Guidelines, the MTO Bikeway Planning & Design Guidelines, TAC's Bikeway Traffic Control Guidelines and AASHTO's Guide for the Planning, Design and Operation of Bicycle Facilities.</p>
<p><i>Guideline A-24:</i></p>	<p>The County's future by-law for bicycle lanes should state that a cyclist must travel one way in a bike lane (same direction as motor vehicle traffic flow) and that cyclists may be ticketed if travelling in the wrong direction.</p>
<p><i>Guideline A-25:</i></p>	<p>Paved shoulders implemented in Wellington County should be delineated by way of standard edge lines and complemented by bikeway route signing and/or share the road signing.</p>
<p><i>Guideline A-26:</i></p>	<p>Signed only routes on urban streets may be complemented by the addition of roadway edge lines, located a minimum of 1.2 m from the face of curb.</p>



A.5.1.2 Lane Widths and Road Diets

Definition: Reduction in the number of lanes or lane widths which can be used to reduce vehicle speeds and enhance the movement and safety of cyclists as well as pedestrians. It is also an effective method of utilizing excess space.

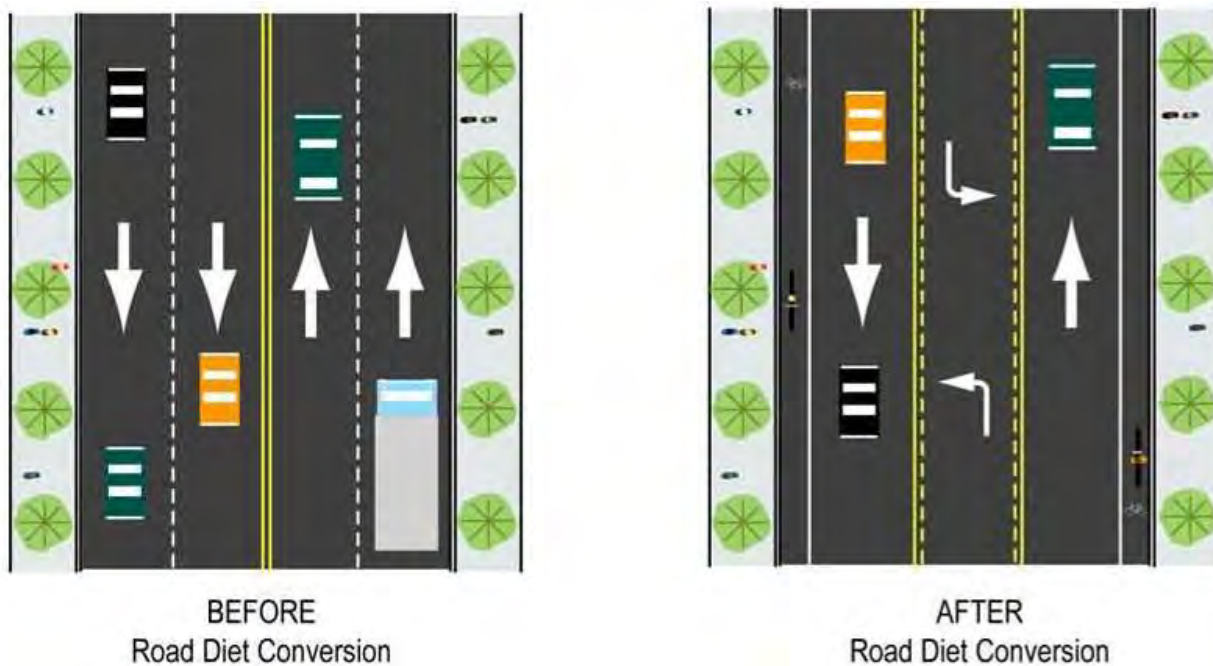


Figure A.15 – Road Diet Example: Lane Reduction

Key Considerations:

- Road diets have been successful in several communities for roadways with an average daily traffic (ADT) of up to 18,000. It is important to remember that intersections generally determine roadway capacity, not the number of lanes mid-block. Road diets provide turning lanes to handle capacity.
- A reduction in travel lanes can affect the carrying capacity of a roadway which may cause traffic to divert onto adjacent residential streets.
- A road diet changes the "feel" of the roadway. It offers traffic calming benefits by modifying perception of appropriate travel speeds. Lane manoeuvring is simplified while maintaining capacity. Left-turning motorists are removed from the travel way. This results in through cars maintaining continuous movement throughout the corridor without speeding and passing. Entering motorists only need to cross one lane of traffic; if needed, they have a median refuge area in which to wait for a second gap in traffic. Non-motorized users benefit when space is provided for on-street bike lanes, turning movements are simplified, and crossings in non-signalized locations are made easier.

Consideration must be given to:

- School buses;
- Emergency vehicle access; and
- Truck volumes.



- Reduced lane widths of 3.3 m are used on roadways in many jurisdictions with limited rights-of-way to accommodate different elements of the cross-section. Narrower lanes can reduce the pedestrian crossing distance and vehicular traffic speed. Motorists drive more cautiously given the reduced space between vehicles in the adjacent lane. This could also be viewed as a traffic calming measure.
- On the other hand, lane widths greater than 3.7 m can be detrimental to safety. Drivers tend to drive at higher speeds and less cautiously with wider lanes. Speeding is more prevalent along wider lanes and may increase the potential for collisions with pedestrians. In addition, wide lanes may tempt motorists to park or stop momentarily on-street where they are not permitted to do so.
- In general, on roads with a posted speed limit of 70 km/h or less, reduced lane widths (3.3 metres) should be considered for inner lanes (middle and median lanes), whereas curb lanes should be kept at 3.5 metres wide. However, in industrial areas or other roadways which carry relatively high truck traffic volumes, wider inner lanes (3.5 metres) should be considered.

A literature review indicates that ...

Safety is maximized for lane widths between 3.3 m and 3.7 m, and widening beyond 3.7 m can be detrimental to safety.

On multi-lane roads a minimum 3.5 m wide curb lane is recommended for accommodating buses and heavy vehicles. The wider curb lane can also accommodate cyclists where delineated bike lanes are not provided. A wider curb lane also provides additional buffer space between vehicles and pedestrians.

Four Lanes without Centre Turn Lanes



Centre Turn Lanes, Bike Lanes & Pedestrian Refuge Island at a Bus Stop



Figure A.16 – Road Diet Example from Phil Road in Urbana, IL, USA

Source: www.vtpi.org (City of Urbana)



Example of Road Retro-Fitting: Georgetown, ON



- 4 Lane Collector;
- On-street parking permitted, but low demand; and
- High operating speeds.

Scenario 1: Bike lanes with on-street parking one side



Scenario 2: Bike lanes with on-street parking two sides



Lane Widths & Road Diets Guidelines:

Guideline A-27: Road diets; a reduction in lane widths or number of lanes should be considered as a low cost solution to adding active transportation facilities to multi-lane roads. Inner travel lanes may be reduced to 3.3m to create additional space in the outer/curbs. Reducing the width and/or number of lanes may also have other traffic calming benefits.



A.5.2 Intersections

Cycling facilities at intersections should be carefully designed to encourage the safe and predictable movement of pedestrians, motorists and cyclists. Since intersections are the most likely area for conflict between various users of the roadway, care should be taken to design and mark the intersection approach such that all users understand and can anticipate the potential movements of other road users. It is important to understand the typical movements of a bicycle and motor vehicle in an intersection of a multi-lane roadway to fully understand the potential for conflict. The figure below illustrates these movements as well as the potential conflict points for motorists and cyclists.

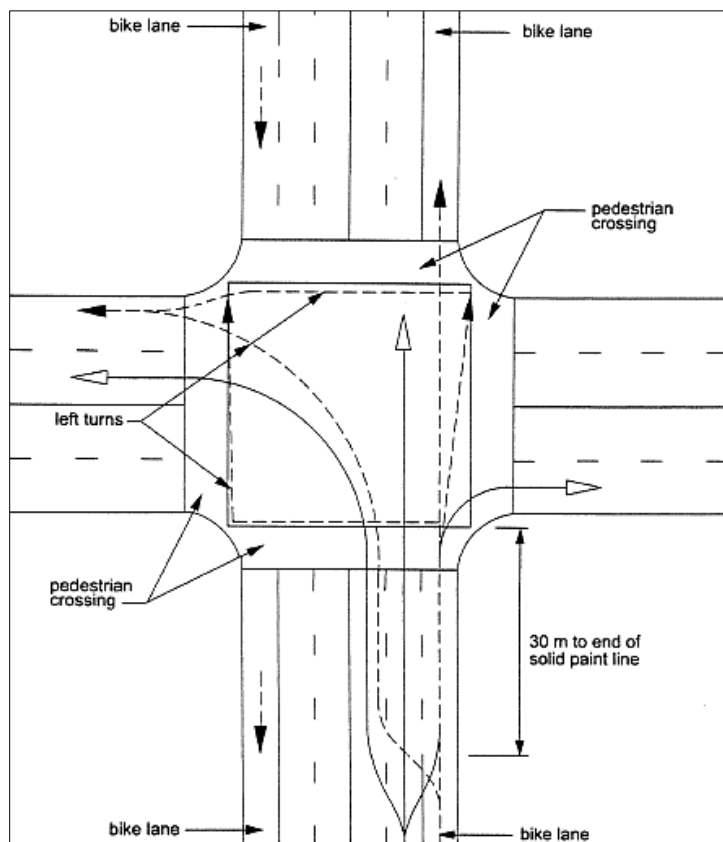


Figure A.17 – Typical Bicycle and Motorized Vehicle Movements at an Intersection of Multi-lane Roadways and Associated Conflict Points

Source: TAC Geometric Design Guide for Canadian Roads, 1999

Design Guidelines for intersections with on-road bicycle facilities provide measures that increase roadway user safety by:

- Increasing visibility for both cyclists and motorists and other roadway users (ensure cyclists and motorists can easily see each other);
- Designating and clearly marking a travel path for all roadway and intersection users including cyclists, motorists and pedestrians;
- Introducing designs that minimize the need for complex manoeuvres for cyclists;
- Managing intersection access to mitigate conflict points;
- Designing actuated signals to detect the presence of cyclists; and
- Facilitating awareness and understanding between competing modes of transportation.

Right-turn conflicts may occur when a cyclist is trying to make a through movement while a motorist is trying to make a right turn and to do so the motorist must cross over the on-road bicycle facility.

Left-turn conflicts may occur when cyclists try to merge across one or more lanes of through vehicle traffic in order to turn left using the same path as motorized vehicles.



Left and Right-turn conflicts can be mitigated using design elements such as:

- Pavement Markings;
- Signage;
- Pavement Colour,
- Designated Holding Areas for Cyclists;
- Medians;
- Bicycle Traffic Signals; or
- By adjusting signal timings to accommodate cyclists.

Design Alternatives for Mitigating Right Turn Conflicts

Bicycle Lane Adjacent to Combined Through / Right Turn Lane

Where: On roadways where the bicycle lane is adjacent to a combined through / right-turn vehicle lane.

Design Solution: Implement a dashed line approach the intersection. The dashed line should begin, at minimum, 15 m from the vehicle stop line which indicates to motorists that they are permitted to cross into the bicycle lanes (when safe to do so) to make a right hand turn.

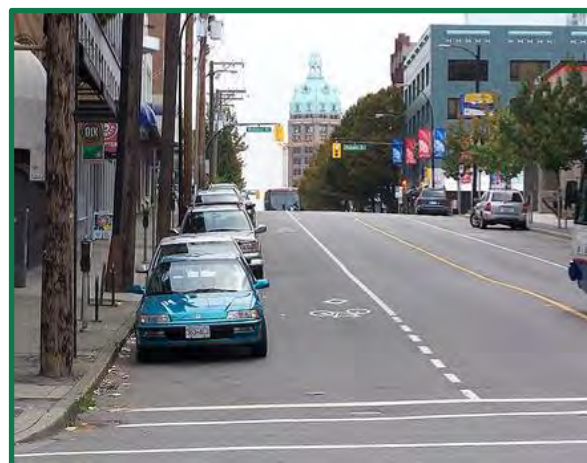


Figure A.18 –Bicycle Lane Adjacent to Combined Through / Right-Turn Lane

Source: John Luton (flickr), 2009

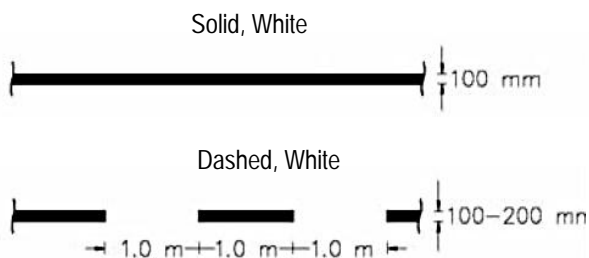


Figure A.19– Longitudinal Pavement Markings for Bicycle Lanes

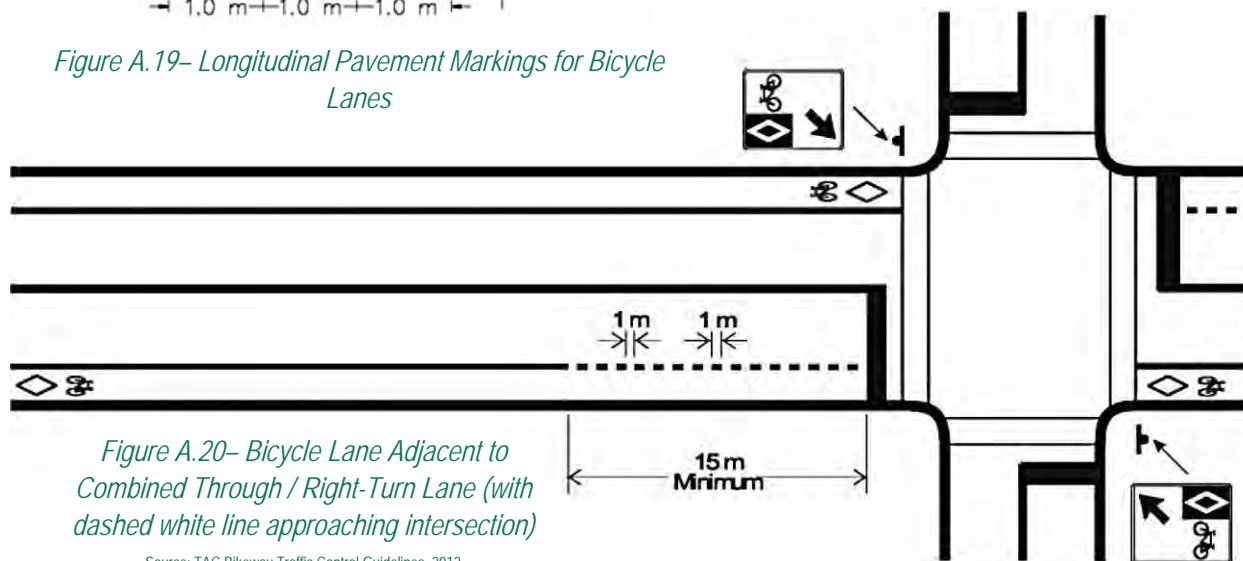


Figure A.20– Bicycle Lane Adjacent to Combined Through / Right-Turn Lane (with dashed white line approaching intersection)

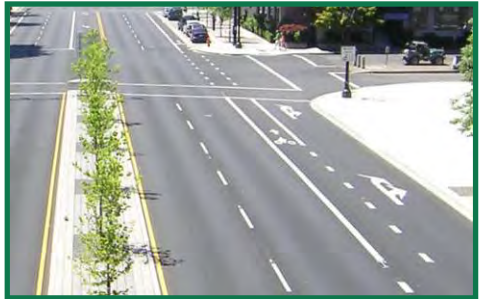
Source: TAC Bikeway Traffic Control Guidelines, 2012



Through Bike Lane with Dedicated Right-Turn Vehicular Lane

Where: A through bicycle lane separate from and adjacent to the dedicated right-turn vehicular lane.

Design Solution: Cyclists are positioned on the left side of the right-turning motor vehicles. A dashed line is used along the portion of the bicycle lane where motorists are permitted to cross over to the dedicated right turn lane and a solid line is used to delineate the space that is exclusively reserved for cyclists.



Design Benefits:

- Enables cyclists to position themselves appropriately to minimize conflict with vehicular traffic especially those motorists making a right turn;
- Positions the potential conflict point before the intersection making it more visible to motorists;
- Reduces conflicts between cyclists and right turning motorists; and
- Delineates the cycling travel path and positions cyclists appropriately in order to cross the intersection directly and safely.

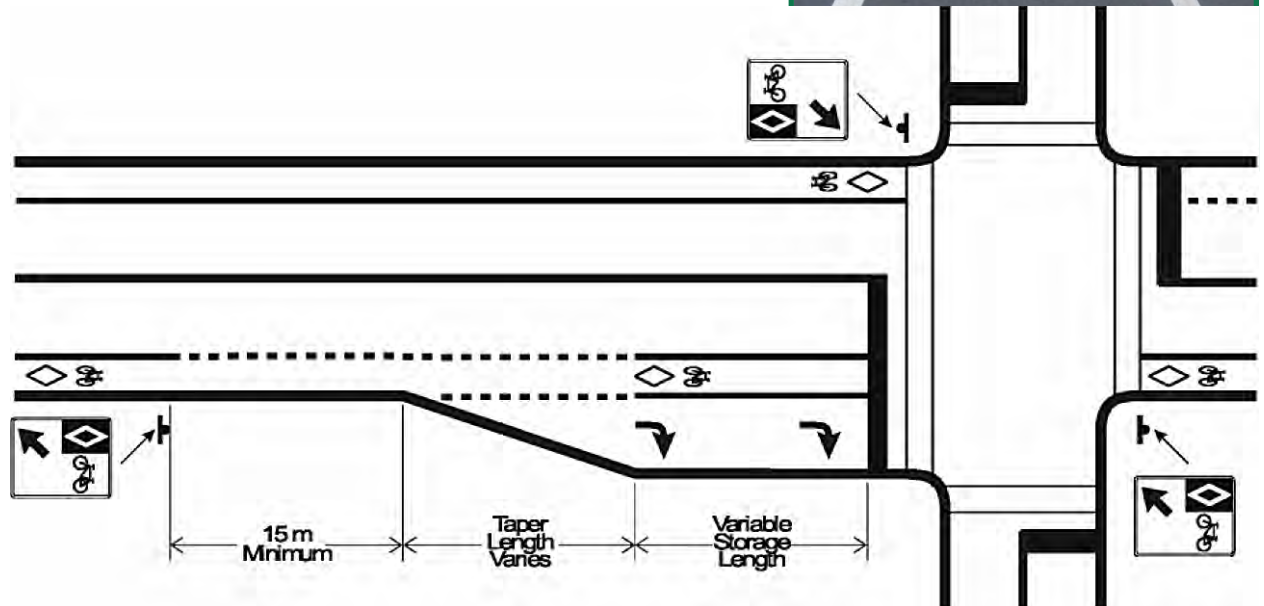


Figure A.21 – Through Bicycle Lane Adjacent to Introduced Right-Turn Lane

Source: TAC Bikeway Traffic Control Guidelines, 2012



Design Alternatives for Mitigating Left Turn Conflicts

Left-Turn Guide Line Markings through an Intersection

Where: Within the intersection where dashed lines are used to identify a cyclist's travel path and provides cyclists with a safe and direct path through the intersection.

Design Solution: The dashed extension lines should be approximately 1.0 m long and 0.1 to 0.2 m wide spaced at least 1.0 m intervals. The turning lane should align with and match the width of the leading and following on-road bicycle facilities.



Photo Credit: Jym Dyer, 2001

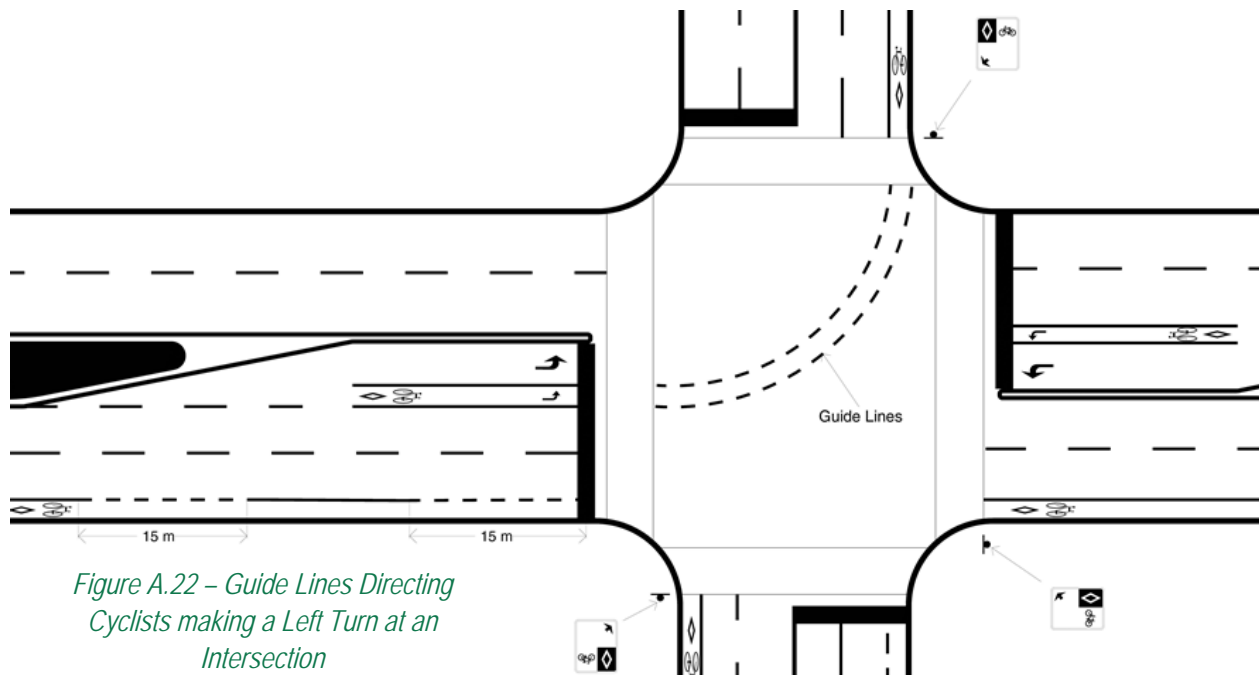


Figure A.22 – Guide Lines Directing Cyclists making a Left Turn at an Intersection

Source: TAC Bikeway Traffic Control Guidelines, 2012

Please note that...

There is also the potential for standard bike lanes along roadways to become substandard in width at intersections due to spatial constraints. At these locations, the bike lane should not be signed as such or delineated with any bicycle-stencil pavement markings; however, bicycle-route signs may be erected at these locations. It is recommended that when these intersections are improved, that they be upgraded to accommodate standard bike lanes. A detailed evaluation of the intersection should be undertaken at times when such intersections are improved to determine if there is enough public land available or to ensure that there are no competing interests for space, such as pedestrian or utility space. Therefore, a detailed review should be undertaken to address these issues.



Bike Boxes

Where: is a designated area at the front of a traffic lane of a signalized intersection that allows cyclists to safely wait ahead of queuing vehicular traffic during the red signal phase before proceeding ahead of motorists on the green phase. Typically considered at locations where cyclist volumes are high and measures are being considered to give cyclists priority at intersections.

Design Solution: A bike box should be 4.0 metres deep and contain a vehicular stop line between the bike box and the queuing vehicles to indicate the point behind which motor vehicles are required to stop during a red signal phase. A typical bicycle pavement marking should be applied between the crosswalk line and the stop line. For increased visibility, coloured pavement may be used to enhance the visibility of the bike box. Appropriate signage can be used to provide additional guidance to motorists.

- Design Benefits:**
- Significantly increases the visibility of cyclists making motorists aware of the presence of other road users;
 - Cyclists are given priority and are able to cross through the intersection more quickly;
 - For bike boxes that extend across the entire intersection approach, cyclists are able to safely transition from the right-side of the lane group to the left-side during a red signal which allows cyclists to make a safe left turn movement ahead of vehicular traffic; and
 - Can mitigate right-turn conflicts since generally right turns on red are restricted for motorists where bike boxes are used.



Source: Richard Dhruil

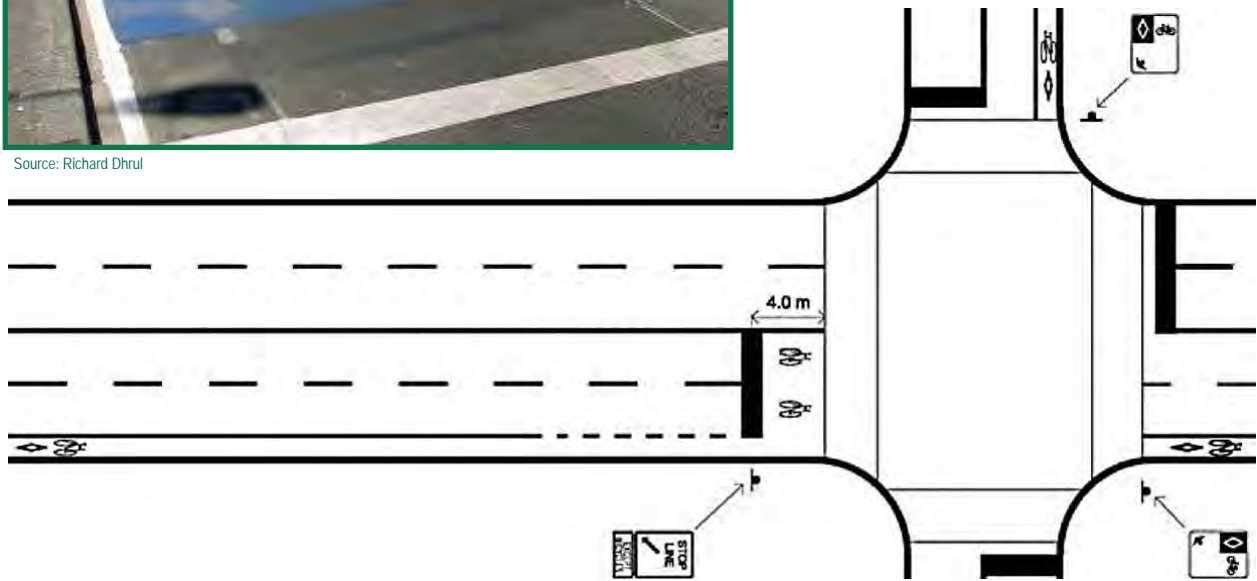


Figure A.23 – Typical Bike Box Design at a Signalized Intersection with a Bike Lane Approach

Source: TAC Bikeway Traffic Control Guidelines, 2012



Intersection & Bike Box Guidelines:

<i>Guideline A-28:</i>	Cycling facilities at intersections should be carefully designed to encourage safe and predictable movement of pedestrians, cyclists and motorists.
<i>Guideline A-29:</i>	Bike boxes may be considered at locations where cyclist volumes are high and measures are being considered to give cyclists more priority at intersections (e.g. adjusting signal timing or phasing sequences)



A.5.3 Crossings

A.5.3.1 Multi-use Trail Crossings at Intersections

TAC's Guidelines for the Design and Application of Bikeway Pavement Markings provide recommended treatments for locations where multi-use trails cross roadway intersections. There are two different applications to consider:

- **Combined Crossings:** where pedestrians and cyclists will mix; and
- **Separate Crossings:** where cyclists and pedestrians have their own designated space for crossing.

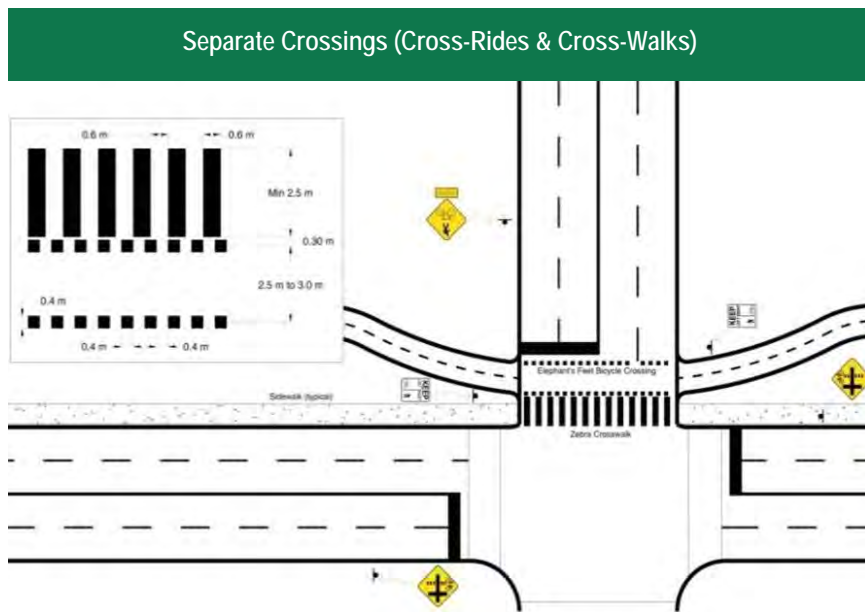


Figure A.24 – Separate Bike Crossing at an Unsignalized Intersection

Source: TAC Bikeway Traffic Control Guidelines, 2012

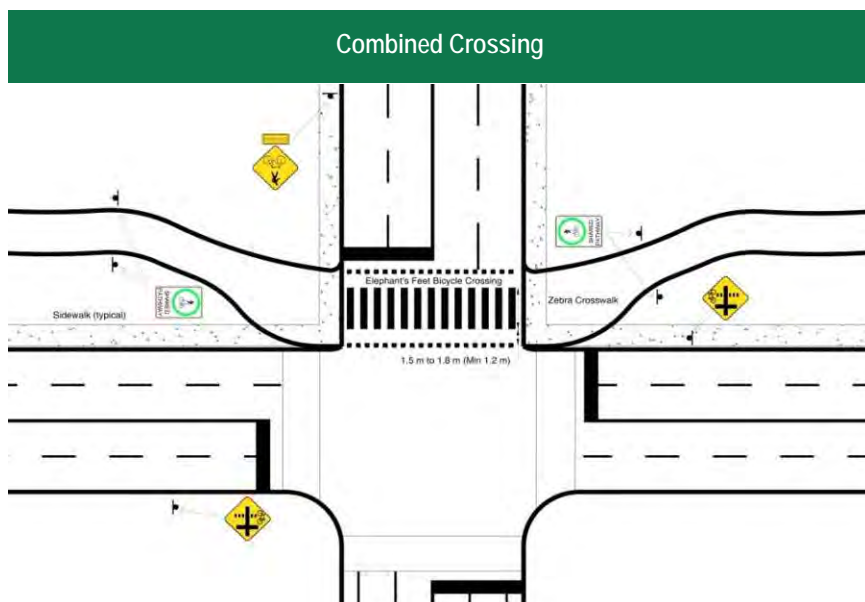


Figure A.25 – Combined Multi-use Trail Crossing at an Unsignalized Intersection

Source: TAC Bikeway Traffic Control Guidelines, 2012



A.5.3.2 Mid-Block Crossings

Where: Ideally, a trail crossing should occur at an existing signalized or stop controlled intersection, or if at a mid-block location, by way of a grade separated crossing such as an underpass or bridge. Unfortunately, these ideal crossing solutions cannot always be achieved.

The location of the trail and its existing or preferred alignment and desire line for trail users may mean that crossing at an existing or future protected crossing is impractical. In addition, when retrofitting a roadway to accommodate a trail crossing, constructing an underpass or bridge for the trail is not always a feasible solution from both a design and cost perspective.

OTM Book 15 – Pedestrian Crossing Facilities:

"Pavement markings to delineate pedestrian crossings are not recommended in the design of a refuge island." Section 3.3.1.2

Also, "marked crosswalks with painted pavement markings are not recommended at uncontrolled crossings as they create a false sense of security on the part of pedestrians..." Section 3.3.1

Design Considerations:

- It should be designed to provide advance warning to motorists.
- Should be designed and signed to encourage the trail user to reduce speed and stop.
- Grade changes on the trail in advance of the crossing combined with adequate sight distances, signing, textural surface contrast and bollards should be considered.
- Mid-block crossings of arterial or collector roads may warrant consideration of a pedestrian activated signal.



Figure A.26 – Mid-Block Crossing Examples; (Signalized – Left), (Unsignalized – Right)



Please note that...

TAC designs presented above do not incorporate a perpendicular sidewalk along the cross-street. An alternative treatment presented in Figure A-22 illustrates one example of how this situation can be addressed at a mid-block trail crossing.

Typical Mid-Block Trail Crossing

plan: n.t.s.

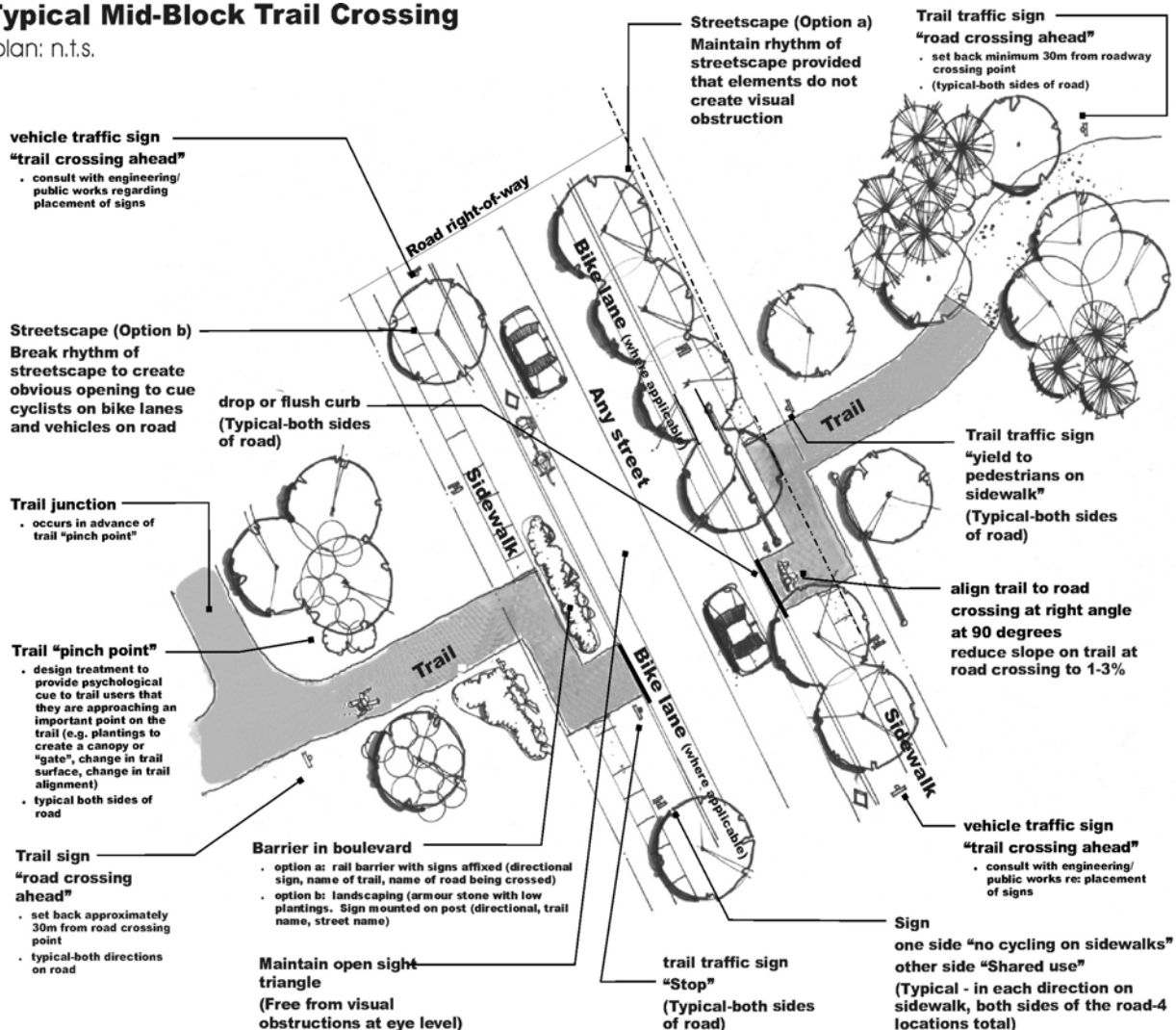


Figure A.27 – Elements of Trail Crossings of Roadways

If the trail crossing is within the given distance of a signalized or stop-controlled intersection, or a formal pedestrian crossing, trail users should be directed to cross at this location. The following are considered acceptable threshold distances for mid-block crossings:

- 2 Lane Roadway: 60 metres from nearest protected crossing; and
- 4 to 6 Lane Roadway: 120 metres from nearest protected crossing.



A.5.3.3 Multi-use Trail Crossings at Railways

Design Considerations:

- Appropriate traffic control devices be installed at the intersection of railway tracks and network routes including:
 - Pavement Markings;
 - Signage; and
 - Lift gates where specified by Transport Canada Guidelines.
- Careful consideration should be given to the design of at-grade crossings of railways. It is recommended that crossings be designed as close to right angles as possible. In many situations this may require widening of a network segment in advance of the crossing, thereby allowing cyclists, to reduce their speed and position themselves for crossing at right angles.
- Rubber track guards are recommended to improve friction between bike tires and the pavement, and also to narrow the rail gaps.
- Clearly visible signage should be displayed to warn of an approaching railway crossing, and possible tripping hazards when walking or running over them.
- Approaches should be paved and inspected regularly during road inspections for signs of deterioration around the tracks. Pavement deterioration adjacent to railway tracks can be a potential hazard, especially to those in wheelchairs since tires could get caught in the rails.

Reference Documents:

Traffic control devices should be designed and installed in accordance with:

- The Bikeway Traffic Control Guidelines (TAC 1997);
- Manual of Uniform Traffic Control Devices for Canada (TAC 1998); and
- RTD-10, Road/Railway Grade Separations (Transport Canada, October 24, 2002).





A.5.4 Bridges & Highway Interchanges

The key consideration in designing bicycle facilities across bridges and through interchanges is the safety of cyclists. The separation of non-motor vehicle traffic from motor vehicle traffic, either through pavement markings or fully separated facilities, is often recommended to reduce the potential for conflict between these two types of road users, especially on arterial and collector roads.

A.5.4.1 Bridges

The design of new structures or the modification of existing bridges must now comply with the standards of the Canadian Highway Bridge Design Code (2002). The guidelines state that:

“Roadway and sidewalk widths, curb widths and heights, together with all other geometrical requirements not specified in the Code, shall comply with the standards of the Regulatory Authority, or in their absence, with the TAC Geometric Design Guide for Canadian Roads.”

“Sidewalks and cycle paths shall be separated from traffic lanes by a barrier or guide rail, or by a curb having a face height of at least 150 mm and a face slope not flatter than one horizontal to three vertical. Sidewalks and cycle paths not so separated shall be designed as part of the roadway.”

In Ontario, the current *Geometric Design Standards for Ontario Highways (GDSOH) 1994*, does not provide guidelines on offsets (horizontal clearances) at bridges. In the past, the Ontario Highway Bridge Design code was the guiding document, but this code is no longer in force since it has been replaced by the Canadian Highway Bridge Design Code effective June 1st, 2002. The *TAC Geometric Design Guide for Canadian Roads and the Canadian Highway Bridge Design Code* also do not provide details on the side clearances required on bridge decks. Side clearances are the distance between the edge of the travelled way and adjacent curb or barrier. Where side clearances on a bridge are wider than the approach roadway shoulder width/side clearance, the bridge side clearance should match that of the approach roadway.

Given that neither the Canadian Highway Bridge Design Code, nor Geometric Design Standards for Ontario Highways prescribe current structure clearances and cross section dimensions, the *Ontario Ministry of Transportation's (MTO) in August of 2002* issued a *“Revision Information Sheet for Geometric Design Standards for Ontario Highways”*.

Section D.7.2.3 of this document, which now forms part of the Geometric Design Standards for Ontario Highways, provides the following direction with regard to sidewalks, curbs and bicycle routes on bridges, where required, the widths of sidewalks and bicycle routes on bridge decks should meet the following requirements:

- The edge of a sidewalk adjacent to the roadway on a bridge should match that of the approach sidewalk;
- Where the approach roadway is not provided with a curb, the sidewalk width should be at least 1.5 m;
- Paved bike lane and bicycle route widths should be in accordance with the Ministry's Ontario Bicycle Routes Planning and Design Guidelines. Bicycle routes should be at least 1.5 m wide for one-way traffic;



- The height of curbs should not be less than 150 mm above the adjacent roadway except to match the height of curbs on the approach roadway and
- Curbs should not be used in conjunction with barrier walls except where the curb and the barrier wall are separated by a sidewalk.
- Section D.7.2.5 of the same source also states that:
- Where practicable, underpassing roadway cross-sections should match that of the approach roadway; and
- Horizontal clearances from the edge of the through travelled way to the face of an abutment or pier should meet or exceed minimum clear zone widths in the Ministry's Roadside Safety Manual.

To allow cyclists to cross an existing bridge safely, the structure may require alterations to provide adequate width for all bridge users. A bicycle route can be routed across the bridge in one of three ways:

- Creating a bike lane or shoulder bikeway on the travelled way;
- Reserving a sidewalk for cyclists only, or for shared use with pedestrians if there is adequate width; or
- Widening the roadway to permit shared use of the right lane by motor vehicles and bicycles.

The creation of a bike lane on a bridge is an option if the bridge has shoulders, or if traffic lanes are wide enough to permit the creation of a wide curb lane to accommodate bicycles on the travelled way.

A.5.4.2 Interchanges

Challenge: Incorporating AT facilities into interchanges is a significant challenge. Mixing relatively high speed, high volume motor vehicle traffic making frequent merging/diverging movements with pedestrian and bicycle traffic is a challenge. A general goal in these locations should be to provide clearly delineated space for cyclists and to provide them ample time to choose when to cross merging and diverging traffic.

Recently, there has been a safety rationale and policy direction to improve cyclist accommodation at interchanges in Ontario. In 2011 the Ministry of Transportation Ontario completed a study which looked at the integration of cyclists and pedestrians at interchanges within GGHA and Niagara Region.

A proposed process for assessing opportunities and requests for Active Transportation (AT) alternatives at interchanges for consideration and discussion by the MTO. This process includes a set of "Alternatives Tables" which are meant to direct practitioners in selecting AT alternatives for common interchange configuration categories. The alternatives outlined in these tables are not requirements or hard solutions; they are simply a collection of 'suggested minimum' and 'desirable' design alternatives for a wide range of situations and interchange configurations. It is recommended that the AT alternatives be assessed on a site by site basis to reflect site-specific situations (i.e. traffic characteristics, operational concerns and physical constraints of each location). In situations where it may be more desirable to allow a cyclist to choose their own merge, weave or crossing manoeuvres, it is recommended that the pavement markings for the bicycle lane be discontinued through the crossing area.

The following illustrations provide two typical solutions for bicycle facilities on ramps with motorists travelling at low speeds (< 70 km/hr) and on ramps with motorists travelling at high speeds (> 70 km/hr). The 2012 update to the MTO Bikeway Design



Guidelines should be consulted for a more complete suite of design alternatives for crossings to highway ramp crossings and overpasses.

Figure A.28 Bicycle Lane Carried Straight across Lower Speed Diverging Ramp with Parallel Lane

For low speed merging/diverging ramps, as per the TAC Bikeway Traffic Control Guidelines for Canada, it is recommended to carry the bicycle lane straight across the ramp using a white, dashed line pavement marking. Coloured pavement may also be considered for the portion of the bicycle route crossing the motor vehicle travel lane.

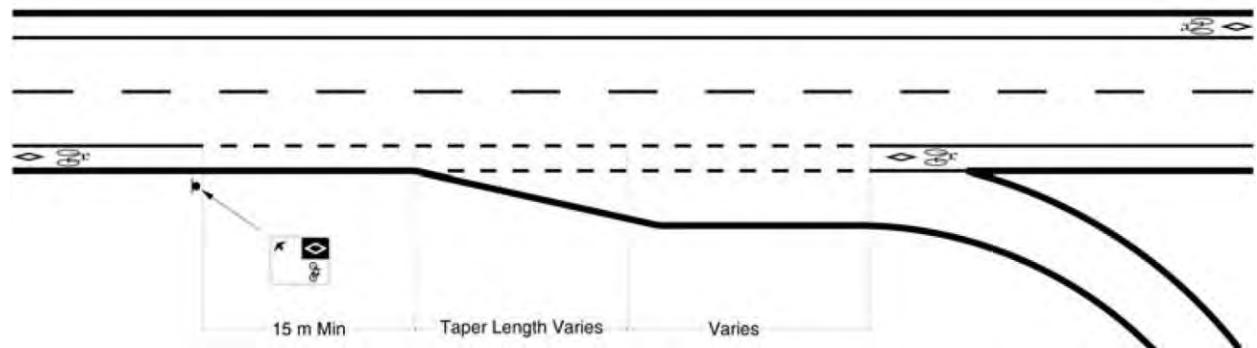
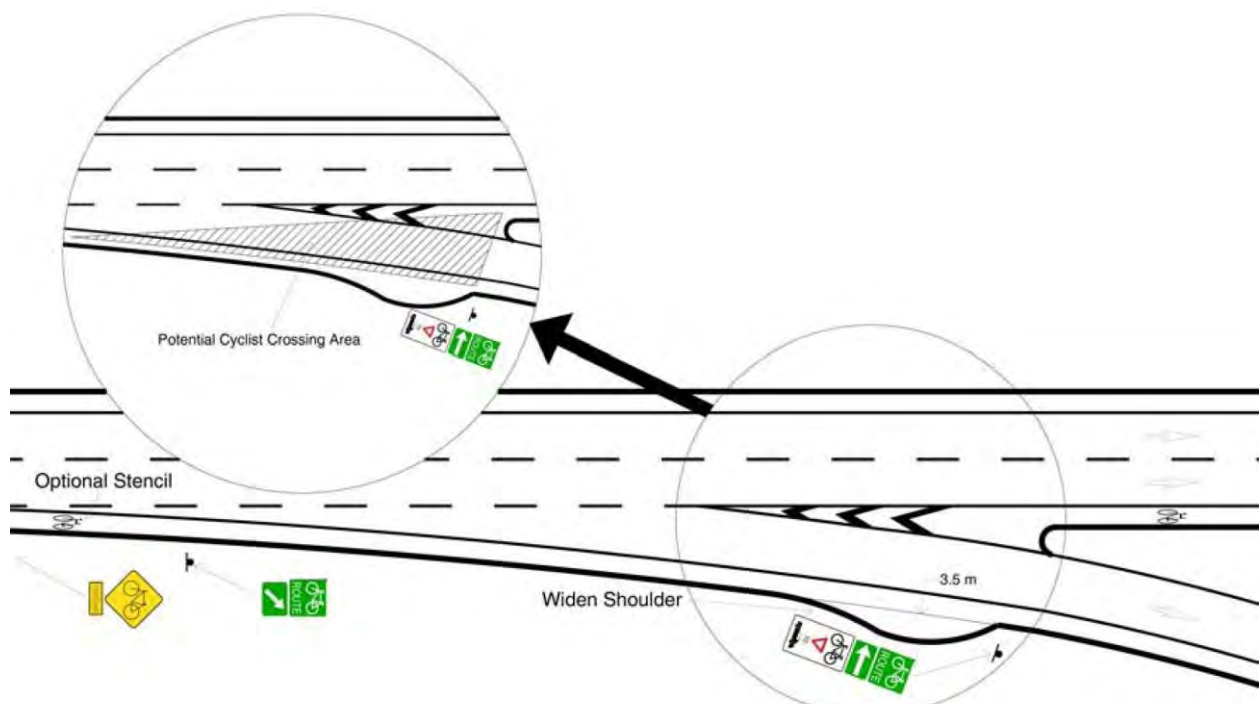


Figure A.29 Typical Design for Cycling Crossing at High-Speed Diverging Ramp

For high speed merging/diverging ramps, as per the TAC Bikeway Traffic Control Guidelines for Canada, it is recommended that the bicycle lane not be carried straight across the ramp. Instead a “jughandle” is recommended. The jughandle allow cyclists to slow or stop adjacent to diverging traffic align their bicycle so they can see oncoming traffic and cross the ramp when there is a break in the traffic and also cross the ramp using the shortest path of travel. Signage to alert motorists of the crossing is also recommended.





Bicycle Facilities at Bridges & Highway Interchanges Guidelines:

<i>Guideline A-30:</i>	The creation of a bike lane on a bridge may be considered if the bridge has shoulders, or if the traffic lanes are wide enough to permit the creation of a wide curb lane to accommodate bicycles on the travelled way.
<i>Guideline A-31:</i>	The guidelines for accommodating on-road bikeways at interchanges as outlined in the MTO Bikeway Facility Design Guidelines (2012) and OTM Book 18 (2012) should be adopted by the County and local municipalities for future cycling and pedestrian facilities.



A.5.5 Roundabouts

Roundabouts are gaining popularity as an option for intersection control because they are considered to be safer for roadway users than other at-grade intersection designs. All motorists are directed to travel in the same counter-clockwise direction which eliminates left-turn conflicts associated with traditional intersection designs.

Single-lane or multi-lane roundabout may be considered where applicable and designed in accordance with NCRP Report 672 – Roundabouts: An Informational Guide Second Edition (December 2010) and Highway Design Bulletin 2011-004 (Appendix A – MTO Design Exceptions).

- **Single-lane Roundabouts:** Cyclists are expected to ride with motorists. Cyclists are able to navigate single-lane roundabouts more safely and comfortably as they are not required to change lanes to make left-turn movements (as is the case at traditional intersections) or to change lanes to choose the appropriate lane of travel (as is the case at multi-lane roundabouts).
- **Multi-lane roundabouts:** Cyclists should be given a choice as to whether they prefer to stay in mixed use traffic and ride with motorists or to use the sidewalk and cross the road as a pedestrian.

Key Considerations:

- If traffic volumes are high, a multi-use AT trail may be built to allow cyclists to bypass the multi-lane roundabout.
- Bicycle ramps should be provided to allow access to the sidewalk or AT multi-use trail and consideration should be given to providing a widened sidewalk or trail where pedestrian and cyclist use is medium to high.

The following two figures illustrate bicycle lanes at single lane roundabouts, bicycle lanes at multi-lane roundabouts with sidewalk bicycle by-pass and bicycle lanes at multi-lane roundabouts with multi-use AT trail bicycle by-pass and the appropriate signage locations.

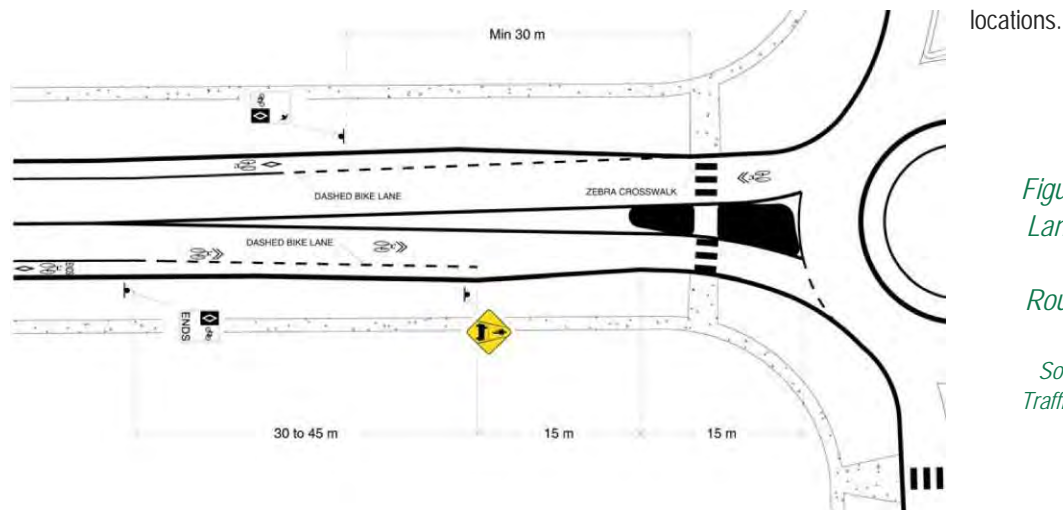


Figure A.30 – Bicycle Lane Approaching a Single Lane Roundabout (shared use)
 Source: TAC Bikeway Traffic Control Guidelines, 2009

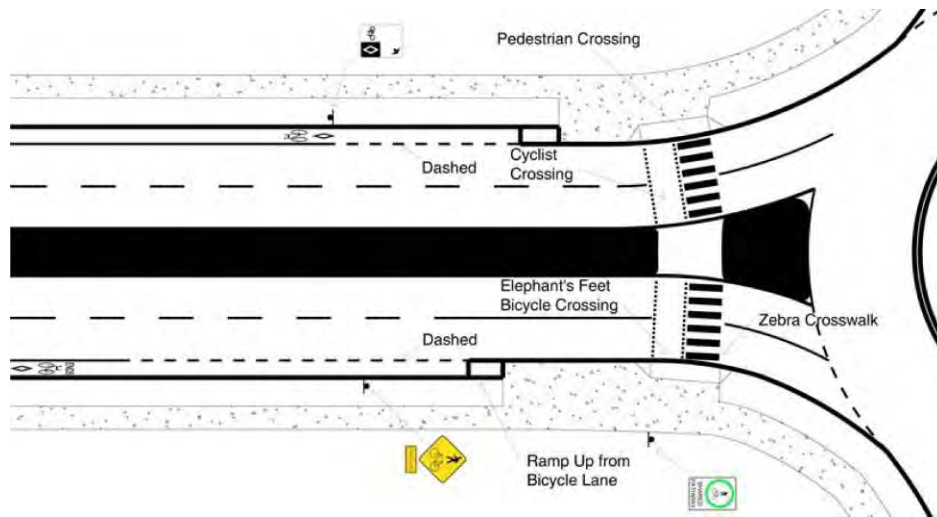


Figure A.31 – Multi-lane Roundabout with Bicycle By-Pass
Source: TAC Bikeway Traffic Control Guidelines, 2009

Roundabout Guidelines:

Guideline A-32:

The needs of pedestrians and cyclists should be fully incorporated into roundabout designs in Wellington County.



A.5.6 Network Amenities

The provision of network amenities is a key and sometimes overlooked element of cycling network design. Developing and maintaining a comprehensive network of on-road and off-road active transportation facilities does not automatically mean people will use the network. The network has to be promoted, users need to feel comfortable and safe in using it, and they should have access to adequate trip-end facilities at strategic locations.

A.5.6.1 Trip-End Facilities for Commuters

Facilities which could be implemented at workplaces as well as educational institutions to promote the use of the network for utilitarian purposes include:

- **Bicycle Parking** which can include a variety of types from the simple post and ring style rack for 2 bicycles to larger and more elaborate systems for large numbers of bicycles at destinations where use/demand is high;
- **Change and Shower Facilities** at the cyclist's destination.

A.5.6.2 Bicycle Parking

The provision of bicycle parking facilities is essential for encouraging more bicycle use in Wellington County. The lack of adequate bicycle parking supply or type can deter many from considering using their bicycle as a basic mode of transportation.

Bicycle Racks

Bicycle racks are made up of the following four main components:

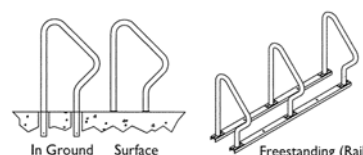
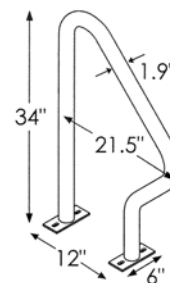
- The rack element;
- The rack;
- The rack area; and
- The rack area site.

These four components are described in greater detail in the following sections.

The Rack Element (the portion of a bike rack that supports the bicycle)

Key Characteristics:

- They can be joined on any common base or arranged in a regular array and fastened to a common mounting surface.
- The racks may be used to accommodate a varying number of bicycles securely in a particular location.
- Various types of available bicycle rack designs include the "Ribbon" rack, the "Ring" rack, the "Ring and Post" rack and the "Swerve" rack.





The Rack Element Should:

- Support the bicycle upright by its frame in two places;
- Prevent the wheel of the bicycle from tipping over;
- Enable the frame and one or both wheels to be secured;
- Support bicycles without a diamond-shaped frame with a horizontal top tube;
- Allow front-in parking: a U-lock should be able to lock the front wheel and the down tube of an upright bicycle; and
- Allow back-in parking: a U-lock should be able to lock the rear wheel and seat tube of the bicycle.

Bicycle racks should not only allow for a secure lock between the bicycle and the rack, but should also provide support for the bicycle frame itself. The rack element should also be designed to resist being cut or detached by common hand tools such as bolt and pipe cutters, wrenches and pry bars which can easily be concealed in backpacks.

The Bicycle Rack (the portion of a bike rack that supports the bicycle)

The Bicycle Rack should:

- Consist of a grouping of the rack elements either by attaching them to a single frame or allowing them to remain as single elements mounted in close proximity to one another;
- Whether as single units or grouped together, be securely fastened to a mounting surface to prevent the theft of a bicycle attached to a rack;
- Be mounted so that it cannot be easily lifted or moved from its position with bicycles attached;
- Be easily and independently accessed by the user;
- Arranged to allow enough room for two bicycles to be secured to each rack element;
- Be arranged in a way that is quick, easy and convenient for a cyclist to lock and unlock their bicycle to and from the rack.

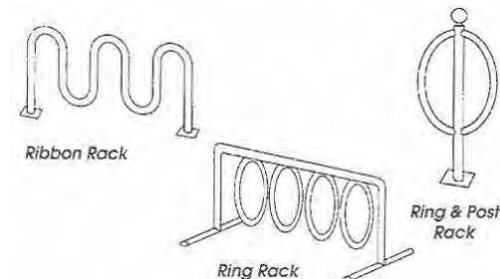


Figure A.32 – Examples of Bicycle Rack Elements

Source: www.core77.com

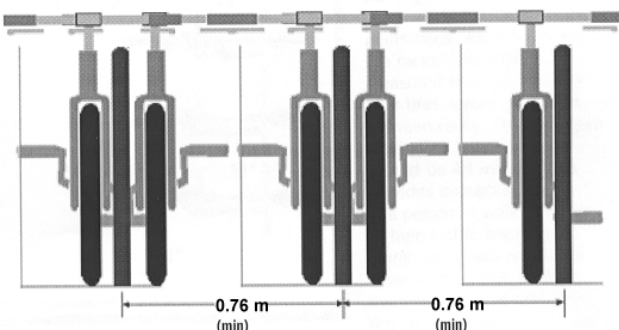


Bicycle Parking Area

Definition: the “bicycle parking lot” or area where more than one bicycle rack is installed. Bicycle racks are separated by aisles, much like a typical motor vehicle parking lot.

Key Considerations:

- The recommended minimum width between aisles should be 1.2 m to provide enough space for one person to walk with one bicycle.
- Aisle widths of 1.8 m are recommended in high traffic areas where many users may retrieve their bicycle at the same time, such as after a school class.
- A 1.8 m depth should be provided for each row of parked bicycles since conventional bicycles are just less than 1.8 m long and can be accommodated in that space.
- Large bicycle rack areas with a high turnover rate of arriving and departing cyclists should have more than one entrance to help facilitate user flow.
- If possible, the rack area should be sheltered to protect the bicycles from the elements by placing awnings and overhangs above the rack area.
- Bicycle racks should be placed as close as possible to the entrance that it serves, but not in a location where they would inhibit pedestrian flow in and out of the building.
- Where possible rack areas should be no more than 15 m from an entrance, and should be clearly visible along a major building approach line.
- Bicycle rack areas that are hard to find or that are located far from a building entrance are generally perceived as vulnerable to vandalism and will generally not be used by cyclists. To encourage use of a bicycle rack by cyclists, the rack site should be clearly visible and well lit.
- Multiple buildings in an area should not be served by one bike rack. Rather, smaller bike racks should be placed in convenient locations at each building, but not in a manner that would obstruct utility access openings, garbage disposal bins, doorways or other building access points.



A rack is one or more rack elements joined on a common base or arranged in a regular array and fastened to a common mounting surface.



Source: www.cyclesafe.com



- To avoid excessive bicycle riding on the grass, bicycle racks should only be placed on grass surfaces located within close proximity to a paved cycling route, such as on off-road multi-use trail, or an on-road route. Bicycle racks on grass surfaces should be considered temporary, and every effort should be made to relocate them to a permanent, hard surface area or a concrete pad can be paved in an approved area to accommodate bicycle parking.

Bicycle racks should not be placed within the following areas:

- Bus loading areas;
- Goods delivery zones;
- Taxi zones;
- Emergency vehicle zones;
- Hotel loading zones;
- Within 4.0 m of a fire hydrant;
- Within 2.5 m of a driveway or access lane; and
- Within 10.0 m of an intersection.

Bicycle Lockers

Definition: Bicycle lockers are individual storage units. They are weather-protected, enclosed and operated by a controlled access system that may use keys, swipe card (key fob) or an electronic key pad located on a locker door. Some locker systems are set up for multiple users (i.e. coin operated or secured with personal locks). On average, two standard car parking spaces (of 5.6 m x 2.6 m each) can accommodate 10 individual bicycle locker spaces but this may differ depending on the locker model.

Key Considerations:

- Security and durability are important to consider when selecting a bicycle locker.

Design Alternatives:

- Transparent panels are available on some models to allow surveillance of locker contents;
- Stackable models can double bicycle parking capacity on site;
- Options for customer access can vary from a simple, single-use key system to a multi-user system that allows secure access through



Source: www.en.wikipedia.ca



Source: www.nramjedi.com



Source: www.transitaction.ubc.ca



Source: www.winnipegtransit.com





smart card technology or electronic key pads;

- Bike Lockers require a level surface, clearance for locker doors and should be located close to building entrances or on the first level of a parking garage and within range of security surveillance. Bicycle Lockers are best placed away from sidewalks and areas with high pedestrian traffic. High quality, durable models should be able to withstand regular use, intense weather conditions and potential vandalism;
- The installation of lockers and showers at workplaces and educational institutions helps to promote the use of the cycling network for utilitarian purposes. Businesses or institutions with more than 20 employees commuting by bicycle should be encouraged to offer these facilities.

Recommendation: consideration should be given to promoting and implementing cycling supportive facilities. The development of end-of-trip facilities can strengthen the outreach of the County’s Active Transportation Plan by encouraging more residents to use cycling as a preferred mode of travel.

Network Amenity Guidelines:

<i>Guideline A-33:</i>	Wellington County and its partners should provide trip-end facilities for employees and visitors at all public buildings where feasible, and the private sector should be encouraged to do the same for residential, commercial and institutional developments.
<i>Guideline A-34:</i>	Using the criteria outlined, the type of bicycle parking facility, number of available spaces and location should be carefully considered on a site by site basis.
<i>Guideline A-35:</i>	Wellington County and local municipal partners should consider a program to install post and ring style racks on an as-requested basis for destinations throughout the County. The design of a signature post and ring style rack could be used to as a common branding element for Active Transportation throughout the County.

A.6.5.7 Bicycle Friendly Catch Basin Covers

Catch basin grates and utility covers are potential obstructions to cyclists, as well as in-line skaters. Therefore, bicycle-safe grates should be used, and grates and covers should be located in a manner which will minimize severe and/or frequent manoeuvring by the cyclist.

Key Considerations:

- When new curbed roadways are constructed or rehabilitated, curb face inlets should be considered to minimize the number of potential obstructions.
- Catch basin grates and utility covers should be placed or adjusted to be flush with the adjacent pavement surface.

Challenges:

Issue: Catch basin grates with slots parallel to the roadway, or a gap between the frame and the grate, can trap the front wheel of a bicycle, causing loss of steering control. If the slot spacing is wide enough, narrow bicycle wheels can drop into the grates. Conflicts with grates may result in damage to the bicycle wheel and frame as well as potential serious injury to the cyclist.



Potential Solution: Grates should be replaced with bicycle-safe, hydraulically efficient versions over time as grates are replaced and as roads are rehabilitated. Catch basin covers on high demand cycling routes should be considered as a higher priority over routes that have lower levels of use/demand. Other municipalities such as the Region of Niagara have recently adopted a new standard for catch basin covers that is bicycle friendly. Wellington County and the local partners should review the Niagara standard and approach as a potential model.

Catch Basin Cover Guidelines:

Guideline A-36:

Wellington County and local municipal partners should take steps to ensure that catch basin covers are bicycling friendly by implementing a program to incrementally replace “unfriendly” covers.

A.6.5.8 Rest & Staging Areas

Where: Rest areas should be provided along routes where users tend to stop, such as interpretative stations, lookouts, restaurants, museums and other attractions / services, which are logical locations for rest areas. Ideally, there should be a rest area at least every five kilometres on popular rural recreational trails or at major intersections and gathering places near on-road facilities or along sidewalks and boulevard trails. In urban centres rest areas should be provided more frequently, and in areas where trail/AT route demand is high such as popular urban trails, trails near seniors’ centres, along waterfront promenades etc., opportunities for resting/seating should be much more tightly spaced (e.g. consider intervals of 100-250m).

In addition to seating, a number of other amenities should be considered for rest areas. The decision to include these or not depends on the size, scale and location of the rest area. Additional amenities may include:

- Tables;
- Washrooms and potable water;
- Waste receptacles;
- Parking for automobiles;
- Information signing complete with mapping; and
- Bicycle parking facilities.



Figure A.33 Pathway Seating & Rest Areas; Confederation Trail Georgetown PEI (Middle) MMM Group & Caledon Trailway, Palgrave, ON (Right) MMM Group



Rest & Staging Area Guidelines:

Guideline A-37:

Rest and staging areas should be provided at strategic locations such as gathering points, attractions and destinations, as well as other locations where cyclists and pedestrians are expected to stop. Wellington County and local partners should work together to identify and implement rest and staging areas.

A.5.7 Network Signage

The design and construction of the network should incorporate a hierarchy of signs each with a different purpose and message. This hierarchy is organized into a “family” of signs with unifying design and graphic elements, materials and construction techniques. The unified system becomes immediately recognizable by the user and can become a branding element. Consistent with this approach is the correct use of signage, which in-turn reinforces the trail’s identity. Generally the family of signs includes:

Orientation and trailhead signs: which are typically located at key destination points and major network junctions. They provide orientation to the network through mapping, other appropriate network information as well as any rules and regulations. Where network nodes are visible from a distance, these can be a useful landmark. In some municipalities, orientation signing has also been used as an opportunity to sell advertising space. This not only provides information about local services that may be of interest to trail users, but it may also help to offset the cost of signs and/or pathway.

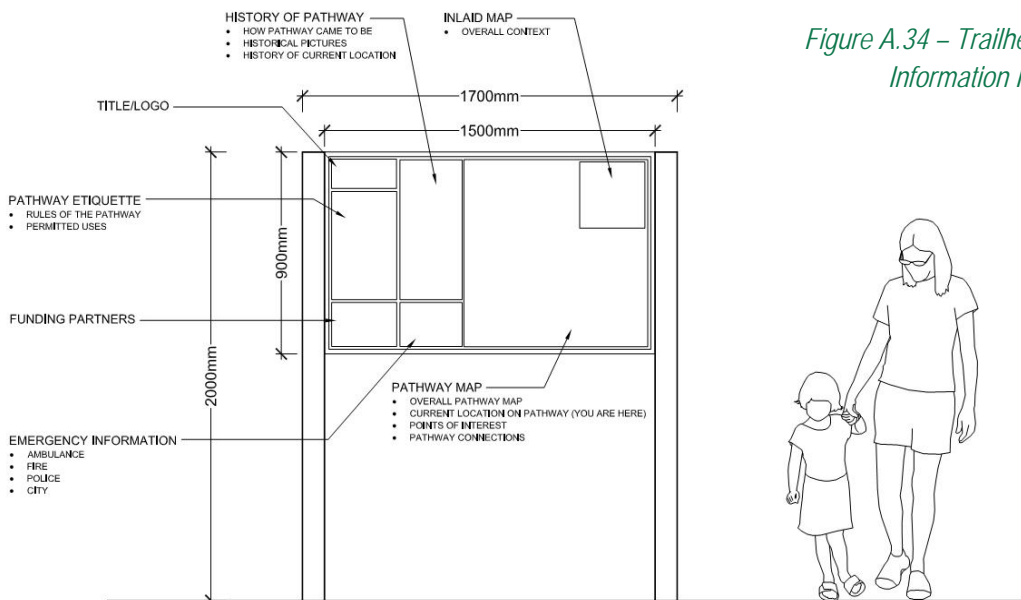


Figure A.34 – Trailhead Sign-Typical Information Features



*Figure A.35 –
Trailhead Sign
Examples
Ottawa, ON (Left) –
MMM Group
Kissing Bride Trail,
Guelph / Eramosa
(Right) – MMM Group*

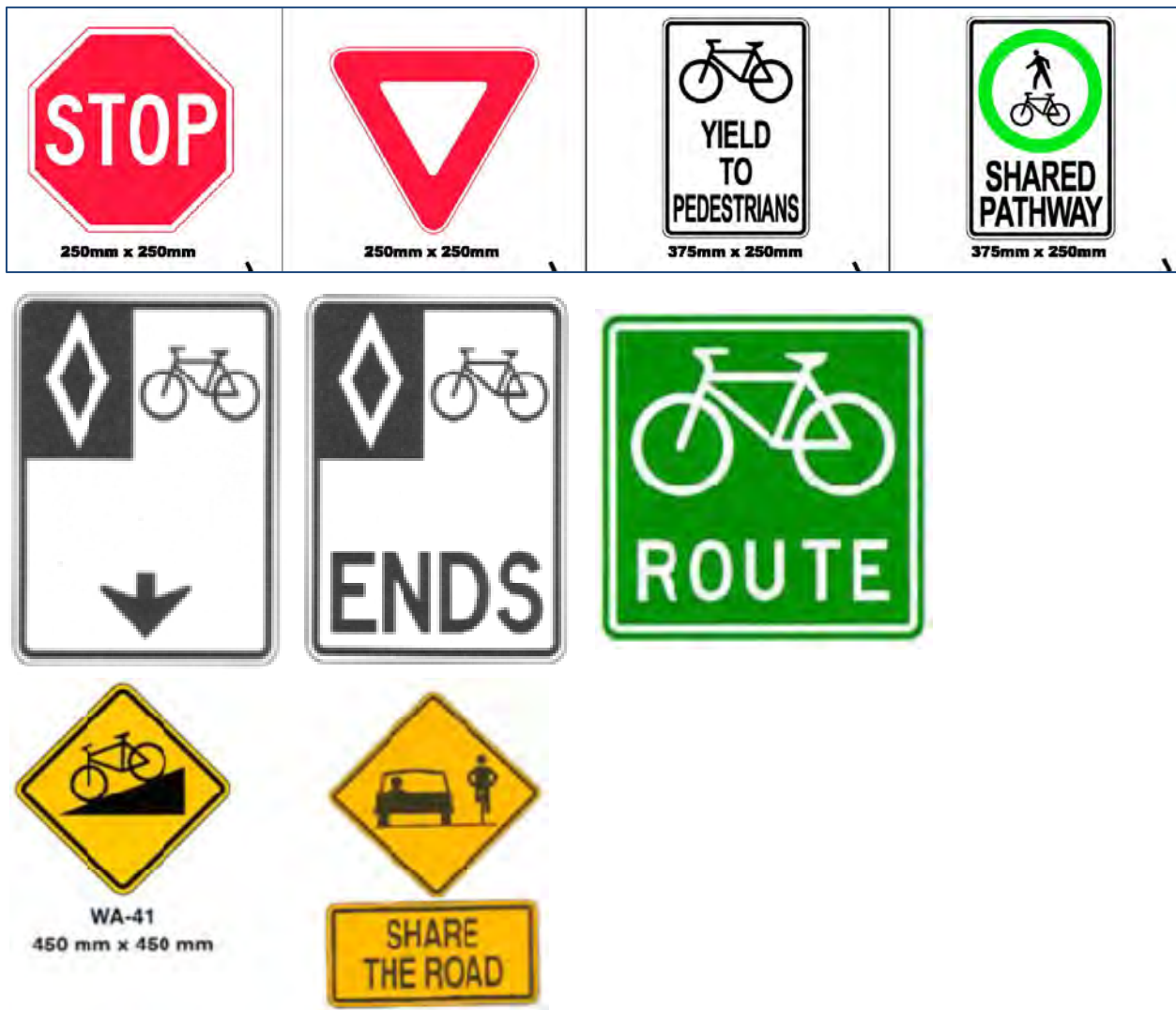
Gateway signs should be employed where key AT routes enter into the County from surrounding municipalities. The gateway sign is a smaller version of the trailhead sign and includes elements such as route mapping, “Welcome to Wellington County branding/logos, and user etiquette and emergency contact information.

“User Etiquette” signs, which should be posted at public access points to clearly articulate which trail uses are permitted, regulations and laws that apply, as well as trail etiquette, safety and emergency contact information. At trailheads, this information can be incorporated into trailhead signs. In other areas, this information can be integrated with access barriers.

Regulatory signs which are required throughout the system. Where traffic control signs are needed (stop, yield, curve ahead etc.), it is recommended that recognizable traffic control signs be used (refer to the Ministry of Transportation for Ontario’s (MTO) Manual of Uniform Traffic Control Devices, 1996). Regulatory signs are intended to control particular aspects of travel and use along the road or off-road network. Signs restricting or requiring specific behaviour is not legally enforceable unless it is associated with a provincial law or municipal by-law. Where applicable, it is recommended that authorities discreetly include the by-law number on signs to reinforce their regulatory function. Warning signs are used to highlight bicycle route conditions that may pose a potential safety or convenience concern to network users. Examples are steep slopes, share the road, railway crossings and pavement changes. These signs are diamond in shape, with a black legend on a yellow background. These signs are more applicable to cycling routes and multi-use trails than pedestrian systems.



Figure A.36 – Typical Regulatory Sign Examples





Interpretive signs which should be located at key trail features having a story to be told. These features may be cultural, historical, or natural. Interpretive signs should be highly graphic and easy to read. They should be located carefully in highly visible locations to minimize the potential for vandalism.



Figure A.37 – Interpretive Sign Examples
 Erin (Top Left) – Photo: MMM Group
 Fundy National Park (Top Right)- Photo: MMM Group
 Tobermory (Bottom Left) – Photo: MMM Group
 Sauble Beach (Bottom Right) – Photo: MMM Group



Route marker and trail-directional signs: which should be located at key

AT network intersections and at regular intervals along long, uninterrupted sections of network. The purpose of route marker signs is to provide a simple visual message to users that they are travelling on the pathway network. These wayfinding signs may include the network logo or “brand” and communicate other information to users such as directional arrows and distances in kilometres to major attractions and settlement areas. They should be mounted on standard sign poles and be located on all legs of an intersection or off-road trail junction, as well as at gateways.



Figure A.38 – Interpretive Sign Examples

Essex (Left)-Photo Essex Region Conservation Authority

Kissing Bridge Trail, Guelph / Eramosa (Second from left) Photo MMM Group

Halton Hills (Third from Left)-Photo MMM Group

Confederation Trail (Right) Photo MMM Group

Network Signage Guidelines:

Guideline A-38:

The County and local municipal partners should prepare an AT network branding and signage strategy using the sign types outlined in the AT Plan as a guide.



APPENDIX B – ENGAGING THE PUBLIC, STAKEHOLDERS & LOCAL PARTNERS

B.1 EMERGING TRENDS AND DEMAND (ONLINE QUESTIONNAIRE RESULTS)

As part of the County Wide Active Transportation Study, a web-based questionnaire was developed and hosted using the online service SurveyMonkey (www.surveymonkey.com). The questionnaire, which was posted in August 2011 and concluded in May 2012, it was accessible to residents and stakeholders during the first and second round of public information centres (PICs) and stakeholder workshops. The questionnaire, although not statistically valid, provided the study team with useful information and input regarding opinions on active transportation throughout the County. These include:

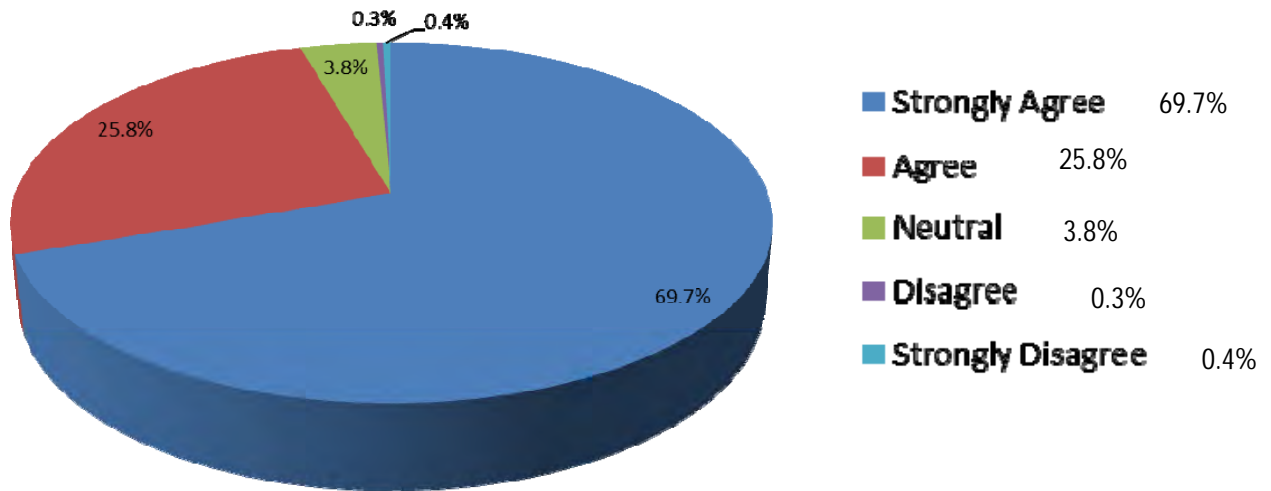
- The frequency of use for multiple active transportation modes;
- The motivation behind the use of AT facilities and improvements;
- The reasons for implementing an AT study for the County;
- The AT and trail facility uses which are considered important to the residents of the County and Township;
- The constraints / barriers to trail and AT development; and
- Residents who want to be kept informed or involved in the implementation of the plan.



The final survey results are based on the 716 respondents, which is considered a significant response rate given the population of the County relative to similar AT surveys conducted for other municipalities in Ontario in recent years. The following is a summary of the key findings from the survey. Key findings from the online survey include the following:

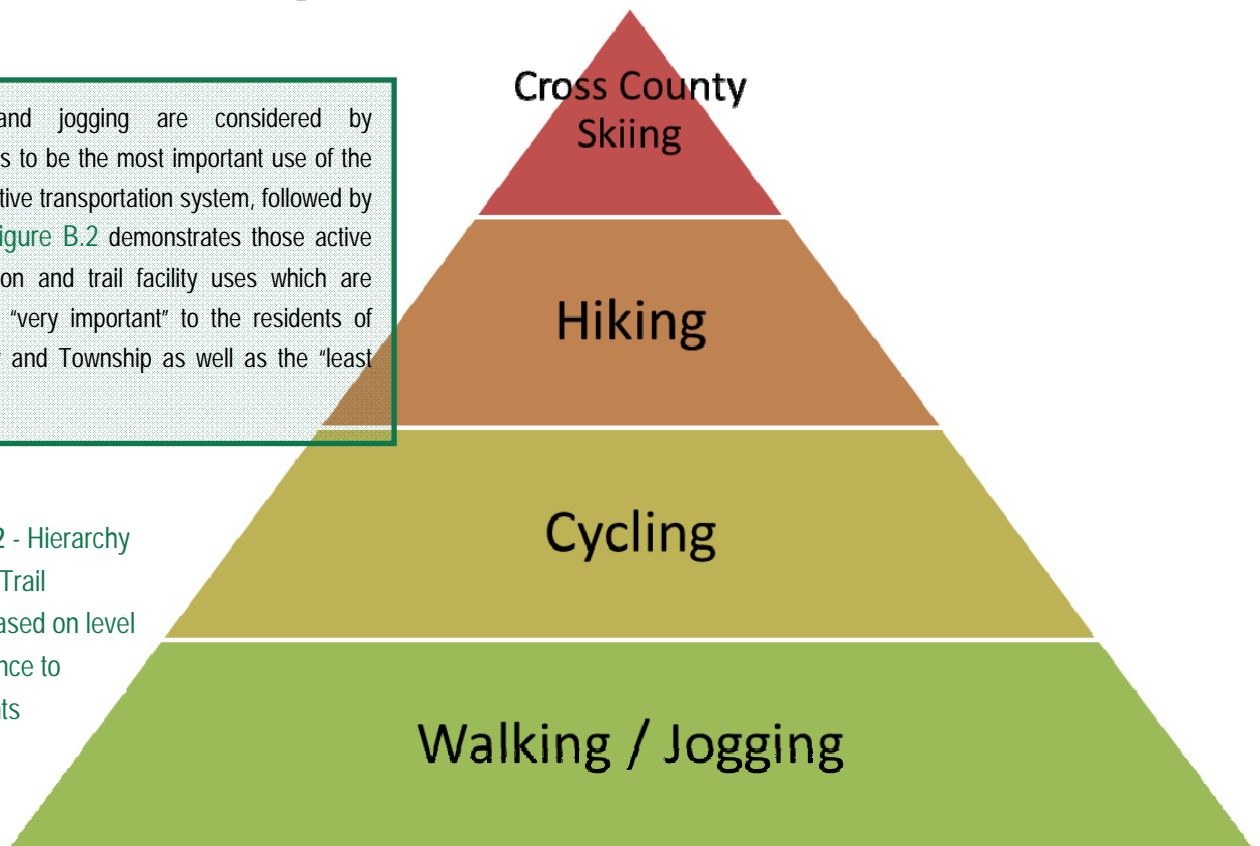
Over 95% (95.5%) of survey respondents agreed that Wellington County should invest in improvements that provide opportunities for active transportation and trail use in the County as illustrated in Figure B.1;

Figure B.1 – Proportion of support for making investments for trail and active transportation improvements in Wellington County



Walking and jogging are considered by respondents to be the most important use of the trail and active transportation system, followed by cycling. Figure B.2 demonstrates those active transportation and trail facility uses which are considered "very important" to the residents of the County and Township as well as the "least important".

Figure B.2 - Hierarchy of AT and Trail facilities based on level of importance to respondents



Recreation or fitness is a primary motivator for cycling with 96% of respondents indicating that it motivates them at least sometimes to use the AT system. As well, the majority of respondents are motivated to use the AT system for commuting to school and destination oriented trips, which includes trips to and from shops, visiting friends or running errands. However, trips for workplace travel during the work day are currently not significant motivators for cycling in the County. The comparison of responses is illustrated in Figure 4.3.

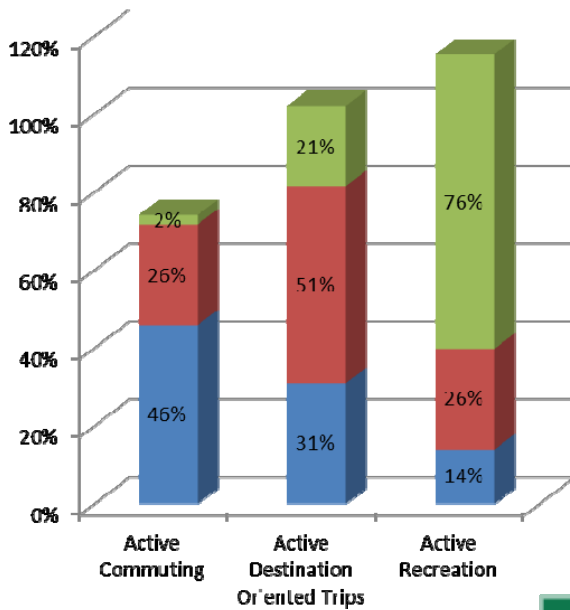


Figure B.3 – Motivators to use Multi-use Trails and Active Transportation Facilities in Wellington County.

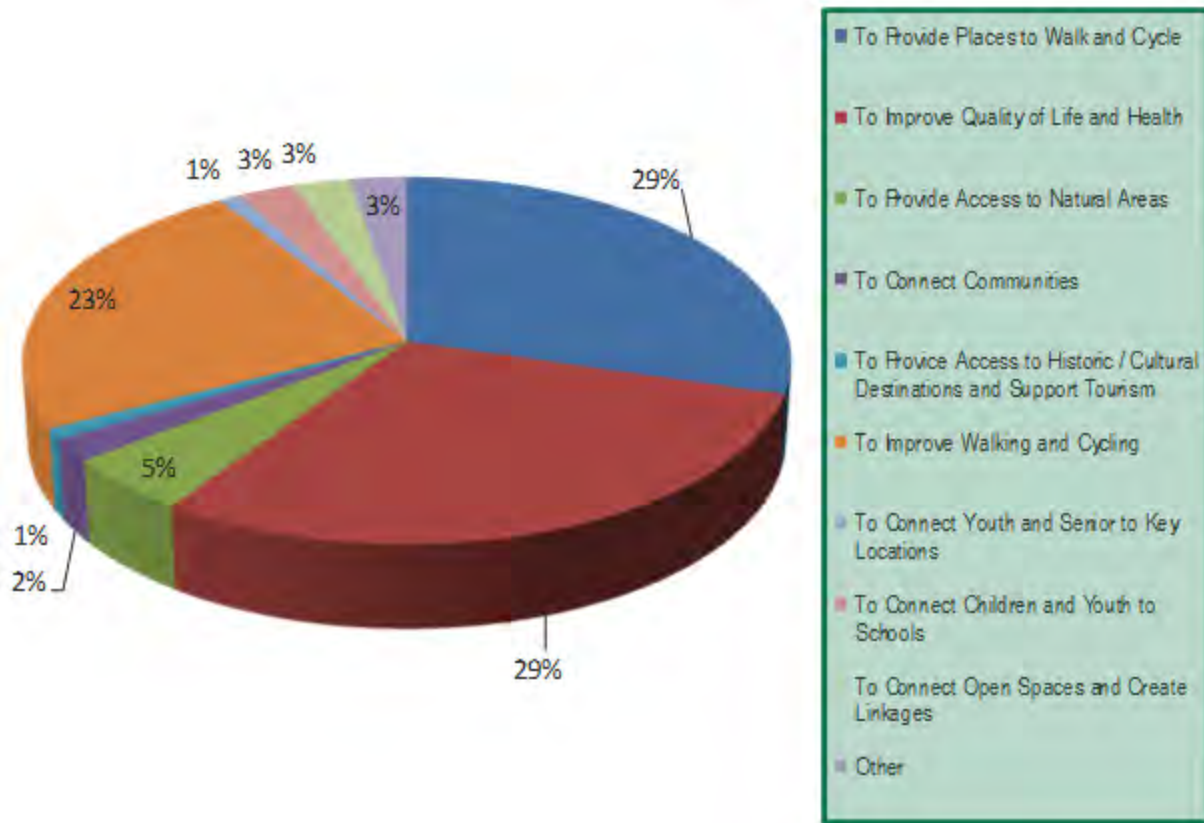
The following three improvements were selected as the most important by respondents for encouraging AT facility use in the County; more multi-use hiking and cycling trails (36%), bike lanes or paved shoulders on roads (27%) and better connections to key destinations including school and work (12%) as illustrated in Figure B.4;

Figure B.4 -- Hierarchy of AT and Trail improvements based on level of importance to respondents.



The majority of respondents suggest that an on and off-road active transportation and recreational trail system network should be developed for Wellington County for the following reasons illustrated in Figure B.5;

Figure B.5 – Rationale for the Development of an on and off-road Active Transportation Network



Respondents were also given the opportunity to highlight the top five challenges, constraints and barriers to improving conditions for hiking, walking and cycling in Wellington County that should be considered within the overall cycling network. The comparison of responses is illustrated in Figure B.6.

Top 5 Challenges/Constraints/Barriers to Improving Conditions for Hiking Walking and Cycling in Wellington County
1. Funding for Construction and Maintenance of Facilities
2. Securing Access for New Trails on Private Lands
3. Lack of Information on Route Locations, Lack of Encouragement Programs
4. Level of Cooperation between County & Townships
5. Lack of Facilities

B.2 PHASE 1 CONSULTATION EFFORTS

B.2.1 Public Information Centre #1- October 22, 29, November 5, 2011

Following the completion of Phase 1 of the Master plan study process, the Study team undertook the first set of Public Information Centres (PICs). There were a total of three PICs held at strategic locations throughout the County at the end of October / beginning of November. The specific dates and locations of the PICs were as follows:

Saturday October 22, 2011
8:00am to 12:00pm
Erin Community Centre/Erin
Centre 2000
14 Boland Drive
Erin, ON

Saturday October 29, 2011
8:00am to 12:00pm
Centre Wellington Community
Sportsplex
Boardroom A & B
550 Belsyde Avenue,
Fergus, ON

Saturday November 5, 2011
8:00am to 12:00pm
Mount Forest & District Sports
Complex
850 Princess Street
Mount Forest ON

On these dates, representatives from the consultant team, the County, the Township, Wellington-Dufferin-Guelph Public Health in motion and local stakeholder groups gathered to engage members of the public through an informal “drop-in” ‘open-house’ session. These sessions were used to present materials on existing active transportation and trail conditions throughout the County and its local Townships. The goal of the first PIC, as outlined in the consultation strategy, was the following:

“To introduce the public to the project and to hear from them regarding issues and opportunities, potential use standards and protocols related to active transportation in Wellington County”

As this is a County-wide study, the study team chose locations that would engage residents from all areas including the northern and southern urban centres. In addition, as we are also undertaking the Township’s Trails Master Plan in conjunction with the County’s plan, the study team chose the Township of Centre Wellington’s Sportsplex in Fergus for one of the three locations to present information on both the County and Township studies.

The PIC was promoted using a combined notice for both the County and Township studies which was distributed in hard copy as well as posted on the County’s webpage (link to webpage provided in the textbox beside). The notice provided study background information as well as additional ways in which residents could get involved including a link to the online questionnaire and contact information for the study representatives for additional inquiries and commentary.



Link to the Online Questionnaire:

http://www.surveymonkey.com/Wellington_Questionnaires

PIC Notice on Township Webpage:

<http://www.centrewellington.ca/departments/parksandrecreation/transoandtrailsvr/default.aspx>

PIC Notice on County Webpage:

http://www.wellington.ca/community_subsection.aspx?id=3085

A set of display boards was developed for both the Active Transportation Master Plan as well as the Township of Centre Wellington Trails Master Plan in advance of the PICs. Information presented included:

- The draft vision and goals;
- The study process and proposed schedule;
- The proposed route selection principles / criteria and network development approach;
- Interim findings from the online questionnaire;
- Background information review and analysis including key policies and plans;
- Examples of Active Transportation and trail facility types, such as off-road trails and on-road signed bike routes with paved shoulders and bike lanes; and
- Maps illustrating existing active transportation and trail routes, and candidate routes currently being considered.

As the PIC was open-house format, attendees were provided with the opportunity to speak with study team members, provide their comments directly on maps of the County and urban areas as well as the study vision and route selection criteria. The following are samples of a few of the displays developed for the PICs.

VISION & OBJECTIVES

An active transportation plan is being developed locally, and across Wellington County. The goal of this plan is to:

- Create and restore opportunities throughout the County for people-powered forms of recreation and transportation such as walking, biking, and e-bike riding, on both existing, underdeveloped, and/or new routes.

Study Objectives:

- Examine the current status of active transportation and trails in the County;
- Recommend a network of active transportation routes throughout the County and connecting to neighboring municipalities;
- Provide vision recommendations on Official Plan goals;
- Recommend and describe guidelines and standards for the construction of active transportation facilities;
- Recommend education and recreation programs related to active transportation; and
- Identify areas and potential as part of a phased action plan.

The study area for the Active Transportation Master Plan includes the Township of Centre Wellington, the County of Wellington, and the County of Simcoe. At the same time, Township of Centre Wellington is conducting a study to develop a Township-wide Trails Master Plan. The two studies are being closely coordinated.

WHAT HAVE YOU TOLD US SO FAR?

Active Recreation is the main motivator for use of trails and active transportation facilities.

66% of respondents had **Most Comfortable** with Walking / Running / Jogging on Multi-use Trails

60% of respondents had **Least Comfortable** with Cycling on Roads without Bike Lanes / Paved Shoulders

The pyramid diagram shows levels of comfort: 1. Most Comfortable (Walking, Jogging and Running), 2. Comfortable (Biking), 3. Somewhat Comfortable (Cycling on Roads with Bike Lanes / Paved Shoulders), 4. Somewhat Uncomfortable (Cycling on Roads without Bike Lanes / Paved Shoulders), 5. Least Comfortable (Cycling on Roads without Bike Lanes / Paved Shoulders).

NETWORK ROUTE SELECTION PRINCIPLES

1. **Walkable:** Active transportation routes should be a viable component of the transportation system.
2. **Connectivity/Linkage:** The Active Transportation Network should link communities and important destinations throughout the County such as commercial employment and residential areas, community centres, schools, recreation and health destinations, parks, libraries, etc. The County-wide network should link existing and planned Active Transportation and trail facilities at the local municipal level and should be complementary to existing transportation routes. Inter-municipal routes will provide crossings of major barriers (e.g. highways, major roads, roads, water and terrain etc.) at key transit locations.
3. **Easy to Access:** Routes should be easy to access from both neighbourhoods within the County and from the County as a whole.
4. **Integrative:** The network should be integrated with other modes of transportation, particularly public transit. Routes and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations.
5. **Attractive and Inspiring:** Routes should take advantage of attractive and scenic areas, scenic and urban views, and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations.
6. **Safe:** The network should provide a diverse set of trail facilities and trail types (e.g. multi-use trails, walking and biking trails, etc.) to accommodate a variety of users (e.g. children and seniors), and this should be a priority for heavily used trail types.

TRAIL AND ACTIVE TRANSPORTATION NETWORK ROUTE SELECTION PRINCIPLES

1. **Connectivity and Safety:** Walking and biking routes should provide connectivity between key destinations and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations. The network should be designed to be safe and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations.
2. **Attractive and Inspiring:** Routes should take advantage of attractive and scenic areas, scenic and urban views, and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations.
3. **Safe:** The network should provide a diverse set of trail facilities and trail types (e.g. multi-use trails, walking and biking trails, etc.) to accommodate a variety of users (e.g. children and seniors), and this should be a priority for heavily used trail types.

VISION & GOALS

A connected path and trail network is part of a healthy, active and healthy community. The construction of a new Wellington is underway in order to create a healthy, active and healthy community. The network should be designed to be safe and provide access to existing and future transit services (e.g. bus, train, etc.) at key transit locations.

The Master Plan study will:

- Examine the current status of trails in the County;
- Recommend a network of multi-use trails throughout the County;
- Provide vision recommendations on Official Plan goals;
- Recommend and describe guidelines and standards for the construction of multi-use trails;
- Recommend education and recreation programs related to multi-use trails; and
- Identify areas and potential as part of a phased action plan.

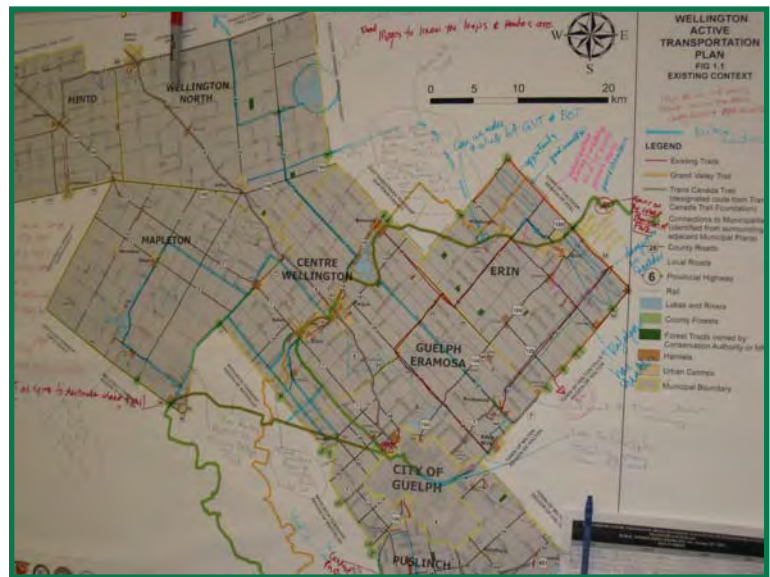
The study area for the Active Transportation Master Plan includes the Township of Centre Wellington, the County of Wellington, and the County of Simcoe. At the same time, Township of Centre Wellington is conducting a study to develop a Township-wide Trails Master Plan. The two studies are being closely coordinated.

CURRENT POLICIES & INITIATIVES SUPPORTING TRAILS IN CENTRE WELLINGTON

- **Knowledge of County Policies (2014-2015):** The County of Wellington has a number of policies that support active transportation and trails. These include the Official Plan, the Active Transportation Policy, and the Trails Policy.
- **Knowledge of County Policies (2016-2017):** The County of Wellington has a number of policies that support active transportation and trails. These include the Official Plan, the Active Transportation Policy, and the Trails Policy.
- **Knowledge of County Policies (2018-2019):** The County of Wellington has a number of policies that support active transportation and trails. These include the Official Plan, the Active Transportation Policy, and the Trails Policy.



Attendees were encouraged to provide their input on the map boards which presented the existing active transportation and trail facilities found throughout the County and Township. Many of the attendees provided comments on the full County Map of existing conditions as illustrated to the right. The following table highlights the key comments:



Comments Received at the first Public Information Centre

Map / Location	Comments Received
County-wide	<ul style="list-style-type: none"> ■ Link to Dufferin and Grey County ■ Need maps to know where the routes are ■ Widen the road shoulder where the trail crosses the road to provide additional room for car parking ■ In new development areas create a buffer between the trail and development (e.g. Wellington Place) ■ Add memorial benches/rest stops along the trail , more frequently in urban areas and mid concession in rural areas ■ Need more paved shoulders ■ How to we create links between existing trails that are widely dispersed? (e.g. those in County Forests and MNR Forest Tracts) ■ Where can we develop mountain bike trails. The Elora Cataract Trailway is a great transportation route, can we find some locations along the trail for destination mountain biking loops/networks ■ Enhanced signage is needed for the entire network ■ Note that the Kissing Bridge Trail corridor continues all the way to Goderich

Map / Location	Comments Received
Township of Centre Wellington	<ul style="list-style-type: none"> ▪ Add paved shoulders on Wellington Road 21 from Elora to the County line. Waterloo Region has paved shoulders from there east to Hwy 86 ▪ Consider a route along Middlebrook Road ▪ Add a route along 8th Line from Wellington Road 18 to the Kissing Bridge Trail just north of Ariss ▪ Add a route along 6th Line from Inverhaugh to Ariss ▪ Can we link Alma to Fergus/Elora using the old railway line? ▪ Create a future link from the Salem school to the Elora Cataract Trail ▪ The Trestle Bridge (Trestle Bridge Trail) is slippery when icy ▪ Link neighbourhoods on the south side of the Grand to the Elora Cataract Trail ▪ Reinstate the old swing bridge over the river in west Fergus (near base of Beatty Line) ▪ How do we make the connection from the end of the Trestle Bridge Trail to the Trans Canada Trail at Cottontail Road? ▪ Belwood Lake is a destination ▪ Add a paved shoulder on Wellington Road 7 from Wellington Road 21 to Sideroad 4 ▪ Use 6th Line and Sideroad 10 to the Kissing Bridge Trail
Township of Erin	<ul style="list-style-type: none"> ▪ Can we create a link between the Grand Valley Trail and the Elora Cataract Trail near 5th Line and Sideroad 27 north of Hillsburgh? ▪ Winston Churchill north of Wellington Road 22 is a good connection ▪ Tenth Line north of Wellington Road 22 is an opportunity for a connection ▪ Forks of the Credit Provincial Park (Town of Caledon) is a destination ▪ 9th Line south of Erin is a dangerous route; there is no shoulder, steep embankments in some areas and bad sightlines due to hills. Trafalgar Road although busier has wider gravel shoulders and better sight lines
Township of Guelph Eramosa	<ul style="list-style-type: none"> ▪ Link Eden Mills and Rockwood via a trail ▪ Rockwood Conservation Area and Guelph Lake Conservation Area are destinations ▪ Link Rockwood to the Elora Cataract Trailway via Wellington Road 27 and Fifth Line through Oustic ▪ Link Guelph to Rockwood via the Radial Line Trail, through Eden Mills and Indian Trail ▪ Add a paved shoulder along Wellington Road 124 from Guelph to Cambridge
Township of Mapleton	<ul style="list-style-type: none"> ▪ Link Alma to Drayton via 12th Line and Wellington Road 11 ▪ There should be a loop around Conestoga Lake, it is a destination ▪ Link Alma to the Elora Cataract Trailway via ▪ Create a loop in Mapleton using 12th Line, Wellington Road 11, Wellington Road 45, Sideroad 18 and Wellington Road 17, this also serves to connect the Kissing Bridge Trail with Drayton
Township of Minto	<ul style="list-style-type: none"> ▪ Pike Lake is a destination and there is a permanent population of residents in the area. Please include sidewalks and cycle lanes ▪ How do we link Palmerston and Harriston since the old railway corridor is no longer available north of 7th Line?
Township of Puslinch	<ul style="list-style-type: none"> ▪ Connect Puslinch Lake and Twin Ponds with a trail system ▪ Create a loop in west Puslinch using Sideroad 10, Ellis Road, Townline Road and Speed River Trail ▪ Starkey Hill Trail is a destination ▪ The old Black Bridge (City of Cambridge is a destination) ▪ Create a north south route using Sideroad 10, the Story Bridge, Concession 4, through Little Tract, Wellington Road 33 and Ellis Road to Puslinch Tract and Puslinch Lake

Map / Location	Comments Received
Township of Wellington North	<ul style="list-style-type: none"> ▪ Create a loop around Luther Marsh, it is a destination as is Damascus Lake ▪ Create a trail along the abandoned rail corridor from Arthur to Grand Valley ▪ Create a link between Arthur, Damascus, Luther Lake to Elora Cataract Trailway ▪ Add shoulders on Wellington Road 16 between Wellington Road 19 and Damascus and on Wellington Road 19 from 2nd Line to Wellington Road 16 ▪ Wellington Road 14 is a great link in to Grey County ▪ How/where is the best place to create an east-west link in the north part of the County?

B.2.2 Stakeholder Workshop #1-October 20, 2011

A half day workshop was convened during the first phase of the project engage members of the trail and active transportation community, representatives from the County and local towns and townships, conservation authorities etc. The session was held on Thursday October 20th, 2011 in advance of public consultation events marking the conclusion of the first phase of the study. The purpose of the workshop was to introduce the study and gather input from individuals with a keen interest and a variety of opinions on active transportation facility development throughout the County.

An overview presentation was provided:

- A definition and benefits of active transportation;
- Study background information and policy analysis;
- Study vision, objectives and process;
- Interim online questionnaire results (see additional memo for a summary of results to date);
- Best practices and facility design alternatives;
- Existing conditions regarding active transportation within the County; and
- Draft route selection criteria.

Throughout the presentation meeting attendees posed some general questions about the study process as well as the upcoming tasks. Some of these included:

- Will the plan include design guidelines for active transportation facilities?– Yes
- Will there be a hierarchy of routes for the active transportation and trail master plan? - Yes
- Will there be consideration for accessible facilities to accommodate wheelchairs etc.? - Yes
- Confirmation that the timeline for the implementation of the master plan will be a 20 – 25 year plan with a phased approach of short, medium and long-term timelines.
- Confirmed that connections would be made to the surrounding municipalities as well as bordering regions / counties.

Following the presentation workshop attendees were broken into different working groups and were asked to provide input on four different topic areas. Two of the four topic areas were targeted towards mapping initiatives and reviews. Maps were

provided to the participants to add location specific comments related to trails and active transportation across the County as well as specifically within the Township of Centre Wellington. One representative from each of the groups presented a summary of their findings to all the workshop participants. Unless otherwise noted the responses from each of the groups to the four questions have been combined in the following sections.

Topic 1.0 Provide comments on the proposed vision, route selection principles as well as current and potential partners

Topic 2.0 Mark or describe on a map the important destinations and barriers as well as existing off-road trails and on-road facilities (e.g. paved shoulders, bike lanes etc.)

Topic 3.0 Mark or describe on a map those candidate routes as well as potential regional cycling routes at a maximum of 5 routes.

Topic 4.0 Identify potential policies/policy themes, programs (existing, enhanced and new) and partners (current, potential and new) that could be explored in the future of developing and implementing the Active Transportation Plan.

Topic 5.0 Identify and mark on the map potential major/regional cycling routes. A regional cycling route is one that would provide a connection from one side of the County to the other, or connecting key destinations in the County.



Topic 1.0 *Comments on Vision, Route Selection Principles & Current and Potential Partners*

Participants at the roundtable discussion were asked to comment on the following draft vision for active transportation throughout Wellington County:

“Create and improve opportunities throughout the County for people-powered forms of recreation and transportation such as walking, biking, on and off-road cycling, in-line skating, skateboarding, wheel chairing, snowshoeing and cross country skiing.”

Comments from the working group on the draft vision:

- Too long and wordy which may add confusion when documented.
- Should make the statement more concise.

The statement was revised by the group and now should be considered as the following:

“Create and improve opportunities throughout the County for active recreation and transportation.”

In addition to the review of the vision, the group took the time to review the route selection criteria which was presented by the study team. Based on further review, the group provided some additional comments on the route selection criteria as well as key features which could be considered for integration when developing the master plan document. They included:

- With regard to the “Visible” criteria, this needs to be revised to have a more clear definition
- When developing the new routes there should be broad consultation which should occur early on in the study process
- Routes should be considered that protect green corridors from human impacts (not to be confused with human connectivity / corridors)
- With regard to the “Context Sensitive” consideration should be made for horse and buggy, farm equipment and e-bikes for accessibility
- “Cost Effective” should be considered as a route selection criteria
- When considering / developing recommendations with regard to maintenance the plan should clarify who does it? And who pays for it?
- The group also suggested potential partners for consideration: Municipalities, Landowners, Steering Committee Members, Trail Groups, Public Health Representatives, Volunteers, Insurance Companies, Universities / Colleges, Ontario Trails Council (OTC), Emergency Response Groups, Conservation Authorities, School Boards and Private Funding Sources.



Topic 2.0 Identification of Destinations, Barriers & Existing On and Off-road Facilities (Mapping Exercise)

This section provides a summary of points raised by the Working Group which discussed the location of destinations and barriers, where new active transportation or trail facilities are needed and what priorities should be considered for development. The following is a list of the key points raised at the workshop.

Opportunities:

- More paved shoulders
- Increase the number of off-road trails
- Better signage including advanced way-finding signage and "Share the Road" signage throughout the County
- Sideroad 10 Bridge over the Speed River had to be closed for motor vehicles which may be an opportunity for a bike bridge (i.e. the Stroy Bridge)
- Hydro 1 Corridor – however, there are issues with the trails in the Hydro 1 corridor as they can be inflexible. There should be Provincial legislation which applies to Provincial agencies and private corporations
- Abandoned railways/railways to be abandoned should be considered when developing the network
- Marketing of different route options and programming should be considered in addition to the network itself.

Barriers:

- Budget Constraints e.g. Puslinch, which currently has no trail budget
- Waterways and Rivers are considered barriers e.g. Speed, Eramosa
- Admission fees e.g. Elora Cataract Trail this can be a barrier for some people conscious of budget
- Highway 401 which bisects Puslinch – if MTO would widen Highway 401 which would allow for the opportunity for new bridges to accommodate pedestrian and cyclists
- Access to sensitive areas in Conservation Lands is a large issue for public access. There should be better education on how to "act" in these areas so that all members of the public can maximize on these important natural features
- Lack of north / south linkages



Topic 3.0 Identification of Candidate Routes & Potential Regional Cycling Routes (Mapping Exercise)

This section provides a summary of points raised by the Working Group who discussed potential candidate routes as well as regional cycling routes. Attendees were asked to provide their comments as mark-ups on a map of existing active transportation and trail routes throughout the County. Comments on the maps and presented by the working group members included:

- Suggested the idea of more themed loop trails e.g. the “Butter Tart Trail”
- Accessible trails in urban areas as well as rural communities to facilitate community building
- Length of routes should include low 1km, moderate 5km and long (greater than 5km) along corridors connecting the Trans Canada Trail in Wellesley Township – Region of Waterloo through Mapleton up to Palmerston
- More signage along the existing and future proposed routes which could be guided by the future OTM Book 18 and MTO Bikeway Design Guidelines. These guidelines will also be explored in further detail in the County’s AT and Trail design guidelines
- Education on the Economic return for the development of Active Transportation and Trail Facilities throughout the County.
- Routes which connect the urban and rural communities efficiently and effectively.
- Agricultural and farm agreements need to be address as an important element of the plan. These agreements need to respect the needs of the agricultural industry while accommodating the needs of local residents within the City of Guelph
- Gravel roads should not be considered for future cycling routes as they are not ideal / safe for users within Puslinch
- Geocaching on the trail as well as the use of Quick Response (QR) codes for route identification and information should be explored more specifically within and around Erin
- Risk Assessment for route options along Wellington Road 34 and loop route connecting Concession 1 and Wellington Road 37.



Please note that...

There is increasing demand for signage along the existing and future proposed routes which could be guided by the future OTM Book 18 and MTO Bikeway Design Guidelines. These guidelines should be explored in further detail in the County’s AT Master Plan.

Topic 4.0 Recommendations of Potential Policies & Policy Themes, Programs & Partners

Participants who responded to question 4 were asked to provide their input on potential policies and policy themes to be considered when developing active transportation and trails master plans. These proposed potential policies and policy themes could be considered throughout the development process and will be adapted based on current policies in place, emerging trends as well as context specific considerations. Some of the key recommendations included:

Policies & Policy Themes:

- Lack of Provincial vision and support
- Who are the “Owners” of AT and Trails?
- “Adopt an AT and Trails policy that is mandated to deliver.”
- Should be included in other policy including provincial policy statement to municipal bylaws
- Direction from Council to link staff members in support of the plan with a champion to lead the initiative
- Should have provincial and national support from a financial perspective
- Example of a partnership fund/seed fund provided by an upper tier municipality: Region of Niagara

Key Considerations:

Safe Trails: What do they look like? Is there a set menu of what should be included to make it “safe”. Should there be requirements for EMS? And what other uses can be included when ensuring safety for all users

Risk Management Plan: Considerations when developing a risk management strategy to be integrated into the AT and Trails plan include but not limited to Signage, EMS Numbers, GPS Markers, Insurance, Design features (e.g. lighting & amenities), Flow management, Event management, Distance markers, Maps, Local Support, Policing Services

Highway Traffic Act Alterations: Consideration for e-bikes, scooters, bikes and horses; definition of roadway and Right-of-Way; what are the traditional uses?



- Motor Vehicle Act: ATV, snowmobiles and cycling consideration / interaction as well as consideration for access and interaction.
- Trespass Act: enforcement considerations and signage.

<p><i>Programs:</i></p> <ul style="list-style-type: none"> ▪ Driver education and user education ▪ Signage program ▪ Early education for school aged children ▪ Club and peer pressure for involvement ▪ Best practices based on standards ▪ Host tourism related events 	<p><i>Partners:</i></p> <ul style="list-style-type: none"> ▪ Event managers ▪ Provincial groups; and ▪ Road safety advocates.
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Topic 5.0 Potential Major/Regional Cycling Routes

Thirteen potential routes were identified:

- Arthur east along the abandoned rail line to the Townline, north up to and around Luther Marsh
- Connecting Arthur and Mount Forest using a series of sideroads and concessions that roughly parallel Hwy. 6
- Linking Harriston and Mount Forest using the river corridor to 10th Line Wellington Road 6 and the abandoned rail line just north of Lover's Lane
- Connecting Palmerston to the Kissing Bridge Trail at Wallenstein using King Street, Concession 8, Wellington Road 11, Wellington Road 45 and Reid Woods Road
- Connecting Fergus and Arthur using Gerrie Road, Wellington Road 17, Sideroad 21, 16th Line and Wellington Road 12
- Creating a loop in west Centre Wellington using the designated Trans Canada Trail route, Sideroad 10, 8th Line and the existing Grand Valley Trail back into Fergus
- Connecting to routes in the City of Guelph based on network plans that Guelph has been working on
- Linking Guelph to Aberfoyle via Sideroad 10, Little Tract, and Wellington Road 34
- Linking Aberfoyle with Arkell using Wellington Road 34, the Nassagaweya-Puslinch Townline, Wellington Road 37 and Watson Road
- Connecting Eden Mills and Rockwood using Indian Trail and Wellington Road 41
- Connecting Rockwood and Belwood Lake/Elora Cataract Trail using Wellington Road 27 and 5th Line
- Creating a second link between Erin and Hillsburgh using Wellington Road 24, Wellington Road 124 and links through Erin back to the Elora Cataract Trail

B.3 PHASE 2 CONSULTATION EFFORTS

B.3.1 Public Information Centre #2 - April 11, 12, 25 2012

In advance of developing the master plan report and upon the completion of the proposed active transportation network and proposed facility types for Wellington County. As was the case for the first PIC, a total of three PICs were held at strategic locations throughout the County within the month of April 2012. The locations were chosen to provide information to additional communities throughout the County. The areas were also chosen based on interest expressed by members of Council as well as areas which had previously not been engaged through the initial PICs or the questionnaire. In total there were approximately 100 attendees. As was the case for the first public information centre the study team identified one of the locations as Centre Wellington to ensure that information regarding the Township's Trails Master Plan as well as the County's Active Transportation Master Plan were presented. The specific dates and locations of the PICs were as follows:

Wednesday April 11, 2012	Thursday April 12, 2012	Wednesday April 25,
6:30 p.m. to 9:00 p.m.	7:00 p.m. to 9:00 p.m.	Palmerston Arena
Fergus Sportsplex	Puslinch Community Centre	7:00 p.m. to 9:00 p.m.
550 Belsyde Avenue	23 Brock Road South	520 Cavan Street
Fergus, ON	Puslinch, ON	Palmerston, ON

On these dates, representatives from the consultant team, the County, the hosting municipality, Wellington-Dufferin-Guelph Public Health in motion and local stakeholder groups gathered to engage members of the public through an informal 'drop-in' session. Similar to the first round of public information centres, the events were held as an 'open-house' used to present the candidate active transportation route network for the County as well as its local municipalities. In addition, the study team presented potential design alternatives and active transportation facility types for consideration for implementation. The goal of the second public information centre, as outlined in the consultation strategy, was:

“To present various components of the proposed active transportation plan.”

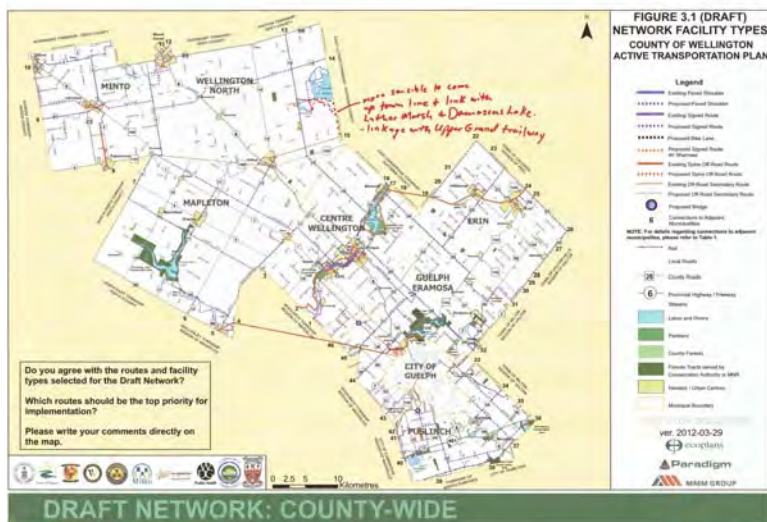
The PIC was promoted using a combined notice for the County as well as the Township studies which was posted on the County, Public Health and Municipal webpages. In addition, a hard copy was provided to local residents and an ad was placed in the Wellington Advertiser. Lastly, an email was sent to contacts identified from the first public information centre as well as all respondents to the online questionnaire who indicated that they wanted to be contacted regarding future events related to the project. The notice provided a study update as well as next steps for the study process, a link to the online questionnaire as well as contact information for the study representatives.

A set of display boards was developed for both the County as well as the Township studies in advance of the PIC. The information presented included:

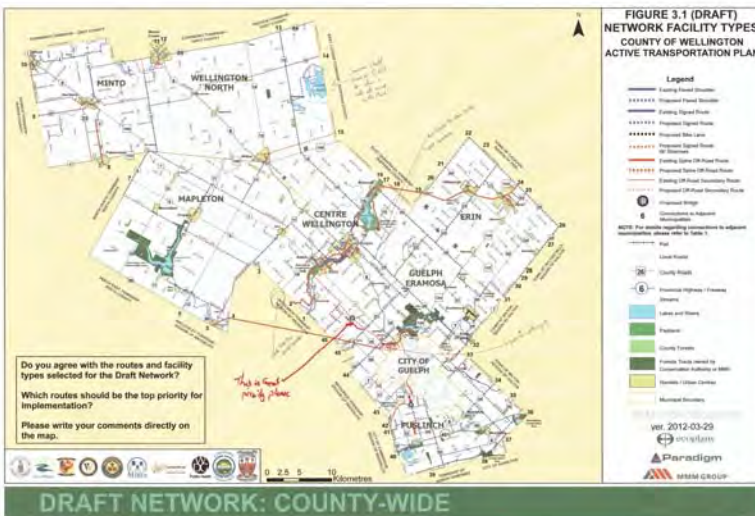
- The updated study vision and goals;

- Updated interim online questionnaire results and commentary;
- The updated route selection criteria;
- Draft active transportation network; and
- Potential active transportation facility types for consideration.

Attendees were encouraged to speak with the study team members, provide their comments directly on the maps of the County as well as the local municipalities' candidate route networks. In total the public information centres had approximately 75 attendees. The following is summary of responses provided.



Comments Received on proposed active transportation and trails facility types maps from public information centre #2.



Map / Location	Comments Received
Township of Centre Wellington	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Wellington Road 29 should be the main route and Jones Baseline should be the secondary route if both are included in the network ▪ We like the proposed trail connection between the Elora Cataract Trail and the Trestle Bridge Trail just to the west of Beatty Line ▪ Provide a connection from Black Street to Revell Street in Fergus ▪ Continue the proposed path connection along the abandoned rail corridor north of Garafraxa down to Hill Street ▪ Can the leash free park be connected to the Elora Cataract Trail to the east of Glengarry? ▪ Add a signed route along Middlebook <p><u>Priorities</u></p> <ul style="list-style-type: none"> ▪ Continue paving shoulders along Wellington Road 19 ▪ Wellington Road 26 ▪ Wellington Road 29 ▪ Wellington Road 22 ▪ Trans Canada Trail from Elora to Guelph
Township of Erin	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Add a signed route along Sideroad 5 from Winston Churchill to Wellington Road 24 ▪ Prefer a signed route on 9th line south of Sideroad 5 rather than Winston Churchill south of Sideroad 5 ▪ Extend route along Erin-Garafraxa Townline from Orton to Wellington Road 26 ▪ Add a paved shoulder on Wellington Road 24 from Hillsburgh to Erin-Garafraxa Townline ▪ 8th Line north of Wellington Road 22 is currently gravel, would it be hard surfaced if it is shown on the network? ▪ Winston Churchill north of Wellington Road 22 is very spongy <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ Wellington Road 52 from 9th line east towards Belfountain ▪ Wellington Road 23 north of Sideroad 17 ▪ Wellington Road 22 from Winston Churchill to Wellington Road 26 ▪ Wellington Road 42

Map / Location	Comments Received
Township of Guelph Eramosa	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Connection between the Kissing Bridge Trail and the Trans Canada Trail route (hydro corridor) through the Marden Tract is currently signed to restrict cycling ▪ Could we have a trail from Guelph to Rockwood? Consider using the Third Line Road allowance south of Highway 7 and the Indian Trail Road allowance and Indian Trail from the 3rd Line road allowance to Jones Baseline ▪ Add a bike lane (paved shoulder) along Hwy 7 from Guelph to Rockwood ▪ Connect the Cross Creek neighbourhood into the Guelph ▪ Township Road 3 and Wellington Road 32 from Wellington Road 124 to Marden Road <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ 7th Line south of Wellington Road 124 through Everton to Sideroad 5 ▪ Wellington Road 29 south of Hwy 7, and remaining sections of Wellington Road 29 north of Wellington Road 124 ▪ Sideroad 5 into Rockwood
Township of Mapleton	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Look at Sideroad 12 as an alternative to Wellington Road 12. It is used a lot by the local farm community as an east-west route. It is a good road, however no winter maintenance in some sections ▪ Concession 8 is very busy, the north south route should shift over to Concession 6 and 6th Line which has wider shoulders and less traffic ▪ Wellington Road 17 from Alma west is a very busy road with lots of farm vehicles/feed trucks ▪ Consider Blind Line and 3rd Line south of Sideroad 18 near Wallenstein
Township of Minto	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Abandoned railway line south of Clifford no longer available ▪ Abandoned railway line south of Harriston no longer available; however there is an unopened road allowance that may be a possibility. Perhaps a land swap (trade road allowance for access along creek)

Map / Location	Comments Received
Township of Puslinch	<p><i>Network Comments:</i></p> <ul style="list-style-type: none"> ▪ Future enhancements along Brock Road over 401 are to include pedestrian and bicycle facilities ▪ Is it possible to hard surface Gilmour Road, it is very dangerous to ride downhill on gravel roads ▪ Could a trail system be developed in the government lands north of Telfer Glen in Morriston ▪ County should have an online map of the trails in Little Tract, trails should have blazes ▪ Agree with the connection on the Sideroad 10 unopened road allowance north of Laird Road ▪ There are trails around the west side of Puslinch Lake. Is this GRCA land or privately owned? ▪ Connect the network to the terminus of the Lafarge Trail at Gore and Maddaugh ▪ Please accommodate horses on the trails. Trails often go through rural areas yet they are banned. Horses bikers and hikers can share the same trails ▪ Use the McLean road allowance between Victoria and Hwy 6. It provides a good connection to the new GO bus terminal and the employment area just north of 401 ▪ Very scenic unopened road allowance from Victoria Road to Watson Road following the same alignment as Hume Road ▪ Add the Radial Line Trail and the Arkell Sidetrail that connects Starkey Hill to the Guelph Hiking Trail Club's Radial Line Trail-Section 2 ▪ The area shown as green (Forest Tract owned by MNR or GRCA) on Concession 2 east of Wellington Road 35 has now been sold to a private landowner and should be removed from the map
Township of Wellington North	<p><i>Network Comments:</i></p> <ul style="list-style-type: none"> ▪ More sensible to come up Town Line and link with Luther Marsh and Damascus Lake, also provides a link with the Upper Grand Trailway at the Wellington/Dufferin County boundary ▪ Someone should lean on GRCA to allow a route all around Luther Marsh ▪ Existing off road trail in Mount Forest east of Lover's Lane may be on property ▪ Existing off road route on north side of the river, on the west side of Hwy 6 may be on private property, there may be opportunities on the south side of the river ▪ Horses and bicycles have difficulty with same trail needs ▪ As part of the new trail loop in Arthur the Lions Club will be developing a staging area just west of Conestoga

The comments gathered from both of the public information centres were used by the study team to refine and ultimately determine the active transportation network recommended for Wellington County.

B.3.2 Stakeholder Workshop #2 - March 29 2012

A second stakeholder workshop was held for the Wellington County Active Transportation Master Plan and the Township of Centre Wellington Trail Master Plan on Thursday March 29, 2012 between 10:00 a.m. to 2:00 p.m., in advance of the second round of public information centres. Members of the trail and active transportation community were engaged including a number of those representatives who had attended the first workshop as well as additional representatives from local advocacy and interest groups (e.g. local businesses, school boards, Ontario Provincial Police, Grand River, Hamilton and Saugeen Valley Conservation Authority etc.).

The purpose of the workshop was undertaken to encourage participation and gather your input on how to improve conditions for active transportation and trails throughout the County and provide input on key aspects of the project that have been ongoing since the first workshop. Main objectives for this workshop include:

- Receiving and discussing comments on the draft recommended Active Transportation network routes and proposed facility types;
- Discussing possible priorities for implementation;
- Discussing potential promotion, marketing and outreach alternatives for consideration by the County, local municipalities and other partners. Workshop attendees were encouraged to provide comments on the maps provided and to engage with the study team.

The workshop an overview of the work which had been completed to date which included:

- An update on the study progress;
- A review of the definition of active transportation;
- An update on the results of the online questionnaire;
- A proposed network development and facility selection tool;
- A set of facility design alternatives; and
- A presentation of the proposed active transportation network.



Following the presentation workshop attendees were broken into working groups according to geographic area within the County and were asked to provide input on three topics areas. The topic areas were developed to address mapping and network design alternatives. Maps were provided to the participants to add location specific comments related to the proposed active transportation and trail candidate route for the County as well as the Township of Centre Wellington. Following the discussion a representative from each of the groups provided the key comments and discussion points. The following are the topic areas which were discussed by each of the groups:

Topic 1.0 Discuss and list 3-5 potential criteria that can be used to determine priorities for network implementation.

Topic 2.0 Identify the top 5 network priorities for implementation.

Topic 3.0 Identify other initiatives that are needed to support Active Transportation (e.g. policies, programs, partnerships, products)

The responses are summarized in the following table. Please note that not all groups were able to address all three topic areas.



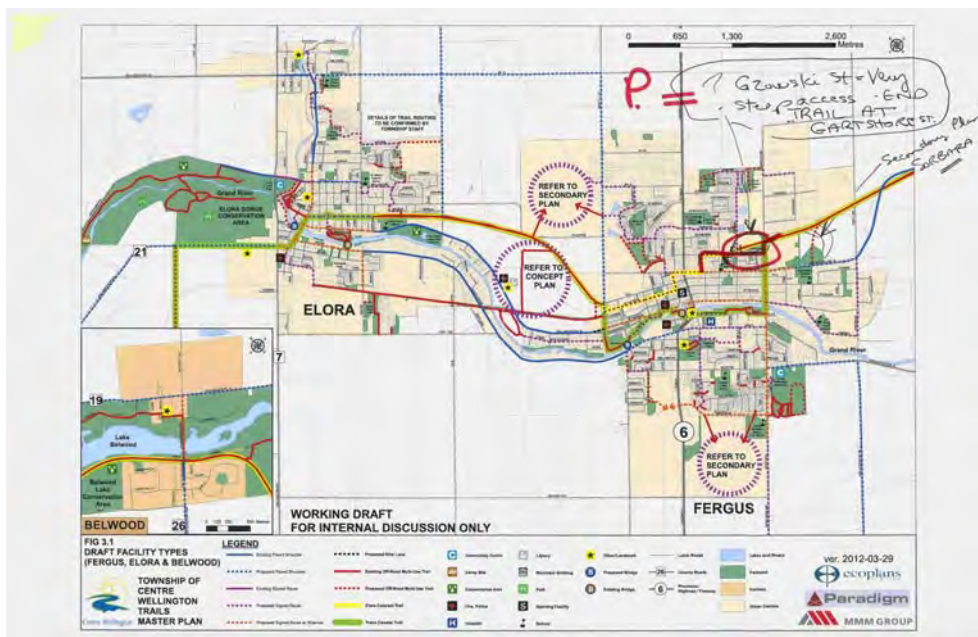
Map / Location	Comments Received
Township of Centre Wellington	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Wellington Road 29 requires a substantial protected shoulder it is a very busy road ▪ Jones Baseline is a feasible bike route to Wellington Road 124 ▪ Post-winter maintenance of paved shoulders is an issue. Cleaning up sand and salt is a safety issue ▪ Use 5th Line and 4th Line from Wellington Road 18 south. There are 4 or 5 roadside farm stands that would serve as a tourist draw. It is also a good alternative to Wellington Road 26 as it is less busy. It also connects south Wellington the to the Elora Cataract Trail ▪ Fergus routes require more discussion, there needs to be a more direct route/connection of the trails to downtown to support tourism ▪ Access the Elora-Cataract Trail at Gzowski Street is very steep. Consider ending the trail at Gartshore Street and use Forfar and James to Garafraxa. ▪ Is there a secondary plan for the 'Sorbara' land on the east side of Fergus? <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ Wellington Road 21 from Elora west to the county boundary is a priority route and key connection to Waterloo Region. It also connects to the Kissing Bridge Trail. Some sections currently have paved shoulders, the gaps need to be filled in ▪ Connecting the Elora Cataract Trailway to Guelph either by the Hydro corridor or Kissing Bridge Trail is a priority/complete the Trans Canada Trail Connection to Guelph ▪ Elora Cataract Trail signage through Elora and Fergus is needed so there is a clearly defined route ▪ Wellington Road 16 north of Wellington Road 19 requires signage and promotion as a route
Township of Erin	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ No comments <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ No comments

Comments Received for Centre Wellington Proposed Network from Stakeholder Workshop #2



Map / Location	Comments Received
Township of Guelph Eramosa	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Add Fifth Line and Wellington Road 27 to the network ▪ Concern for safety along Sideroad 5 east of Rockwood due to the current condition of the road ▪ Look at using extension of Indian Trail and 3rd Line road allowance south of Hwy 7 to make a connection between Rockwood and Guelph ▪ What does the Fife Road route connect to, it is a nice aesthetic road route but does it connect to a route in the Kitchener-Waterloo plans? ▪ 5th Line may make a better route ▪ Wellington Road 29 can be a busy road. Fifth Line could be a better alternative, it is not as busy and it connects Rockwood to Belwood and the Elora-Cataract Trail <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ The Rockwood Guelph link should be a key priority, this was also identified as a priority from past consultations, and a reasonable cycling route may be available using 3rd Line road allowance and Indian Trail. The connection from Guelph to Rockwood is a safety concern at this point ▪ Cyclists will travel from Kitchener Waterloo, Burlington and Milton to cycle in the area; it is becoming a cycling 'nirvana'. We need maps and cross jurisdictional promotion <p><u>Policies Programs and Partnerships:</u></p> <ul style="list-style-type: none"> ▪ Greenlands securement opportunities around connecting to public lands and creating trail linkages/loops and destinations. It was noted by Credit Valley Conservation (CVC) staff in attendance that they are looking for partnership opportunities in this regard. ▪ Special Events to promote strategy, identify new routes and create partnerships ▪ Work at partnership strategies to develop public trail access on private lands.
Township of Mapleton	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Consider a route around Conestoga Lake either using the existing road network or longer term within GRCA land ▪ Consider Blind Line and 3rd Line south of Sideroad 18 near Wallenstein <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ Complete the connections through Drayton ▪ Connect Drayton to Glen Allan

Map / Location	Comments Received
Township of Minto	<p><u>Network Comments</u></p> <ul style="list-style-type: none"> ■ Create a link from Harriston to Pike Lake using 10th Line, Pike Lake Road and 12th Line to make the connection into Mount Forest (this could be instead of Eighth Line). Pike Lake is a recreation and residential destination and supports tourism. Good sight lines along 10th, Pike Lake Road and 12th ■ There is a gap from the end of The Whites Junction Trail at 7th Line, use Wellington Road 5 and extend the link across Wellington Road 109 to Blind Line ■ Intersection improvements are planned in the future for Wellington Road 109 and Wellington Road 5 ■ Wellington Road 2 is going to be paved in 2012 ■ Routes should be family oriented <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ■ Connection north end of Whites Junction Trail to Wellington Road 109 and over to Blind Line (#1 priority) ■ Connection from Harriston to Pike Lake (#2) ■ Create better connections to schools in Palmerston and Harriston (#3) ■ Wellington Road 2 (#4) ■ Choose routes with low volume low speed traffic ■ Fill gaps ■ Link key destinations ■ Look for priorities that create a “bigger bang for the buck”



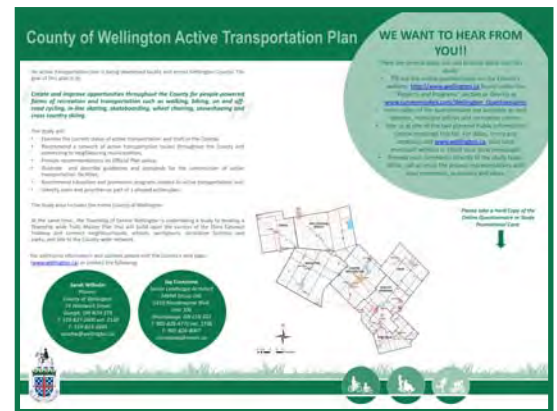
Comments Received for Proposed Facility Types for the Township of Centre Wellington Network from Stakeholder Workshop #2

Map / Location	Comments Received
Township of Puslinch	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ Puslinch Tract (Twin Ponds) contains 15-20km network of ad-hoc/informal trails, there is a trails master plan in development by the Puslinch Tract Recreational Association in partnership with GRCA) ▪ Add a signed route connection from Fletcher Conservation Area to Lafarge Trail. This continues through the Beverly Swamp, into Dundas and to Hamilton Brantford Rail Trail ▪ Add a signed route connection along Wellington Road 36 from Watson Road to Victoria Road ▪ Is Watson Road safe with the steep hill and curve just north of Wellington Road 34. Victoria Road is a better connection even if it is busier. City of Guelph has plans to complete the bike lanes along Victoria Road in Guelph ▪ Could the Nassagaweya-Puslinch Townline be an alternative to Watson Road? ▪ Consider adding Hume Road ▪ Stroy Bridge is a nice part of a well-used trail loop, this link should be part of the network ▪ Could add Niska Road and Pioneer Road as an existing on-road secondary route ▪ Market and Community Centre in Aberfoyle is a destination ▪ Some challenges with a boulevard multi-use trail in Aberfoyle between the restaurant and Cockburn Street as several homes are very close to the street <p><u>Policies/Initiatives:</u></p> <ul style="list-style-type: none"> ▪ Need to have a local Puslinch Marketing approach ▪ Puslinch is connected to municipalities outside of the County and that needs to be recognized ▪ Need to look at health promotion tie-in to be able to access more funding <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ An off –road trail at the Community Centre. The location is visible, feasible, central and an existing recreation hub
Township of Wellington North	<p><u>Network Comments:</u></p> <ul style="list-style-type: none"> ▪ When old rail lines are used there is a need to address the issue of trespassing on private property and property damage/liability. Abandoned rail lines when used for trails should only be available for non-motorized vehicles ▪ Potential for wind turbine vandalism where off road trails pass nearby (e.g. immediately east of Arthur) ▪ If abandoned rail corridor east of Arthur is not feasible, consider Line 2 from Wellington Road 14 to Wellington Road 16 as an alternative ▪ Fall hunting around Luther Marsh, so there would need to be seasonal limitations on trail use ▪ Key Issues: Enforcement, trail user conflict (e.g. dog walkers and senior citizens), jurisdictional restrictions, urban versus rural perceptions and trail user expectations <p><u>Suggested Priorities:</u></p> <ul style="list-style-type: none"> ▪ Education regarding respecting rural property rights/access ▪ Wellington Road 16

B.4 ADDITIONAL COMMUNITY OUTREACH

In addition to the consultation initiatives identified above, the study team undertook additional community outreach initiatives to engage a greater number County residents, interest groups and stakeholders. These additional initiatives included:

- The County and *in motion* developed 8 newspaper advertisements which were placed in the Wellington Advertiser throughout the Course of the Study.
- Child and Youth outreach pamphlets were developed which included youth friendly questions and opportunities to draw any comments or recommendations they had for the development of the active transportation network. The pamphlet also included a QR code which provided users with key information on the study and upcoming events.
- Newsletter write-ups / study updates were developed and placed in a number of newsletters throughout the County including:
 - Minto Recreation Newsletter;
 - OMAFRA Newsletter;
 - Trail Club Newsletter;
 - Public & Catholic Elementary School Newsletters and E-bulletins; and
 - Various businesses across Wellington-Dufferin-Guelph Health Unit.
- Interest Groups were Contacted and asked to provide commentary throughout the study or participate in presenting key study information information using the mobile display boards. These groups included:
 - 4H Horseback Riding Club;
 - Chamber of Commerce;
 - *in motion* partners;
 - Minto-Mapleton FHT who presented the mobile display board and handed out questionnaires at flu clinics;
 - Centre Wellington Seniors Centre presented a display and handed out questionnaires;
 - Upper Grand Family Health Team presented a display and handed out questionnaires;
 - WDG Public Health who presented the mobile display, placed notes in staff bulletins and placed a notice on their website for all three public consultation events;
 - Recreation Committees; and
 - A Facebook Announcement which provided information on the study as well as upcoming events.



Mobile Display Board presented at key locations throughout the County and its local municipalities.



Copy of the Online Questionnaire which was used to collect input throughout the study process.

- 3 Reports to Municipal Councils via Clerks (CAOs office) were developed and presented at Council meetings throughout the course of the study process.
- Information and study updates were provided on County and Municipal Councillor blogs throughout the study process.
- School Aged children were engaged through a community outreach program which asked a photography class in Grade 6 to go out onto trails and take photographs of significant natural features.



Source: Grade 6 Photography Outreach Initiative - Summer 2011



Source: Grade 6 Photography Outreach Initiative - Summer 2011

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 1: Purchase					
Purchase of land at fair market value. Includes "First Right of Refusal"	Any open space, particularly those requiring environmental protection.	<p>The County and / or the Local Municipality directly acquires land. Permanent protection and public access.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the County and / or Local Municipal Official Plan (where applicable) only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenland System Trails are permitted.</p>	Municipal Act (right of municipality to acquire and dispose of own land) and right of municipality to levy local improvement charge on benefiting land	<p>Municipal Government Land Trusts</p> <p>Non-Profit Groups (e.g. The Nature Conservancy)</p> <p>Community Co-operative Partnerships</p>	<p>The County and / or Local Municipalities can purchase properties within a neighbourhood that are listed for sale, and divide the side and/or rear lot to accommodate a block for future trail development through a severance of creation of an easement. This strategy is dependent on monitoring properties as they become available and the assembly of a corridor may have to take place over a number of years.</p> <p>The County and / or Local Municipalities may compensate a homeowner for the portion of their land required for trail development. In this case the homeowner and County and / or Local Municipalities would obtain separate appraisals and negotiate a reasonable price based on the independent results.</p>
Strategy-Technique 2: Land Exchange					
Lands or interest in land can be traded to achieve mutual interests, and net differences in values can then be settled	Any land or land use open space or other type of use including housing.	<p>Same cost as purchase; permanent protection; public access possible.</p> <p>Must be equitable for both parties to be attractive.</p>	Municipal Act (right of municipality to acquire and dispose of own land).	Municipal most common – public ownership.	N/A

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 3: Donation / Bequest					
Land or interests in land donated during an individual's lifetime or by private corporation or as a bequest as part of an estate. The donor may opt to retain use of land until death.	Any land or land use open space or other type of use including housing.	<p>Low cost/ permanent protection and public access. Tax benefits for donor.</p> <p>Lands must meet Federal Tax rules for donation in order to qualify for tax exemptions.</p>	<p>Municipal Act</p> <p>Income Tax Act</p>	<p>All of the above</p> <p>Both public and private ownership.</p>	The County and / or Local Municipalities may coordinate an agreement with a homeowner whose property is potentially impacted by trail development to pay their property and land taxes until such a time when the homeowner sells or relocates at which time their property is gifted to the County and / or Local Municipality.
Strategy-Technique 4: Parkland Dedication					
<p>Lands dedicated to municipality for parkland purposes as a result of subdivision development.</p> <p>Usually relates to recreation land but may be used to acquire natural areas.</p>	Any open space, but usually active parkland.	<p>Provides parkland in growing communities: Can be converted to cash for more flexibility.</p> <p>Planning Act limits amount of land that can be required at no charge.</p>	Planning Act	Municipal Ownership	The County and / or Local Municipalities may coordinate an agreement with a homeowner whose property is potentially impacted by trail development to pay their property and land taxes until such a time when the homeowner sells or relocates at which time their property is gifted to the County and / or Local Municipality.

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 5: Traditional Land Use and Other Regulatory Controls					
<p>Use of land use planning (Official Plan/Zoning/ Subdivision Watershed and Sub-watershed Plans) and other regulatory controls.</p> <p>Land Ownership does not change.</p>	<p>Any open space if designation or zoning is not successfully challenged.</p>	<p>Intent for the land is provided in the Official Plan. Permanent protection can be achieved.</p> <p>May not be popular and does not provide for public access. May trigger requests for financial compensation or purchase.</p>	<p>Planning Act</p> <p>Conservation Authorities Act</p> <p>Fisheries Act</p> <p>Aggregate Resources Act</p>	<p>Municipal, Province, Conservation Authorities.</p> <p>Usually private ownership or public ownership other than the County and / or Local Municipality.</p>	<p>N/A</p>
Strategy-Technique 6: Sale with Restrictions (Including acquisition and resale)					
<p>Land can be sold with restrictions in place to control future uses.</p>	<p>Natural open spaces requiring environmental protection where public access may not be as critical.</p>	<p>Generates revenue while maintaining natural open space; permanent protection; public access can be negotiated.</p> <p>Restricted land more difficult to sell, limited market and reduced value.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	<p>Municipal Act</p> <p>Conservation Land Act</p>	<p>Municipal/Provincial Government</p>	<p>N/A</p>

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 7: Land Trust					
Non-profit organizations dedicated to conserving open space, natural areas, etc.	Usually land needing environmental protection or recreational multi-use pathways.	<p>High profile grass-roots organization. Provides permanent protection and public education.</p> <p>Limits public access.</p> <p>Needs high profile and independence to get funds.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	N/A	Generally non-profit, incorporated community organization or a chapter within an existing organization	N/A
Strategy-Technique 8: Corporate Landowner Agreement / Condominium Agreement					
Similar to Land Trust Conservation land can be owned by a shareholder's corporation or condominium devoted to the protection and management of the lands.	Any open spaces.	<p>An alternative to government ownership and management; no cost; flexible; management costs borne by those directly benefiting. Protection not guaranteed.</p> <p>Little used; no guarantee of public access, needs a willing corporate entity.</p>	<p>Corporations Act</p> <p>Condominium Act</p>	Private landowners, would not involve public ownership.	N/A
Strategy-Technique 9: Conservation Easement					
Agreements that restrict uses for conservation purposes, and when registered on title, they bind both current and future landowners.	Usually land needing environmental protection as well as heritage buildings.	<p>Low cost; may be more acceptable to landowner; can provide permanent protection.</p> <p>Cost of easements may be as great as purchase; public access may be limited; requires ongoing monitoring; not extensively used in Ontario.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	<p>Ontario Heritage Act; Ministry of Government Services Act</p> <p>Ontario Conservation Land Act</p>	<p>Only government agencies and registered charities including land trusts.</p> <p>Private ownership</p>	N/A

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 10: Restrictive Covenant					
<p>A condition on title that restricts the landowner's use of land or assigns certain rights or access to an adjacent landowner. Applicable where a government wishes to control land use but not own the land.</p>	<p>Usually land needing environmental protection.</p>	<p>Low cost; can provide permanent protection.</p> <p>Can only be used under certain conditions; unlikely to be able to specify long-term management obligation. Public access not likely.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	<p>Common Law</p>	<p>Any government or conservation authority.</p> <p>Private ownership</p>	<p>N/A</p>
Strategy-Technique 11: Lease / License					
<p>A lease gives exclusive rights to use land for a specified term and cost.</p> <p>Licenses give permission to use a property for a purpose but not exclusive rights and does not bind future owner.</p>	<p>Any land</p>	<p>Public access can be negotiated</p> <p>Agreement must be renewed periodically; may not protect land in perpetuity.</p>	<p>N/A</p>	<p>Legal lease or license agreement between parties.</p> <p>Private or public ownership.</p>	<p>N/A</p>

Appendix C: Table C.1 Land Securement Strategies and Techniques

Description	Type of Land that Strategy can Typically be Applied to	Advantages / Disadvantages	Legislative Basis	Administrative Conditions	Other Considerations
Strategy-Technique 12: Inventives / Assistance					
<p>Tax or management incentives to encourage retention/ restoration of natural areas. Usually linked to land use restrictions such as Provincial policy and zoning.</p> <p>i.e. Tax Rebates/ Credits/ Management Agreements/ Funding Assistance</p>	<p>Usually land needing environmental protection.</p>	<p>Lower cost and non-confrontational; willing landowner agreement</p> <p>Difficult to monitor compliance; does not provide public access or permanent protection. Lost tax revenue.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	<p>Woodland Improvement Act</p> <p>Game and Fish Act</p> <p>Conservation Authorities Act</p> <p>Conservation Act</p>	<p>Ministry of Natural Resources</p> <p>Conservation Authorities</p> <p>Private Ownership</p>	<p>N/A</p>
Strategy-Technique 13: Stewardship					
<p>Private land owner care and protection of land. Can be linked to incentives. Provides support/education for owner.</p>	<p>Usually land needing environmental protection.</p>	<p>Voluntary. Least costly; non-threatening; builds rapport.</p> <p>Not permanent. No public access or protection.</p> <p>In the case of natural open space that requires environmental protection, and consistent with the Official Plan only small scale, passive recreation uses such as pathways and trails, boardwalks, footbridges and picnic facilities which will have no significant negative impact on the natural features or ecological function of the Greenlands System Trails are permitted.</p>	<p>N/A</p>	<p>Private although all levels of government publicize and provide support.</p>	<p>N/A</p>

Appendix D - Unit Price Schedule

ITEM		UNIT		COMMENTS/ASSUMPTIONS
1.0 GENERAL ACTIVE TRANSPORTATION FACILITIES				
Shared Lanes / Paved Shoulders				
1.1	Signed Bike Route in Urban Area	per kilometre	\$2,000	Price for both sides of the road, assumes one sign a minimum of every 300m / direction of travel (e.g. 6 signs / km) . Note a harmonized price of \$400.00 per kilometre was used for master plan pricing. This assumes that approximately 30% (by distance) of the signed routes are in urban areas and 70% are in the rural areas of the County
1.2	Signed Bike Route in Rural Area	per kilometre	\$200	Price for both sides of the road, assumes one sign on average, per direction of travel every 1 km in rural area
1.3	Signed Bike Route with Sharrow Lane Markings	per kilometre	\$4,000	Price for both sides of the road, includes route signs (\$2,000/km both sides), and sharrow stencil every 75m as per Ministry Guidelines (Painted \$75 each x 26/km = \$1,950 in table) If thermoplastic type product is used assume \$250 / each x 26 = \$6,500 source Flint Trading Inc.
1.4	Signed Bike Route with Wide Curb Lane with Construction of a New Road	per kilometre	\$60,000	Price for both sides of the road, assumes 0.5m to 1.0m widening on both sides of the road (3.5m to 4.0m)
1.5	Signed Bike Route with Wide Curb Lane with Road Reconstruction Project	per kilometre	\$240,000	Price for both sides of the road, includes curb replacement, catch basin adjustments, lead extensions and driveway ramps
1.6	Signed Bike Route with Paved Shoulder in conjunction with existing road reconstruction / resurfacing	per kilometre	\$55,000	Price for both sides of the road, 1.5m paved shoulder, assumes cycling project pays for additional granular base, asphalt and edge line (assume \$110,000 per kilometre if additional widening of granular base required)
1.7	Signed Bike Route with Buffered Paved Shoulder in conjunction with existing road reconstruction / resurfacing project	per kilometre	\$150,000	Price for both sides of the road, 1.5m paved shoulder + 0.5 to 1.0m paved buffer, assumes cycling project pays for additional granular base, asphalt, edge lines and signs (buffer zone framed by white edge lines)
1.8	Addition of Rumble Strip to Existing Buffered Paved Shoulder (rural)	per kilometre	\$3,000	Price for both sides
1.9	Granular Shoulder Sealing	per kilometre	\$3,000	Both sides spray emulsion applied to harden the granular shoulder. This will reduce gravel on the paved portion of the shoulder and significantly reduce shoulder maintenance.
Conventional and Separated Bike Lanes				
1.10	Conventional 1.5m-1.8m Bicycle Lanes by Adding Bike Lane Markings and Signs	per kilometre	\$7,500	Price for both sides of the road, includes signs, stencils and edge line. Price is for conventional paint, (assumes painted lane line at \$1 / m + \$75 / symbol x 26 + \$2000 for signs)increase budget to \$20,000 /km for Thermoplastic) e.g. lane line in thermo is \$5.50/m compared to \$1.00/m for paint
1.11	Lane Conversion from 4 lanes to 3 lanes to Add Conventional 1.5m-1.8m Bicycle Lanes	per kilometre	\$35,000	Price for both sides. Includes grinding of existing pavement, markings, signs, line painting and symbols
1.12	Conventional 1.5m-1.8m Bicycle Lanes in Conjunction with a New Road or Road Reconstruction Project	per kilometre	\$300,000	Price for both sides of the road, assumes 1.5m bike lanes on both sides of the roadway (1.5m x 2 sides = 3.0m). Includes catch basin leads, asphalt, signs, pavement markings sub-base only. Road project funds all other improvements
1.13	Conventional 1.5m-1.8m Bicycle Lanes by Retrofitting / Widening Existing Road	per kilometre	\$700,000	Price for both sides of the road, includes the cost for excavation, adjust catch basins, lead extensions, new curbs/driveway ramps, asphalt and sub-base, pavement markings and signs.
1.14	Wide Bicycle Lane (2.0m - 2.5m BL) in Conjunction with New Road or Road Widening Project	per kilometre	\$250,000	Price for both sides of the road, assumes 2.0m to 2.5m bike lanes on both sides of the roadway . Includes catch basin leads, asphalt, signs, pavement markings sub-base only
1.15	Buffered Bicycle Lane with Hatched Pavement Markings - Assumes New Road or Road Reconstruction/Widening already Planned	per kilometre	\$350,000	Price for both sides of the road, assumes 1.5m bike lanes + 0.5m - 1.0m buffer zone with hatched pavement markings on both sides of the roadway. Includes catch basin leads, asphalt, signs, pavement markings sub-base only. Road project funds all other components
1.16	Buffered Bicycle Lane with Flex Bollards - Assumes New Road or Road Reconstruction/Widening Already Planned	per kilometre	\$365,000	Price for both sides of the road, assumes 1.5m bike lanes + flex bollards centred in hatched buffer zone at 10m intervals. Includes catch basin leads, asphalt, signs, edge line pavement markings (both sides of buffer zone) sub-base only
1.17	Buffered Bicycle Lane with Pre-Cast Barrier - Assumes New road or Road Reconstruction/Widening Already Planned	per kilometre	\$400,000	Price for both sides of the road, assumes 1.5m bike lanes + pre-cast and anchored curb delineators . Includes catch basin leads, asphalt, signs, edge line pavement markings (both sides of buffer zone) sub-base only

ITEM		UNIT		COMMENTS/ASSUMPTIONS
Cycle Tracks				
1.18	Uni-directional Cycle Tracks: Raised and Curb Separated - Retrofit Existing Roadway	per kilometre	\$500,000 - \$1,200,000	Both sides. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price
1.19	Two Way Cycle Track - Retrofit Existing Roadway	per kilometre	\$500,000 - \$800,000	One side. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price
Active Transportation Paths and Multi-Use Trails				
1.20	Two Way Active Transportation Multi-use path within road right-of way with sidewalk on one side	per kilometre	\$375,000	3.0m wide hard surface pathway (asphalt) within road right of way one side of road and 1.5m concrete sidewalk on opposite side (no utility relocations)
1.21	Two Way Active Transportation Multi-use path within road right-of-way	per kilometre	\$275,000	3.0m wide hard surface pathway (asphalt) within road right of way (no utility relocations)
1.22	Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting	per kilometre	\$150,000	3.0m wide, compacted stone dust surface normal site conditions
1.23	Off-Road Multi-Use Trail Outside of Road Right-of-Way on Abandoned Rail Bed in a Rural Setting	per kilometre	\$130,000	3.0m wide, compacted stone dust surface, includes signage along trail and gates at road crossings
1.24	Granular Surfaced Multi-use Trail in a Woodland Setting	per kilometre	\$120,000	2.4m wide, compacted stone dust surface
2.0 STRUCTURES AND CROSSINGS				
2.1	Heavy duty boardwalk	per metre		Structure on footings, 3.0m wide with railings, designed to hold light service vehicle
2.2	Self weathering steel truss bridge	per metre		1.8m wide (footings/abutments additional, assume \$25,000 per side for normal site conditions)
2.3	Self weathering steel truss bridge	per metre	\$3,000	3.0m wide (footings/abutments additional, assume \$25,000 per side for normal site conditions)
2.4	Grade separated cycling/overpass of major arterial/highway	each	\$1,000,000- \$8,000,000	Requirements and design vary widely, use price as general guideline only
2.5	Metal stairs with hand railing and gutter to roll bicycle	per vertical metre	\$3,000	1.8m wide, galvanized steel
2.6	Pathway / Road transition	each	\$2,500	Typically includes 3 bollards, warning signs, curb cuts and minimal restoration (3.0m pathway)
2.7	Pathway / Road transition at existing signalized intersection	each	\$3,000	(At intersection with pedestrian crosswalk) typically includes 6 bollards, warning signs and minimal restoration
2.8	At grade mid-block crossing	each	\$5,000	Typically includes pavement markings, 6 bollards, warning signs, curb cuts and minimal restoration. Does not include median refuge island.
2.9	Median Refuge	each	\$20,000	Average price for basic refuge with curbs, no pedestrian signals
2.10	Mid-block Pedestrian Signal	each	\$75,000-\$100,000	Varies depending on number of signal heads required
2.11	At grade railway crossing	each	\$120,000	Flashing lights, motion sensing switch (C.N. estimate)
2.12	At grade railway crossing with gate	each	\$300,000	Flashing lights, motion sensing switch and automatic gate (C.N. estimate)
2.13	Below grade railway crossing	each	\$500,000-\$750,000	3.0m wide, unlit culvert style approx. 10 m long for single elevated railway track
2.14	Multi use subway under 4 lane road	each	\$1,000,000-\$1,200,000	Guideline price only for basic 3.3 m wide, lit.

ITEM		UNIT		COMMENTS/ASSUMPTIONS
3.0 BARRIERS AND ACCESS CONTROL FOR MULTI-USE TRAILS OUTSIDE OF THE ROAD RIGHT-OF-WAY				
3.1	Lockable gate (2 per road crossing)	each	\$5,000	Heavy duty gates, price for one side of road (2 required per road crossing). Typically only required in rural settings or city boundary areas
3.2	Metal offset gates	each	\$1,200	"P"-style park gate
3.3	Removable Bollard	each	\$500-\$750	Basic style (e.g. 75mm diameter galvanized), with footing. Increase budget for decorative style bollards
3.4	Berming/boulders at road crossing	each	\$600	Price for one side of road (2 required per road crossing)
3.5	Granular parking lot at staging area (15 car capacity-gravel)	each	\$12,000-\$15,000	basic parking area with precast bumper curbs
3.6	Page wire fencing	per metre	\$20	1.5m height with peeled wood posts
3.7	Chain link fencing	per metre	\$100	Galvanized, 1.5m height
4.0 SIGNAGE				
4.1	Regulatory and caution Signage (off-road pathway) on new metal post	each	\$150-\$250	300mm x 300mm metal signboard c/w metal "u" channel post
4.2	Signboards for interpretive sign	each	\$500-\$800	Does not include graphic design. Based on a 600mm x 900mm typical size and embedded polymer material, up to 40% less for aluminum or aluminum composite panel
4.3	Staging area kiosk	each	\$2,000-\$10,000	Wide range provided. Price depends on design and materials selected. Does not include design and supply of signboards
4.4	Signboards for staging area kiosk sign	each	\$1,500-\$2,000	Typical production cost, does not include graphic design (based on a 900mm x 1500mm typical size and embedded polymer material). Up to 40% less for aluminum or aluminum composite panel
4.5	Pathway directional sign	each	\$500-\$750	Bollard / post (100mm x100mm marker) , with graphics on all 4 sides
4.6	Pathway marker sign	each	\$250	Bollard / post (100mm x100mm marker), graphics on one side only
5.0 OTHER				
5.1	Major rough grading (for multi-use pathway)	cubic metre	\$10-\$25	Varies depending on a number of factors including site access, disposal location etc.
5.2	Clearing and Grubbing	square metre	\$2	
5.3	Bicycle rack (Post and Ring style)	each	\$150-\$250	Holds 2 bicycles , price varies depending on manufacturer
5.4	Bicycle rack	each	\$1,000-\$1,200	Holds 6 bicycles, price varies depending on manufacturer
5.5	Bicycle Locker	each	\$3,000	Price varies depending on style and size. Does not include concrete mounting pad
5.6	Bench	each	\$1000-\$2,000	Price varies depending on style and size. Does not include footing/concrete mounting pad
5.7	Safety Railings/Rubrail	per metre	\$100-\$120	1.4m height basic post and rail style
5.8	Small diameter culverts	per metre	\$150-\$250	Price range applies to 400mm to 600mm diameter PVC or CSP culverts for drainage below trail
5.9	Pathway Lighting	per metre	\$130-\$160	Includes cabling, connection to power supply, transformers and fixtures

NOTES:

1. Unit Prices are for planning purposes only, include installation but exclude contingency, design and approvals costs (unless noted) and reflect 2012 dollars, based on projects in southern Ontario
2. Estimates do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside drainage works or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways
3. Assumes typical environmental conditions and topography
4. Applicable taxes and permit fees are additional