
Town of Collingwood Active Transportation Framework



2017



Preface

The Collingwood Active Transportation Plan (ATP) was received by Council in January 2013, but was never formally adopted and set in motion. The plan was ambitious, and included a wide array of policy and design direction for improving active transportation as well as a lengthy list of potential implementation projects. Basically, the plan looked toward:

- expanding and enhancing the active transportation network;
- helping and encouraging more people to use active transportation;
- building community engagement and support for active transportation; and,
- improving the layout and design of the community to be more supportive of active transportation and pedestrians in general.

Central to the achievement of these goals was the plan's emphasis on creating a collaborative and cooperative implementation process, across Town Departments and Committees as well as integrating public and stakeholder involvement whenever and wherever possible.

Although heavily oriented toward a grassroots approach, and making the most of community assets, full implementation would have required a large capital investment, commitment of additional staff resources, expertise and time, and perhaps even entailed the creation of a new department.

Fortunately, the lack of formal implementation has not hindered the Town in moving active transportation planning forward over the past several years and establishing a considerable amount of momentum. The plan has been influential in decision-making and served as an important reference point for active transportation planning, promotion and on the ground improvements:

- Numerous expansions and enhancements have been made to the Town's trail, sidewalk and road network for a wide range of active transportation users;

- Education and safety initiatives have been undertaken to support and encourage the use of the network;
- Understanding and support for active transportation has continued to increase throughout the community; and,
- Active transportation has become an integral part of the Town's decision-making culture, including the overall planning and design of the community, the review of development proposals and infrastructure projects, and the day to day operation of community amenities and services.

Against this backdrop, it is not surprising that through the Town's 2015 Community Based Strategic Planning Process, Collingwood residents identified healthy lifestyle as an important community goal, including support for active living and convenient access to the Town's trails system, local health care and social services.

The Strategic Plan specifically recommended that active transportation be treated in a more formal manner with the adoption of a plan and annual monitoring of its implementation.

Accordingly, the Active Transportation Framework detailed in the following pages has been prepared to address this recommendation and has used the 2013 Active Transportation Plan as a starting point and recognizes the progress Collingwood has made to date. Essentially, the Active Transportation Framework is a more focused document that concentrates less on explaining and building support for active transportation and more on:

- the projects and initiatives that remain to be completed;
- identifying new opportunities and priorities;
- working with other Town initiatives where appropriate, including the Waterfront Master Plan;

- formalizing guiding principles for active transportation decision-making, which are being integrated into the Town's development review process;
- using existing departments, committees and stakeholder organizations to make and support improvements to all aspects of active transportation; and,
- using existing review and decision making processes.



Active Transportation

Background

Active transportation means any form of transportation that is human-powered. It includes walking, cycling, in-line skating, skateboarding, cross country skiing, and canoeing & kayaking; it also includes transport for persons using assistive mobility devices. In fact all trips include active transportation components, sometimes even just the act of walking to and from a car or transit vehicle. The most popular modes of active transportation are walking and cycling. Walking/wheeling is the only form of transportation that can be taken completely independently of all others for an entire trip from beginning to destination.

The importance of active transportation is increasingly recognized as a relevant issue in light of environmental; chronic disease; and personal mobility issues, as well as the economic impacts associated with communities that are not designed and built to be active transportation “friendly”. This will continue to increase in importance due to an aging population; challenging peoples’ quality of life and enhancing the appeal of compact, walkable communities.¹

Active transportation is particularly important recognizing that it is necessary for people that do not typically have a choice outside of these modes for getting around. Typically this has meant children and older citizens, but it also includes, “people who are physically, economically and socially disadvantaged [who] often rely on walking and cycling,” to better achieve social and economic opportunities and equity.² “Paying attention to all modes in street planning can also create a more efficient system that responds better to

¹ Ontario Professional Planners Institute, *Planning and Implementing Active Transportation in Ontario Communities: A Call To Action*, 2012 pg. 2

² Todd Litman, Victoria Transport Policy Institute, *Whose Roads? Evaluating Bicyclists’ and Pedestrians’ Right to Use Public Roadways*, May 31, 2012, pg. 6

travel demand”.³

Because of its far reaching influence, active transportation can have positive effects on many aspects of communities’ successes and overall livability. The Walkable and Livable Communities Institute states this clearly:

*Communities that support walkability (active transportation) have better health and well-being, lower rates of traffic injuries and deaths, better access for people of all abilities, higher property values, better air quality and less greenhouse gas emissions.*⁴

A Pedestrian Design Perspective

Additionally, the American Association of State Highway and Transportation Officials (AASHTO) report, *A Policy on Geometric Design of Highways and Streets*, 2001 specifically identifies the need to design and develop streets with regard to pedestrian needs:

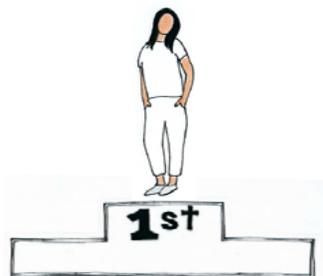
*Pedestrians are a part of every roadway environment, and attention should be paid to their presence in rural as well as urban areas... provisions should be made, because pedestrians are the lifeblood of our urban areas, especially in the downtown and other retail areas. In general, the most successful shopping sections are those that provide the most comfort and pleasure for pedestrians.*⁵

³ National Complete Streets Coalition, *Complete Streets Ease Congestion*, 2011

⁴ Walkable and Livable Communities Institute, *Environmental Protection Agency Walkability Presentation*, 2012

⁵ AASHTO, *A Policy on Geometric Design of Highways and Streets*, 2001, pg. 96

There are many factors which impact active transportation, and the effectiveness of overall community transportation systems. By only using the outdated paradigm that “transportation” means mobility, or physical travel, and evaluation/planning should be based only on these, communities are not examining all the characteristics, or influences on, transportation systems. This results in transportation systems that do not fully support the needs of the community.



Where cars may be the design vehicle for traditional transportation planning, for contemporary active transportation plans, the human-being is viewed as the design vehicle. Well done active transportation planning and design of transportation facilities with perspectives such as “complete streets”, are inherently people-centred. This puts the end user at the centre of all design considerations.

“Collingwood continually seeks to de-emphasize a strong dependence on vehicles and moves toward being a more pedestrian friendly, walkable town with a human scale”.

Mobility is not an end unto itself and is predominantly intended to provide access to needed and desired goods, services, and experiences. Transportation planning must take this into account as a chief principle. Many factors affect transportation access; including the options available for different modes; quality of those options; as well as, land use and design factors. When seen this way, the role of active transportation within a

community is better understood, and the importance of proper design for it is as well.⁶

Policy Direction

Given the importance of Active Transportation, it is not surprising that it has been incorporated into Provincial, County and Municipal planning and policy documents. Moreover, active transportation has also been accepted as best practice across many professional fields that are involved in designing, building and otherwise helping to make communities work and be considered successful.

Examples of adopted policies and suggested guidance in these areas comes from:

The Provincial Policy Statement

Places to Grow, Growth Plan for the Greater Golden Horseshoe

Accessibility for Ontarians with Disabilities Act

Simcoe County Official Plan

Town of Collingwood Official Plan

Collingwood Trails Network Management Guidelines

Simcoe Muskoka District Health Unit (SMDHU)

Ontario Professional Planners Institute

Transportation Association of Canada (TAC)

Ministry of Transportation

American Association of State Highway and Transportation Officials (AASHTO)

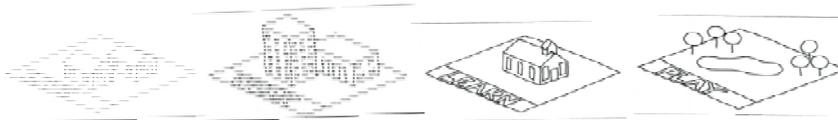
National Association of City Transportation Officials (NACTO)

Provincial and Municipal planning policies are among the more important considerations on the list and emphasize the creation of complete communities with compact urban form where people can use active transportation to meet their day to day needs. Specifically, the Growth Plan

⁶ Todd Litman, Victoria Transport Policy Institute, *Whose Roads? Evaluating Bicyclists' and Pedestrians' Right to Use Public Roadways*, May 31, 2012, pg. 6

for the Greater Golden Horseshoe states in its section dealing with transportation infrastructure that:

The transportation system within the Greater Golden Horseshoe will be planned and managed to: a) provide connectivity among transportation modes for moving people and for moving goods, b) offer a balance of transportation choices that reduce reliance upon any single modes and promotes transit, cycling and walking, c) be sustainable by encouraging the most financially and environmentally appropriate mode for trip-making, d) offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services, e) provide for the safety of system users.



A good active transportation system provides communities with safe, efficient, well connected, and appealing access to peoples' needs; this includes, places where people live, work, learn, and play. Without this connectivity the use of active transportation networks tends to become primarily for recreation.

Examples of how active transportation has been incorporated into other agencies and organizations can be seen in the work of the Simcoe Muskoka District Health Unit (SMDHU) and the Transportation Association of Canada (TAC). The SMDHU, as part of its efforts to achieve better community health, promotes increased levels of physical activity in day to day activities and advocates for better designed communities and transportation systems which are more supportive of walking, cycling and public transit. The TAC looks at active transportation from a different viewpoint - as an integral part of multimodal transportation systems that can help to better manage travel demand, reduce congestion, improve safety and lower infrastructure costs.



Active Transportation is recognized in a wide array of government and professional organizations as an integral component of how we plan, design and ultimately live, work, learn and play in our communities.

Active Transportation in Collingwood

Collingwood is a relatively small community with 21,793 permanent residents and upwards of 4,500 seasonal/recreational residents (2016 Census) living within an area of approximately 35 square kilometres that is well situated in terms of recreational and lifestyle opportunities. The community has a well defined and centrally located built up area with numerous businesses, public services and amenities that are in excess of what is typical for a community of its size. Not surprisingly, 62% of Collingwood's residents live and work within the Town and a much higher proportion use walking and cycling as a way of getting to work than is typical of surrounding communities (2011 National Household Survey, 2011 Census).

Collingwood has been identified by the Provincial Growth Plan for the Greater Golden Horseshoe as the primary settlement area, or focal point, for growth in the northwestern portion of Simcoe County and is anticipated to reach a population of 33,400 over the next fifteen years (2031). On average the community is older than is typical for most of Ontario, with the percentage of the population aged 65 years having risen from 19% in 2001 to 22.5 % in 2011 (2001, 2011 Census) and 26.3% in 2016.

Collingwood's Active Transportation Network

Against this backdrop, over the past several decades Collingwood has developed an excellent active transportation system that provides physical access and connectivity to the various places within the community that people travel to for their daily activities; the places people live, work, learn and play. While focusing more on multi-use recreational trails in its early years it has become more balanced over time with increasing community support and now consists of an overlapping network of trails, roads, bike lanes and sidewalks. It has developed at a scale that is very walkable and bikeable, with an overall size, internal block patterns, and land use mixes, that are well within the accepted thresholds for peoples' desire to use active transportation modes. The Town also has well designed sites and districts

that are interconnected with the active transportation networks and transit system.



Collingwood has well developed trails and public transportation networks that offer good internal and external connectivity.

The challenge is to take these characteristics of the community and build upon them to improve our quality of life further; making the network better, more inviting for all users, and ensuring that it continues to be a core element in how the community is planned, designed and works in its day to day activities.

To date the Town has implemented numerous Active Transportation improvements and there has been a change in the Town's decision-making culture whereby Active Transportation is recognized as an integral part of community planning and design, (at community-wide and site plan specific levels), transportation and recreation infrastructure, as well as recreation and tourism programming and promotion. Several examples of recent improvements are provided on the following page and graphically in greater detail on Appendix A.

Major Infrastructure Improvements

- The Hume Street redevelopment (2015-2016), including bicycle lanes, improved trail/road crossings (Train and River Trails) and sidewalks.
- Bridge crossings and trail extensions for the Train Trail and Siding Trails (supporting more direct and safer north-south and east-west connectivity through the Town and to adjacent municipalities) (2015).
- Inclusion of Bike Lanes on Beachwood Road (2014) (also assisting in connectivity with adjacent municipalities).
- Pedestrian/Cycling Trail Separation at Sunset Point Park to improve safety between different trail user groups.
- Trail connection to Millennium Park (2017).

Education and Enforcement Initiatives

- Active and Safe Routes to School Initiatives (ongoing) collaborative effort to encourage and promote student use of active transportation to get to school and identify safe routes.
- Trail Etiquette (2015) and Wayfinding (2016) signage initiatives to encourage safer and more appropriate trail usage.
- Municipal By-laws (2015) dealing with where ebikes and pedelecs are on the Town's transportation network to address safety and accessibility issues.
- Bicycling Friendly Community Status – Bronze level (2017).

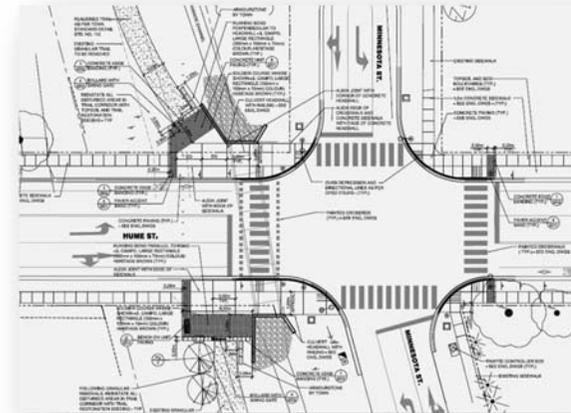
Supportive Infrastructure

- Provision of additional bicycle racks in the Downtown Core.
- Bicycle Repair Stations at Sunset Point and Sidelaunch Brewery (2016).
- Installation of Bicycle Ramps to assist with sections of the network with stairs/steep inclines.
- Installation of Water Stations at various locations (2016, 2017).

Supportive Land Use Planning and Design

- Approval of Official Plan Amendment #33 (Residential Policy Review) which promotes complete communities and development that is designed to be oriented to pedestrians and support public transit.
- Site Plan Approvals, such as L'école Notre Dame de la Huronie, and Balmoral Village, which have incorporated AT into their specific site

configurations and been incorporated into the Town's AT network.



The 2015-2016 Hume Street redevelopment supported an integrated and multimodal approach with bicycle lanes and better configured and safer trail crossings (Hume Street intersection with Minnesota Street and the Train Trail is shown).



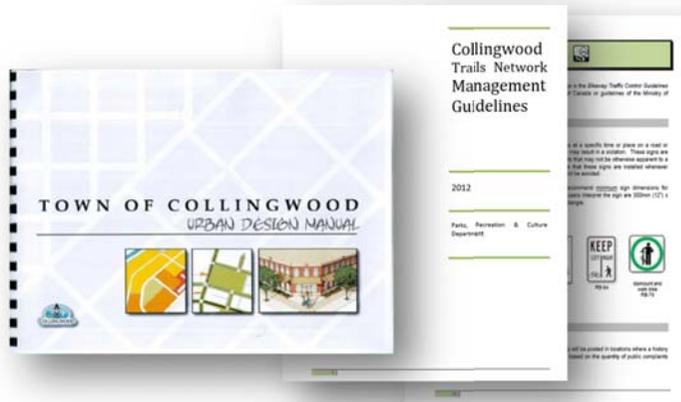
The trail etiquette initiative started in 2015 has helped to jointly educate pedestrian and cyclists, while they are using the trail system, about safe use of the trail system and their need to be aware of/and respect each other.



The Safe School Initiative has included efforts to promote active transportation in our more challenging season

Collingwood Urban Design Manual

The Town’s Urban Design Manual (2010) has been particularly assistive in integrating active transportation considerations into the Town’s planning and design process and the review of individual development proposals at a variety of scales.



Part of the UDM’s stated general purpose is to ensure that development projects are:

- of high quality,
- pedestrian-oriented,
- interconnected,
- sensitive to the natural and built environment, and,
- provide adequate public facilities and infrastructure.

Specific design considerations to support active transportation at all scales of development (e.g., streets, subdivisions, individual development properties and buildings) are woven throughout the UDM, and are presented more explicitly in sections dealing directly with Active Transportation, Landscaping and Public Space.



Improvements, such as bicycle ramps and stairs, where appropriate, can help to support active transportation users

Collingwood Trails Network Management Guidelines

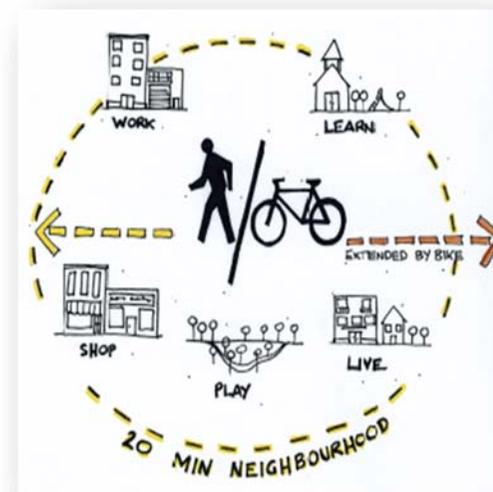
Similarly, the Town’s Trails Network Management Guidelines (2012), has also helped in laying out design, construction, use and operation principles and standards to support and expand the Town’s multi-use trail network.

Purpose and Goals

The purpose of the Active Transportation Framework is to define guiding principles, policies and implementation projects or “elements” that can help to make Active Transportation (AT) in Collingwood a safer, easier, more convenient and desirable transportation choice that is ultimately embraced by a greater number of people than is currently the case. This specific goal in turn fits into the more general community-wide goals of maintaining and improving the quality of life for Collingwood’s residents and visitors and doing so in a manner that supports the Town’s economy, natural heritage and small town character.

To accomplish this goal, the Active Transportation Framework recognizes the need to:

- build on Collingwood’s existing physical and community assets;
- bring a greater degree of focus and coordination to the Town’s efforts;
- address opportunities identified in the 2013 Active Transportation Plan;
- identify and respond to new opportunities as they arise;
- ensure that active transportation is viewed in a comprehensive manner; and,
- ensure appropriate citizen/stakeholder education and engagement



Communities that support active transportation provide easy and comfortable options for people to access their daily needs without the need for a motor vehicle. To achieve this they develop at a scale that is human-oriented, particularly in relation to the length of time it takes a person to travel from one destination to another under their own power. This illustration shows the basic kinds of uses that need to be accessible within 20 minutes walk or bike to support active transportation.

Guiding Principles and Decision-making

Although Active Transportation considerations have been integrated into Town documents and decision-making, the overall approach can be better focused and more thorough. Accordingly, the purpose of this guiding framework is to provide a straight forward list of the key principles for active transportation decision-making and evaluation. The attributes of a good AT system would be more clearly understood, guide decision-making and ensure that opportunities to advance active transportation are identified and realized.

Specifically, these guiding principles would be applied in the following situations:

- Assessment of the existing active transportation network, potential expansions, redevelopments, enhancements and supportive features;
- Development of policies and programs around the use and promotion of active transportation;
- Review of private development proposals such as subdivision plans and site plans;
- Planning and design of transportation and servicing infrastructure projects;
- Development of new public spaces and facilities; and,
- Formulation of neighbourhood and community-wide land use policies.

Guiding Principles

- **Connectivity**
- **Integration**
- **Accessibility**
- **Safety**
- **Affordable and Flexible**
- **Interesting and Enjoyable**
- **People-oriented Design**
- **Communicative**
- **Comprehensive Planning**



Guiding Principles

- **Connectivity**

The ATN needs to offer numerous connections for its full range of current and potential users, with an emphasis on direct linkages between residents and their essential day to day activities. Ideally, there shouldn't be any areas/activities in the community that cannot be accessed by active transportation.

- **Integration**

The design and configuration of the ATN should mediate the different needs of its users where necessary and incorporate appropriate transitions where the ATN interfaces (crosses, coincides or continues) with other modes of transportation, including public transit and automobiles.

- **Accessibility**

The ATN should be accessible to the widest possible range of users, regardless of differences in individual capabilities and socio-economic circumstances. The ATN should also endeavour to provide a core network that is accessible year round regardless of weather conditions.

- **Safety**

The ATN should be designed and operated to avoid, minimize and otherwise manage potential safety concerns for individual users, between different users and with other modes of transportation. Personal safety and security should also be addressed where appropriate using CPTED principles (crime prevention through environmental design).

* cpted principles, such as natural surveillance, natural access control, and natural territorial reinforcement aim to deter criminal behavior , help users to identify safety concerns well in advance and give them sufficient time to respond rather than react.

- **Affordable and Flexible**

Given the limited financial resources and competing demands faced by the municipality, the ATN needs to be designed and operated to be cost

effective while addressing the needs of its users. Where possible, improvements should not preclude or hinder the Town's ability to further develop the ATN and/or respond to future conditions (e.g., demographics, budgeting/fiscal constraints, changing standards, and new technologies).

- **Interesting and Enjoyable**

The ATN should be configured and designed to provide an interesting, enjoyable and desirable experience for its range of users. Thus, 'the journey' needs to be given equal consideration with the destination. ATN routes should incorporate, where possible, direct and indirect connections to natural and heritage features, recreational and tourist amenities and local businesses and institutions.

- **People-oriented Design**

The ATN should be designed and scaled to meet the needs of its users, including supportive infrastructure to assist them with their journeys (e.g., rest stops, bike parking, repair stations, shaded areas, etc.).

- **Communicative**

Appropriate design and signage should help users to understand how to navigate and use the ATN efficiently, safely and cooperatively with other users. Where possible the ATN itself should help with wayfinding and enforcement of proper use.

- **Comprehensive Planning and Design**

Ultimately, active transportation needs to be viewed as a foundational consideration within the larger context of community planning, design, development and infrastructure. At all scales of development active transportation needs to be worked into the existing community and reciprocally the community has to be made more supportive of active transportation.

It is noted that there is a great deal of overlap between these guiding principles and that they need to be considered together as a whole and not viewed in isolation. Similarly, it is recognized that not all guiding principles will be applicable in all situations and that their weight will vary depending on the circumstances involved. For example, redevelopment of a Town road that crosses a major trail might focus more on integration, safety, accessibility and design than a subdivision proposal where connectivity, integration and comprehensive planning would be more prominent considerations.

Additionally, the guiding principles are not intended to replace the existing standards, guiding documents and other practices currently employed throughout Town Departments, but to help ensure a common reference point and broader perspective.

Interdepartmental collaboration and cooperation, especially between Engineering Services, Planning Services and Parks Recreation and Culture is expected and required. The Town's existing Development Review Committee process continues to be the best venue for facilitating and coordinating active transportation review and action.



Implementation

Implementation

As noted previously, Active Transportation has become an integral part of the Town's decision-making culture, including the overall planning and design of the community, the review of development proposals and infrastructure projects, and the day to day operation of community amenities and services.

Accordingly, the intent of this Framework is that improvements and initiatives to support and advance Active Transportation will generally be undertaken:

- using existing departments, committees and stakeholder organizations;
- within the context of existing review and decision making processes; and,
- with specific reference to the guiding principles.

As opportunities arise and priorities and resources are better understood, it is expected that there will be a greater level of specific direction as to how Active Transportation evolves in Collingwood. The recently completed Waterfront Master Plan, the pending Parks Recreation and Culture Master Plan and continued input from the Trails Committee, Accessibility Committee and the public are expected to be helpful in this regard.

Coordination

As with the review of development and infrastructure proposals in general, interdepartmental collaboration and cooperation is expected as a starting point for consideration of all of major Active Transportation initiatives. Where implementation of an initiative would be more appropriately undertaken by a specific department, town committee or community stakeholder, a terms of reference and allocation of responsibility should be clearly detailed and approved. It is most appropriate to have this closely

linked with the Engineering, Planning, and Parks Recreation and Culture Departments to facilitate strong interrelationships and effective work program development. As noted previously, the Town's existing Development Review Committee continues to be the best venue for facilitating and coordinating implementation of the framework.

Public and Stakeholder Involvement

As noted throughout the Active Transportation Framework, public and stakeholder involvement is also intended to be a significant component of implementation helping to provide important information on the needs, wants and challenges faced by active transportation users as well as providing opportunities for education, encouragement and partnering in support of active transportation. Given the wide range of potential initiatives, in terms of scope, scale and understanding of best practice, the exact nature of opportunities for public and stakeholder involvement will be determined on a case by case basis.

The Town's Trail Advisory and Accessibility Committees will also continue to provide an avenue for public input on active transportation issues, given their advisory and supportive role in the development, operation and promotion of the community's off-road, multi-use trail system.

'Elements' from the 2013 Active Transportation Plan

The Implementation section of the 2013 Active Transportation Plan was designed to identify and provide guidance on potential projects or 'Elements' of varying scope, scale, and timeframe that could help to improve active transportation throughout Collingwood. The Active Transportation Framework recognizes that the Elements identified are still useful as examples of potential projects and as a way of stimulating further

thought and discussion. It is acknowledged that the 2013 Elements are not an exhaustive list and that other ideas and documents will likely arise which will also need to be considered.

The 'Elements' are attached as Appendix B.

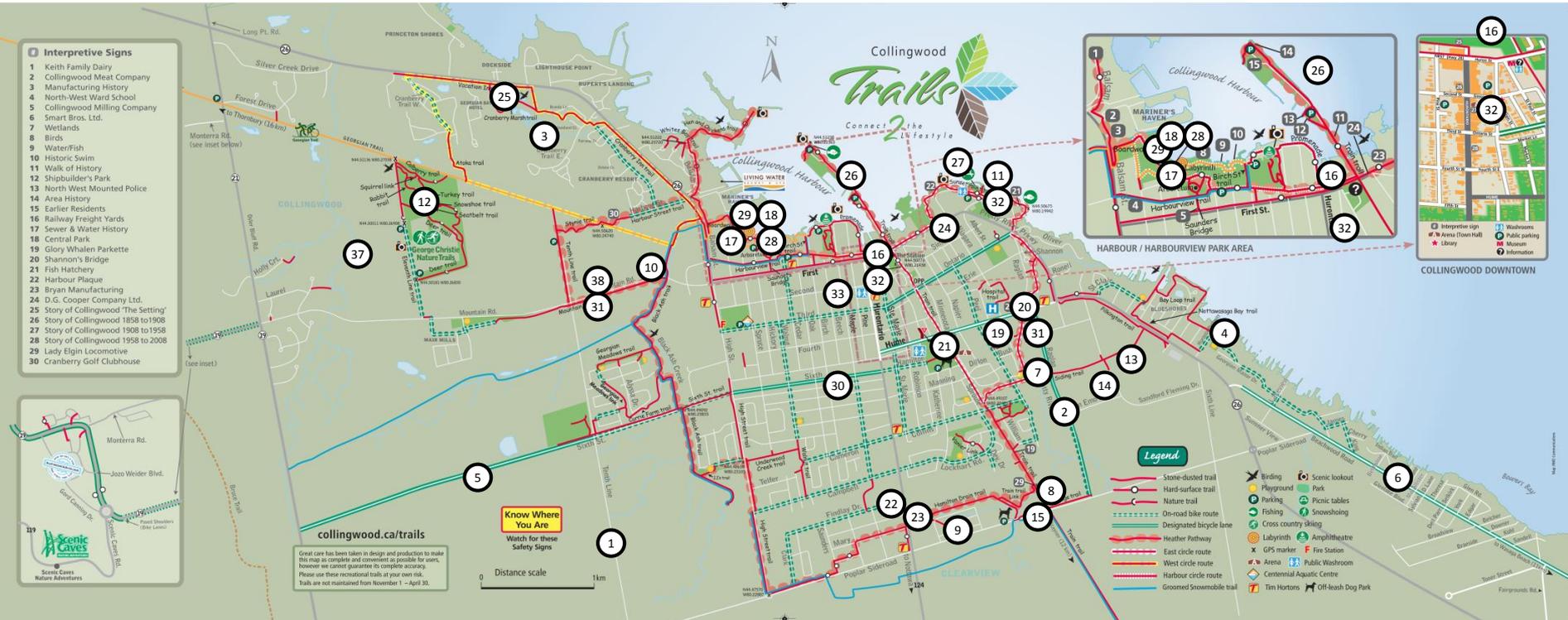


Appendix A to Active Transportation Plan

Infrastructure Improvements

- 1 Bicycle Lane Improvements Tenth Line Upgrade
- 2 Bicycle Lanes with Raglan Street Upgrade
- 3 Cranberry Inn Trail Redesign/Realignment (Wyldeewood Condominium Development)
- 4 Trail Connection Huronia Pathway to Lakeside Point
- 5 Bicycle Lanes on Sixth Street - Tenth Street to Osler Bluff Road
- 6 Bicycle Lanes on Beachwood Road
- 7 Pretty River Trail Bridge (Siding Trail)
- 8 Train Trail Bridge
- 9 Walkway Installation - Pretty River Estates Subdivision
- 10 Realignment/Crossing Improvement Mountain Road and Black Ash Trail
- 11 Pedestrian/Bicycle Trail Separation Sunset Point Park
- 12 Upgrades to George Christie Trails
- 13 Extension of Siding Trail, Including Drainage Improvements

- 14 Trail Connection Sandford Fleming Drive to Macdonald Road
- 15 Trail Connection Train Trail to Poplar Side Road
- 16 Sidewalk/Road Improvements Hurontario Street and Huron Street (Mountainview Town Centre)
- 17 Boardwalk Replacement - Harbourview Park
- 18 Boardwalk Upgrade - Harbourview Park
- 19 Bicycle Lanes and Sidewalk Redesign with Hume Street Upgrade
- 20 Hume Street/River Trail Crossing Improvement
- 21 Hume Street/Train Trail (Minnesota Street) Crossing Improvement
- 22 Trail Connection Maple Street to Findlay Drive (Notre Dame De La Huronie School)
- 23 Trail Hard Surfacing - Hamilton Drain Trail - Hughes Street to Hurontario Street
- 24 Trail Connection and Hard Surfacing Sunset Point Trail to Pretty River Parkway
- 25 Cranberry Marsh Trail/Boardwalk Extension/Connection (Pretty River Academy)
- 26 Trail Connection to Millennium Park



Supportive Infrastructure

- 27 Bicycle Repair Stations (Sunset Point Park and Sidelaunch Brewery)
- 28 Labyrinth
- 29 Boardwalk Benches/Public Art
- 30 Bicycle Racks - various locations
- 31 Supportive Infrastructure - various locations (e.g., bicycle ramps)
- 32 Installation of Water Stations - various locations (e.g. Eddie Bush Arena, Ecopark)
- 33 Public Washrooms (Second St. and Pine St.)

Supportive Policy and Design (only 37 and 38 shown on map)

- 34 Community Based Strategic Plan
- 35 Official Plan Amendment No. 33 (included support for active transportation)
- 36 Parks, Recreation and Culture Master Plan (initiated)
- 37 Blue Mountain Village - Collingwood Link Study (initiated)
- 38 Mountain Road Class Environmental Assessment (initiated)

Education and Enforcement (not shown on map)

- 39 Heather Pathway New Signage
- 40 Installation of New Trail Maps - various locations
- 41 Motorized Vehicles and Trail Usage By-law
- 42 Wayfinding Pilot Project (in partnership with Healthy Kids Challenge program)
- 43 Healthy Kids Challenge - Active Lifestyle Promotion - Activity Passport, Story Walk®, Bike Flags
- 44 Bicycle Friendly Community Status - Bronze Level
- 45 Trail Etiquette Signage - various locations
- 46 Active and Safe Routes to School Initiatives (Healthy Kids Challenge, SMDHU, Environment Network, SCDSB, SMCDSP)
- 47 Healthy Kids Challenge - Centurion Family Bike Event
- 48 Healthy Kids Challenge - Canbike Training
- 59 Bicycle Rodeo Programs (through Simcoe Muskoka District Health Unit and OPP)
- 50 Share the Road Signage - various locations
- 51 Bike Safety Video Initiatives - Collingwood Cycling Club

(Appendix B to Active Transportation Framework – Potential Active Transportation ‘Elements’) (Modified from the 2013 Active Transportation Plan)

As noted, the 2013 Active Transportation ‘Elements’ are intended to serve as useful as examples of potential projects and as a way of stimulating further thought and discussion. The ‘Elements’ are not exhaustive list and other ideas and documents will likely arise which will become part of future discussions on how to improve Active Transportation throughout the Town. In this regard the recently completed Waterfront Master Plan and the recently initiated Parks, Recreation and Culture Master Plan may help to provide guidance and direction.

These Elements often mean different implementation methods and actions. Some of the elements for example, would directly result in physical improvements to the active transportation network while others would be more process-oriented, helping to support design and analysis for longer term projects or to simply foster greater public awareness, involvement and use of active transportation.

It is noted that the Elements were originally grouped generally by timeframes, reflecting the length of time for completion, when execution would be most appropriate functionally and its importance and impact.

While the ‘Elements’ still inherently reflect these concerns, they have now been grouped more functionally to stress that they are examples and not a workplan. Additionally, the list has been updated to reflect the completion of a number of ‘elements’ and to include new ideas and priorities that have emerged over the past several years.

Accordingly, the following specific projects are acknowledged as having been completed.

- Beachwood Road Improvements (2014)
- Hume Street Redesign (2015-2016)
- Sunset Point and St. Lawrence Street Corridor (2014)
- Bridge Link and Trail Extension at the Siding Trail (2015)
- Bridge Link and Trail Extension at the Train Trail (2015)

Modifications to the elements, and new ‘elements’, have also been identified and added as appropriate, based on public/stakeholder input received over the past year:

- Amending of the Town’s Official Plan to more formally address active transportation;
- Revisions to the Town’s Trails Schedule (Schedule D-1) to identify the various existing and needed linkages for the active transportation network;
- An Active Transportation Network prioritization exercise to identify core networks for different user groups, areas of overlap;
- Specific active transportation network improvements that have now been identified as essential for safety and connectivity (e.g., Highway 26/Black Ash Creek crossing);
- Silver Level Bicycle Friendly Community Status;
- Winter Assessment; and,
- Prioritization of AT Network Improvements.

1. Concurrency Review

Supportive Land Use Planning and Design

Challenge

As with all municipalities, the Town of Collingwood is faced with managing many different policies, regulations and processes and responding to a constantly changing environment. The different perspectives and mandates of Town Departments, as well as ongoing changes to Collingwood's social, economic and built environment all present challenges to the effective implementation of active transportation initiatives.

A municipality cannot effectively manage its own implementation programs, nor give appropriate direction to possible partners and other stakeholders, if their policies and/or regulations are conflictive or are not current and integrated. Establishing concurrency between these guiding documents and processes is necessary to facilitate effective implementation of the elements presented herein, and other projects that may result from the evolution of the Active Transportation Framework.

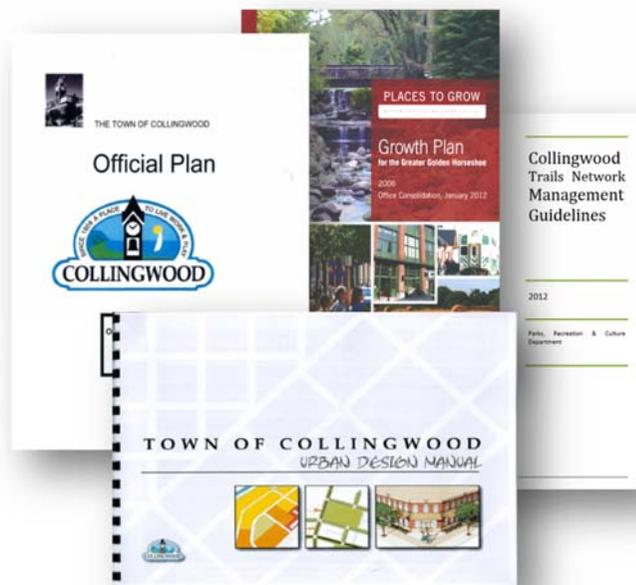
Action

A concurrency review exercise is necessary to ensure that the parts of this complex system are complementary and supportive of each other.

To implement this element, policy and design documents and review processes need to be examined and amended where appropriate, by the relevant Town Departments, including Engineering Services, Parks, Recreation and Culture and Planning Services, Fire and Emergency Services, By-law Enforcement, Finance, etc. A public consultation component at some point during the process may be appropriate to assist with resolving conflicts or areas of uncertainty.

The end result of this kind of review would be updated and mutually supportive regulations and work programs relating to active transportation.

In addition, Planning Services staff note that Provincial and Simcoe County Planning policy documents identify direction to lower tier municipalities regarding Active Transportation. The concurrency review will also need to include an examination of Town documents (primarily the Official Plan) to ensure that this policy direction has been fully incorporated where necessary.



2. Network Prioritization

Challenge

Collingwood's Active Transportation Network consists of a variety of components: sidewalks and trails of varying characteristics as well as a hierarchy of road types, some of which currently incorporate specific active transportation features such as on-street bicycle lanes. The effectiveness of this network in addressing the needs of various existing and potential users groups is not as well understood as perhaps should be the case. Prioritizing initiatives, including the elements contained in this document, is problematic without data.



Action

A comprehensive data collection and review exercise should be undertaken to better understand the active transportation network. Specific matters to be considered could include:

- the different users/groups of the active transportation network, including their demographic characteristics;
- why and how often do they use the system;
- what components/features of the system do they use;
- what locations are involved in their journeys;
- what challenges do users face; and,
- what is the nature of the existing network and where are there gaps and limitations to users.

Efforts could then be directed to prioritizing where and in what form improvements could be made. Such an exercise would provide an additional means of considering the appropriateness and timing for the various elements listed in this document or in assessing new development and infrastructure proposals or initiatives arising from the Waterfront Master Plan and/or the pending Parks Recreation and Culture Master Plan.

3. Complete Streets Design Matrix

Supportive Land Use Planning and Design

Challenge

In recent decades the design parameters of the roads constructed throughout North America have relied too heavily on level-of-service (LOS) and increasing vehicle traffic speeds, thereby skewing their use more and more toward a single mode of transportation. This has also negatively impacted adjacent land-use and values, and the overall safety for active transportation users. In fact, “People who choose active transport modes face an increased risk of injury from collisions, relative to motor vehicle users”.¹

By not focusing on safety for pedestrians and cyclists in the design of transportation systems over the past few decades, has resulted in dangerous road networks throughout communities for active transportation users. This did not just happen; streets have been designed, built, and maintained in ways that favour vehicle movements over the needs of pedestrians and cyclists.

*However, there is encouraging evidence that injury and fatality rates decrease as active transportation mode shares increase, and effect that has been dubbed “safety in numbers”. The Safety in numbers effect is complicated by the fact that in areas higher active transportation mode share, transportation infrastructure is often designed with the safety of pedestrians and cyclists in mind.*²

One of the effects of not designing “complete streets” is increased risk to people that use non-motorized transportation, the National Collaborating Center for Environmental Health cautions: “to minimize the risk of injury, it is

¹ National Collaborating Centre for Environmental Health, *Active Transportation in Urban Areas: Exploring Health Benefits and Risks*, 2010

² National Collaborating Centre for Environmental Health, *Active Transportation in Urban Areas: Exploring Health Benefits and Risks*, 2010, pg. 3

important that urban transportation infrastructure be carefully designed for active modes”.³

Just as with designing for moving vehicles, designing for people requires close attention to how people move and use spaces and the specific dimensions of people using these facilities: for example people walking side-by-side, or parents pushing a stroller, or persons traveling in wheelchairs.



Our built environment is the result of many series of design ideas and construction projects. By paying specific attention to the needs of pedestrians, and cyclists, we can create towns and cities that are more livable. It is important to note that the capacity of streets to move vehicles is not exclusively dependent on the number of lanes as one may expect. In fact, having a greater number of lanes on a street can often reduce its capacity and function

³ National Collaborating Centre for Environmental Health, *Active Transportation in Urban Areas: Exploring Health Benefits and Risks*, 2010, pg. 5

Streets can be designed to move cars efficiently without sacrificing the ability of people to walk or bike along them; it just means different choices be made when designing and building streets. Also the specific characteristics of streets are different and should be included in their designs, for example: intended use, setting, traffic volumes, and intended speeds. In the Congress for New Urbanism's 2012, *Sustainable Street Network Principles*, they define the following as a principle for road design:

*All people should be able to travel within their community in a safe, dignified and efficient manner. A sustainable street network makes that possible and ensures a choice of transportation modes and routes. People can walk, bicycle, take transit, or use a vehicle. Each mode is integrated, as appropriate, within each street*⁴.

In its introduction the Institute of Transportation Engineers' *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* (2010) states that it:

*provides guidance for the design of walkable urban thoroughfares in places that currently support the mode of walking and in places where the community desires to provide a more walkable thoroughfare, and the context to support them in the future.*⁵

This should be referenced as a significant source of design guidance for the local streets that are more centrally located with greater diversity and urban mix of uses, such as the primary retail/commercial corridors.

The first recommendations defined in both the *Pedestrian Death Review*⁶ and *Cycling Death Review* from the Office of the Chief Coroner of Ontario is focused on developing complete streets:

A 'complete streets' approach should be adopted to guide the redevelopment of existing communities and the creation of new communities throughout Ontario. Such an approach would require that and (re-

⁴ Congress for New Urbanism, *Sustainable Street Network Principles*, 2012, page 14

⁵ Institute of Transportation Engineers, *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, 2010, pg. 3

⁶ Office of the Chief Coroner for Ontario, *Pedestrian Death Review*, September 2012

*development give consideration to enhancing safety for all road users, and should include: - Creation of cycling networks (incorporating strategies such as connected cycling lanes, separated bike lanes, bike paths and other models appropriate to the community.) – Designation of community safety zones in residential areas, with reduced posted maximum speeds and increased fines for speeding.*⁷

The American Association of State Highway and Transportation Officials describe this in *Policy On Geometric Design of Highways and Streets*:

*Emphasis has been placed on the joint use of transportation corridors by pedestrians, cyclists, and public transit vehicles. Designers should recognize the implications of this sharing of transportation corridors and are encouraged to consider not only vehicular movement, but also movement of people, distribution of goods, and provision of essential services. A more comprehensive transportation program is thereby emphasized. Cost-effective design is also emphasized. The traditional procedure of comparing highway-user benefits with costs has been expanded to reflect the needs of non-users and the environment.*⁸

AASHTO also clearly defines the need to address pedestrian needs in all street designs:

Pedestrians are a part of every roadway environment, and attention should be paid to their presence in rural as well as urban areas... Because of the demands of vehicular traffic in congested urban areas, it is often very difficult to make adequate provisions for pedestrians. Yet provisions should be made, because pedestrians are the lifeblood of our urban areas, especially in the downtown and other retail areas. In general the most successful shopping

⁷ Office of the Chief Coroner for Ontario, *Cycling Death Review*, June 2012, pg. 20

⁸ American Association of State Highway and Transportation Officials, *Policy On Geometric Design of Highways and Streets*, 2001, pg. xlii

sections are those that provide the most comfort and pleasure for pedestrians.⁹

The Toronto Centre for Active Transportation's describes the benefits of complete street design strategies:

The implementation of Complete Streets results not only in improved conditions for cyclists, pedestrians, seniors, and children but also supports vibrant, healthy communities. Evidence shows that Complete Streets:

- Provide better and more transportation options
- Improve safety for cyclists and pedestrians
- Reduce traffic congestion
- Reduce greenhouse gas emissions
- Create more walkable, therefore, livable communities
- Stimulate economic growth with increased shopping activity, sales, and property values.¹⁰

The Simcoe Muskoka District Health Unit's 2009 *Road Safety Report* describes the health benefits of how we design for active transportation:

The way our communities are designed is a contributing factor to injuries and deaths from motor vehicle-pedestrian collisions and motor vehicle-cyclist collisions. Road design (sidewalks, roads, bike paths, etc.) and the types of features it contains (speed bumps, crosswalks, streetscape, etc.) affects how often, how far and how fast we drive, traffic volume, and our choice of transportation mode. Decreasing the amount of time we spend in a car can lessen our risk of being involved in a MVC. Designing communities that are less sprawled (leading to fewer vehicle trips) and providing for safer street environments that protect pedestrians and cyclists, can reduce or prevent road-related injuries and fatalities.

⁹ American Association of State Highway and Transportation Officials, *Policy On Geometric Design of Highways and Streets*, 2001, pg. 96

¹⁰ Toronto Centre for Active Transportation, *Complete Streets by Design*, 2012, pg. 5

As part of developing complete streets it is important to identify the appropriate target speed for the design because it makes them safer. Designing using target speed means that the street is designed for the speed one intends for drivers to go, rather than operating speed (the speed at which drivers are going): Target Speed = Design Speed = Posted Speed.¹¹



The World Health Organization, World Report on Road Traffic Injury Prevention (2004, pg. 78) states "Speed has been identified as a key risk factor in road traffic injuries, influencing both the risk of a road crash as well as the severity of the injuries that result from crashes". This is why it is particularly important to focus on appropriate target speeds in road designs. The image above shows a complete street within an urban context. The appropriate design speeds and infrastructure for different modes of transportation make this designated State Truck Route function well for all modes of transportation. (Photo by Dan Burden, WALC Institute)

Appropriately designed streets do not have to rely on enforcement to address issues of speeding motor vehicles, as their characteristics inherently encourage appropriate speeds. It is obvious that collision severity is reduced with speed reductions. However, street safety is more importantly improved by reduced motor vehicle speeds, which allow for increased response times and reduced stopping distances, which in turn improve collision avoidance all

¹¹ NACTO, *Urban Street Design Guide*, October 2012, pg 27

together. The table below highlights the relationship between speed and collisions¹²:

Speed vs. Collisions	
Speed Drop	Collision Drop
1 mph (1.6 kph)	5%
3 mph (4.8 kph)	15%
6 mph (9.7 kph)	42%

As such, the challenge for this Element requires the Town to develop a decision making matrix, and associated process, for (re)developing roads within Collingwood that is complete streets focused. This approach will ensure that all modes of transportation are addressed in the design/development process.

¹² Michael King, Nelson\Nygaard Associates, "Designing Complete Streets" presentation, May 29, 2007

Action

The development of the matrix would of necessity be a multi-disciplinary process with representatives from, Engineering, Parks, Recreation & Culture, Planning, Public Works, Fire, and Police Departments; as well as, citizen representatives.

The matrix should include specific sections for each type of transportation mode, as well as public participation and stakeholder involvement. The development of the matrix and use of it in the future should be an interdisciplinary team approach that includes Engineers, Planners, Landscape Architects, Active Transportation experts, and others determined to be potentially insightful and helpful.

Of particular importance is that the matrix integrate the use of "target speeds" as a primary parameter of street designs. Target speed is the speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multimodal activity generated by adjacent land uses, and to provide both mobility for motor vehicles and a safe environment for pedestrians and bicyclists. The design speed (no more than 5 mph over the target speed) should be designed to those geometric design elements where speed is critical for safe vehicle operation. The target speed is based on the street type and context including neighbouring land uses.¹³

Contextual measurements/assessments criteria would also be important in this work (which should also take into account the intended future of the area as described in the Official Plan), because:

Understanding the land use context provides guidance on who will need to use the road and how. This understanding influences the geometric design of the roadway and the types of amenities required in the right-of-way... Land use context and roadway type comprise the organizing framework for the selection of appropriate roadway design values. A context area is a land area comprising a unique combination of different land uses, architectural types, urban form, building

¹³ Knoxville Regional Transportation Planning Organization, *Complete Streets Design Guidelines*, 2009, pg. 10

*density, roadways, and topography and other natural features”.*¹⁴

The basic complete streets design approach from which the matrix should be developed is outlined in the following categories that will all be addressed:

- Safe:
 - for people first
 - real and perceived
- Reliable:
 - well designed
 - appropriate infrastructure for all transportation modes
 - integrated modes of transportation
- Effective:
 - for all transportation modes
 - for needs of citizens and businesses
 - interconnected
 - efficient
- Human-centred:
 - addresses peoples’ needs
 - age appropriate transportation options
 - easily understood
 - aesthetically designed
- Context Sensitive:
 - land use supportive
 - land value enhancing
 - target speed appropriate
- Accessible:
 - diversity of transportation modes facilitated
 - affordable
 - “8/80” accessibility

¹⁴ Pennsylvania and New Jersey Departments of Transportation, *Smart Transportation Guidebook*, March 2008, pg 23

4. Trails for Active Transportation

Supportive Land Use Planning and Design

Challenge

Some of the routes that are part of Collingwood's traditional trail network are appropriate as enhanced active transportation links because they provide direct connections between residents and their day to day activities. However, the development and management of the trail system has been focused on recreation use for the most part, as opposed to active transportation parameters.

When describing this difference, the report created for Collingwood by Walk and Bike for Life notes:

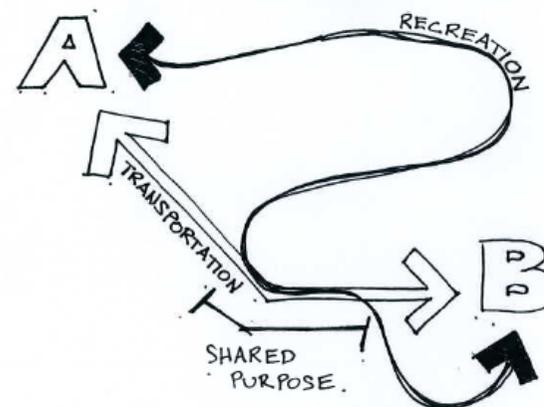
It is important to note the different needs of different users of trails. Recreational users enjoy the very curvy, winding paths of trails that are often outside of the urbanized areas of the city and allow them to experience the natural beauty and green spaces of a city. In terms of transportation, the most effective and well-used bike and pedestrian paths into urbanized areas do not meander around the city, but are straight corridors between places of origin and destination.

*Those that use active forms of transport want to get to their destination in the most efficient manner possible and need corridors that go North-South, East-West in a grid system for efficient transportation.*¹⁵

The chart on page 10 from the ASSHTO *Guide for the Development of Bicycle Facilities*¹⁶ outlines some of the differences in characteristics between recreational trips and utilitarian trips:

A few key routes have been identified as having the greatest need and potential as shared purpose trails. These are illustrated in the map on page

11. To ensure that these key shared purpose routes function as part of the



Users of trails for recreation and active transportation purposes have different needs; and trail systems are developed with these in mind. However, some portions of the trails network may work well for both kinds of users (as illustrated above). When this is the case, these need to be designed, built, and managed for this dual purpose.

active transportation network the Town should address their design, construction, and management accordingly; with work programs executed to make necessary changes.

¹⁵ Walk and Bike for Life, *Trail for Active Transportation*, 2009 pg. 10

¹⁶ ASSHTO, *Guide for the Development of Bicycle Facilities*, 2012, pg. 2-4

Characteristic	Recreational Trips	Utilitarian Trips
Directness	Directness of route not as important as visual interest, shade, protection from wind.	Directness of route & connected, continuous facilities more important than visual interest.
Connectivity	Loop trips may be preferred to backtracking; start and end points are often the same.	Trips generally travel from residential to schools, shopping, or work areas and back.
Distance	Trips may range from under a mile to over 50 miles.	Trips generally are 1-10 miles in length.
Parking	Short-term bicycle parking is needed at recreational sites, parks, trailheads, and other recreational activity centres.	Short-term & long -terms bicycle parking is needed.
Topography	Varied topography may be desired.	Flat topography is desired.
Riders	(individuals) May be riding in a group.	(Individuals) Often ride alone.
Destinations	(Individuals) May drive with their bicycles to the starting point of a ride.	Use bicycle as primary transportation mode; may transfer to public transportation; may not have access to a car for trip.
Time	Typically occur on the weekend or on weekdays before morning commute hours or after evening commute hours.	Bicycle commute trips may occur at any hour of the day.

Action

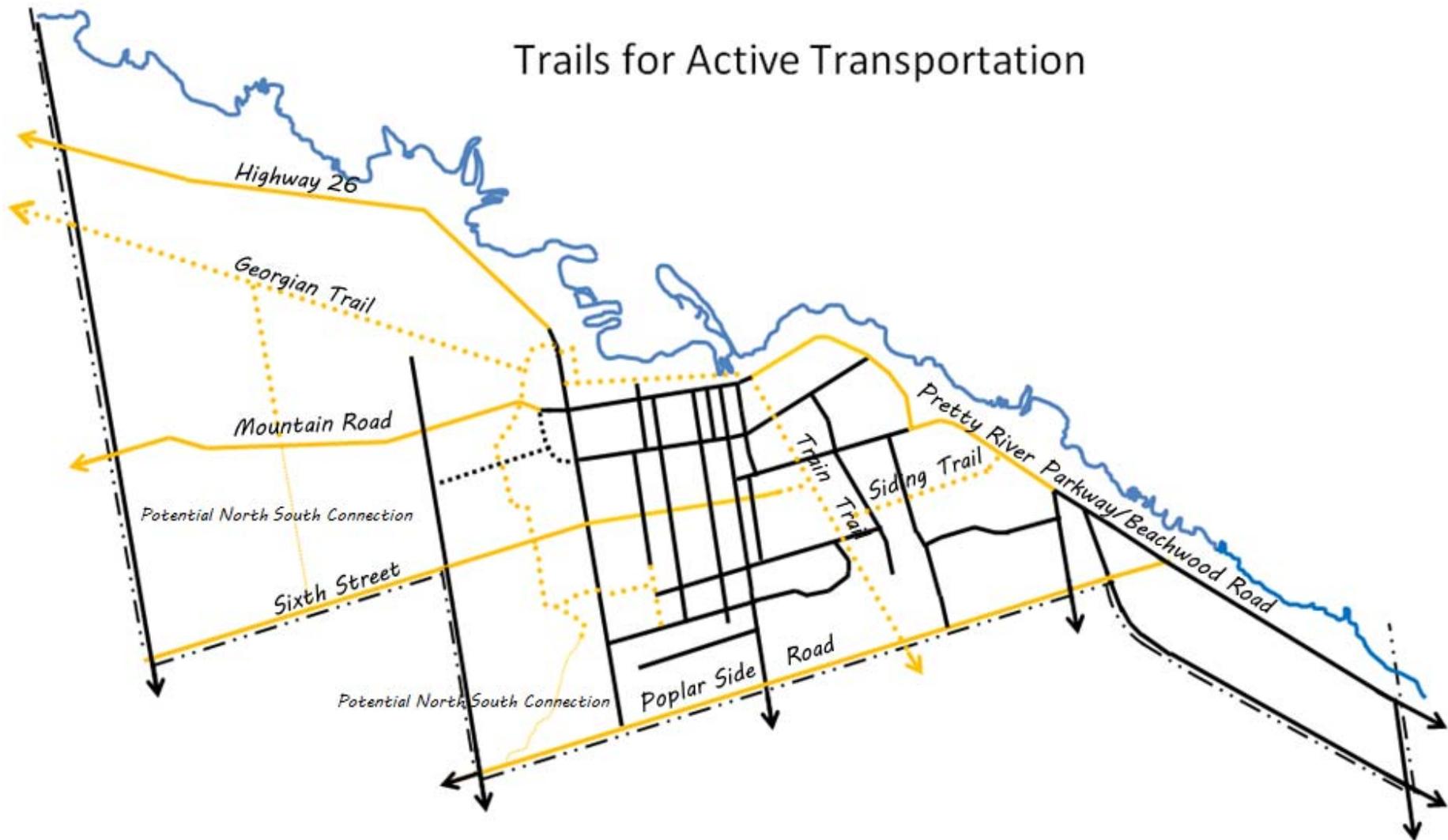
To ensure that they can function as active transportation routes the identified trails (as well as their various street crossings) should be reviewed and improved/maintained as needed (including design; construction of improvements; seasonal maintenance; and, signage). The map on page 11 illustrates a number of crossings and transitions where improvements would appear to be required. Those crossings that correspond with the trail sections identified for this Element need to be improved with facilities, signage, and markings which would make them function better and improve pedestrian/cyclist safety. Potential major crossings/transitions for consideration could include:

- 1 - Black Ash Creek at Highway 26 West (Balsam Street),
- 11 - Black Ash Creek @ 6th Street,
- 10 - High Street @ Chamberlain/Underwood Trail; and,
- 12 – Black Ash Creek @ Mountain Road.



The Black Ash Creek Trail Crossing at Sixth Street is a location that is in need of physical improvements to make it more active transportation friendly and functional.

Trails for Active Transportation



This map illustrates corridors along which the Collingwood Trails Network could be adapted to support both recreational and active transportation uses. These include existing trails, as well as those that may be built along these corridors as future additions.

Developing the appropriate actions for the analysis, design, implementation, and maintenance will primarily involve the Parks Recreation & Culture and Engineering Departments, and the Trails Committee.

The anticipated end result will be that physical changes be made to these specific areas and the funding for their maintenance shift from the Trails Committee budget to that of Public Works (as they will become part of the Town's transportation system, not the recreation system). The Town's budget will be expected to take into account this shift in quality and use of these trails. The extent of physical improvements and seasonal access, are both important considerations of this work; as well as, the phasing of improvements.

The *Collingwood Trails Network Management Strategy, 2012*, developed by the Town of Collingwood Parks, Recreation and Culture Department, should be used as a key resource for informing analysis and design of trail sections and crossings being adapted through this Element.

This Element will have to be closely managed with the considerations outlined with the Major Corridor Gateways - Complete Streets Element described earlier, because they have a given amount of overlap.



This map illustrates potential trail/road crossing locations which could be improved for functionality and safety. Starred locations represent recent improvements.

5. Family Bike Boulevards

Challenge

The initial phase of the development of the bike route network in Collingwood is the delineation of the routes as described in the On-Street Bike Route Element (page 29). This Element is the next phase of making cycling enjoyable, efficient, and practical.

Throughout much of the research and literature on cycling and active transportation, cyclists are often identified by their level of comfort in cycling in traffic (see also page 15). This helps identify the kinds of facilities needed, and what can be expected, when developing a community wide network for active transportation. The *Ontario Bike Plan*¹⁷ describes these categories:

- *The Strong and the Fearless* - perhaps 1% of the population who will ride regardless of the condition of roadways.
- *The Enthused and the Confident* - 5 to 10% of the population who are cycling now attracted by improvements made to bikeway networks in their communities. They may be comfortable sharing the road with motorists, but appreciate bike lanes and other facilities designed specifically for them. And they may choose to cycle more often as further improvements are made.
- *The Interested but Concerned* - perhaps 60% of the population. They may like riding a bicycle based on good experiences in their youth or a ride they took in the summer, but are afraid to ride a bicycle regularly but they would ride if they felt the roadways were safer and traffic traveled slower.
- *No Way No How* - Some one third of the population is not interested in or capable of cycling at all.

The greatest number of cyclists can be identified as “interested but concerned” (62% of bike riders are not comfortable in traffic). These cyclists prefer low-volume low-speed and prefer physical separation from cars, off street, or on neighbourhood streets, as they are not comfortable riding in traffic. For this reason the ATP includes a number of specific routes to be improved as Family Bike Boulevards (see map on page 16).¹⁸

An active transportation network has to be designed, developed and maintained to function well for the many different kinds of people in a community. This includes the young, and people that may not be as comfortable or proficient at cycling for example.

To make active transportation more practical for families, in terms of the bicycle routes there needs to be a dedicated set of streets that achieve the following:

- 1) Provide routes whose design features are enhanced for safety so that they appeal to families, elderly, and less proficient cyclists (primarily focusing on residential areas where practical);
- 2) Provide aesthetic enhancements and street trees along their entire lengths to improve user comfort and the appeal of the routes;
- 3) Connect with the rest of the bike routes;
- 4) Prioritize the movement of cyclists over cars with traffic calming and road diet features that create a lower target speed that is geared to the requirements of cyclists; and,
- 5) Has enhanced wayfinding signage.

¹⁷ Cycle Ontario Alliance, *Ontario Bike Plan*, February 2008, pg. 5

¹⁸ Adapted from: Walk and Bike for Life, *Trails for Active Transportation*, 2009, pg. 38

The Moving People subsection Places to Grow, states:

*Municipalities will ensure that pedestrian and bicycle networks are integrated into transportation planning to: a) provide safe, comfortable travel for pedestrians and bicyclists within existing communities and new development b) provide linkages between intensification areas, adjacent neighbourhoods, and transit stations, including dedicated lane space for bicyclists on the major street network where feasible.*¹⁹

One way to address this is to provide a bike boulevard network. A Bike boulevard is “a street segment, or series of contiguous street segments, that has been modified to accommodate through bicycle traffic and minimize through motor traffic”²⁰ The challenge with this Element is creating a bike boulevard network that is part of the hierarchy of cycling oriented active transportation routes. Note that the implementation of the design features for each of these Elements should be significantly influenced by the *Ontario Traffic Manual Book 18: Bicycle Facilities* which will be released in 2013; described by the Ontario Traffic Council:

*The OTM Book 18 will be the primary reference document used by engineers, planners and designers throughout Ontario. It will contain information on legal requirements, standards, best practices, procedures, guidelines and recommendations for the justification, planning, design, timing and operation of bicycle facilities and control measures.*²¹

¹⁹ Province of Ontario, *Growth Plan for the Greater Golden Horseshoe*, 2006, pg. 25

²⁰ ASSHTO, *Guide for the Development of Bicycle Facilities*, 2012, pg. 1-2

²¹ Ontario Traffic Council, *OTM Book 18: Bicycle Design Guidelines*, Ottawa Bike Summit 2012 presentation, page 4

Action

There are four corridors within Collingwood that have been identified as potentially being part of this enhanced family bikeway network (see map on page 16). These connect to the downtown, a number of parks, trails and other major routes within Collingwood.

These bikeways are envisioned as streets with specific enhancements that make cycling along them particularly safe and comfortable for those people that are less inclined to ride on busy streets with vehicular traffic; such as young children. They will be created through the introduction of a number of traffic calming features, landscaping, and public art, for example:

- Travel lanes will be strategically narrowed at (through the use of curb extensions)
- Shy space around features such as refuge islands will be enhanced with wide drain gutters and/or wide striping to reduce vehicular speeds
- Street trees will be planted to provide sun health and calm vehicular traffic;
- Travel for bicycle and calmed vehicular travel will be prioritized along the corridors;
- Bikeway markings will be painted on the street;
- Signage designating the bikeway will be positioned along the route;
- Key intersections will incorporate public art into the signage to act as wayfinding and identification markers for the family bikeway²².

²² Intersection of Ontario Street and Ridgeway bike routes in Vancouver, British Columbia

Traffic calming should be an integral component of the design of these routes. The principles under which traffic calming functions, can be defined by the following four points²³:

- Vehicle Speed:
 - Significant determinant of crash severity
 - Critical factor where modes conflict
 - Appropriate with respect to context
- Pedestrian/cyclist Exposure to Risk:
 - Reduce time in vehicle travel lanes
 - Physical and visual cues to increase legibility for users
 - Human-centred design focus
- Driver Predictability:
 - Need for vehicle use to be predictable
- Effective 24hrs a Day:
 - Self-evident function and use
 - Self-enforcing through physical characteristics

This Element should be completed by a multi-disciplinary team with a community engagement component, and should include test projects with low-cost and temporary measures to test the design solutions. A monitoring and assessment strategy should be developed to coincide with these test projects.

These images show examples of features that should be considered for the Family Bike Boulevards, integrated into bike routes in Vancouver, British Columbia. Pictured here are curb extensions, mini-roundabout, public art, road markings, and street trees.

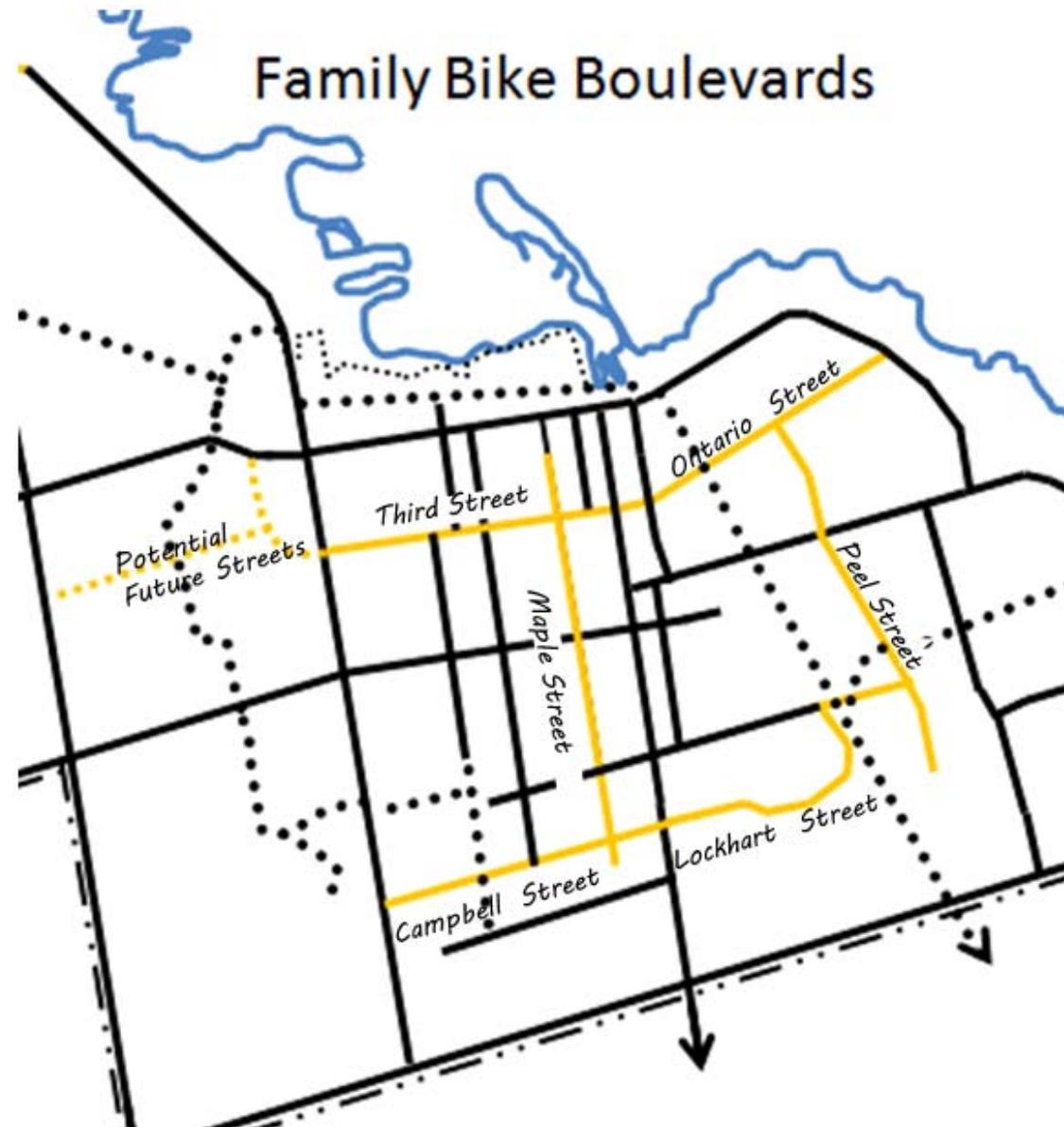
Source: Google



²³ Michael King, Nelson\Nygaard Associates, "Designing Complete Streets" presentation, May 29, 2007

Characteristics	EXPERIENCES/CONFIDENT RIDERS	CASUAL/LESS CONFIDENT RIDERS
Comfort	Most are comfortable riding with vehicles on streets, and are able to navigate streets like a motor vehicle, including using the full width of a narrow travel lane when appropriate and using left-turn lanes.	Prefer shared use paths, bicycle boulevards, or bike lanes along low-volume, low-speed streets.
Traffic	While comfortable on most streets, some prefer on-street bike lanes, paved shoulders, or shared use paths when available.	May have difficulty gauging traffic and may be unfamiliar with rules of the road as they pertain to bicyclists; may walk bike across intersections.
Directness	Prefer a more direct route.	May use less direct route to avoid arterials with heavy traffic volumes.
Sidewalks	Avoid riding on sidewalks. Ride with the flow of traffic on streets.	If no on-street facility is available, may ride on sidewalks.
Speed	May ride at speeds up to 40 km/h on level grades, up to 72 km/h on steep descents.	May ride at speeds around 13 km/h to 20 km/h.
Distance	May cycle longer distances.	Cycle shorter distances: 1 to 8 km is a typical trip distance.

The facilities developed in the community need to address the specific needs of a broad range of people, when it comes to active transportation. Not every walker, or cyclist is the same. The ASSHTO Guide to the Development of Bicycle Facilities has a chart that explains the differences between people's level of skill and comfort when cycling. There are similarities in the ranges of differences, and things that need to be considered when planning, designing,



This map illustrates a number of routes envisioned for Family Bike Boulevards. The suitability of these particular roads, and the implementation of this element, requires a special consideration of design safety, comfort and convenience.

6. Winter Assessment

Challenge

Collingwood is very much a winter community and many of its residents and visitors continue to make use of the active transportation system throughout the winter months. Collingwood provides winter maintenance to its sidewalk system and a limited number of paved sections of trails (which provide important connections for the sidewalk system), but the majority of the trail system remains accessible only to recreational enthusiasts using skis, snowshoes or snowmobiles. Similarly, on-street bicycle lanes appear to be an overlooked component of the Town's transportation system which should be given greater consideration.



Collingwood's sidewalk system which receives winter maintenance (ploughing, sanding, salting, etc.) as required, is focused on the downtown and older parts of the community and leaves important parts of the trail system and newer subdivisions unconnected.

Action

Collingwood's active transportation network should be examined from the perspective of winter use. What users groups are currently using the network, what groups could be encouraged to use it and what needs to be done to support existing and potential users. Identification of a core Active Transportation Network with supportive facilities, enhanced maintenance operations and promotional initiatives could help to increase users.



Identification of a winter active transportation network should include consideration of routes for bicycles – especially given recent trends with 'fat bikes' and the broader issue of equity (where bicycles may be one of a limited number of transportation choices available to some residents).

(Source: Doug Burlock Photography)

7. Walkability/Bikeability Audits

Supportive Land Use Planning and Design

Challenge

The need to effectively review walking conditions to encourage travel on foot intrinsically requires a systematic method for assessing pedestrian environments. Alongside this recognition, the importance of particular aspects of the public realm such as public spaces and interchange spaces are considered to be of key importance in the optimization of walking environments²⁴.

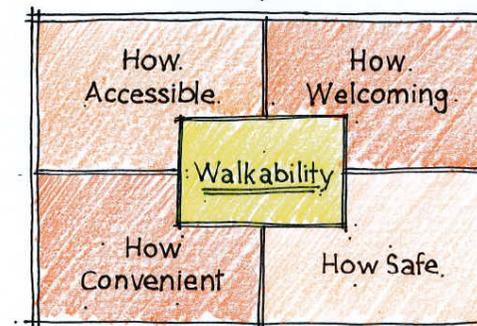
The above was said in terms of the PERS (Pedestrian Environment Review System) which looks at a variety of parameters, including: moving in the space; interpreting the space; personal safety; feeling comfortable; sense of place; opportunity for activity; quality of the environment; and maintenance. The County's Transportation Master Plan states:

Walking and cycling infrastructure should be designed in such a way as to connect to the existing trails network, provide access to local commercial areas, encourage increased walking and cycling for local short trips, and provide safe walking and cycling routes to neighbourhood schools and community centres.²⁵

The most effective method of analyzing the built environment when designing for new developments is through first-hand, on-the-ground experience. This provides insights into the physical features and uses of the area that are not able to be assessed otherwise. Additionally, the people most familiar with an area, the local citizens, are often more acutely aware of design issues because of their familiarity with the environment.

Therefore, this Element outlines how the Town, with local stakeholders, will conduct walking and biking audits of the entire town within three years. These will be conducted to:

- 1) Develop and understanding of the current (baseline) condition of the community in terms of active transportation;
- 2) Identify issues that need to be addressed to improve active transportation within the community; and,
- 3) Build local capacity by informing and educating local citizens about active transportation and road design.



Walkability (and bikeability) is determined by looking at the features and characteristics of the environment and how people use it. There are four basic categories that this information falls into as illustrated above. Assessments of these categories and features are part of walkability/bikeability audits.

²⁴ David Allen, Transport researcher, TRL Ltd, *Auditing Public Spaces and Interchange Spaces*, presented at Walk21 the 6th International Conference on Walking in the 21st Century, September 2005

²⁵ Simcoe County, *County of Simcoe Transportation Master Plan*, 2008, pg. 5-2



Walkability/bikeability audits will help identify how well the community fits the “8/80” rule; which indicates the town’s overall safety/comfort for pedestrians and cyclists (Photo by Sarah Bowman, WALC Institute).

As described by Walk and Bike for Life’s *Trails for Active Transportation: Town of Collingwood report* (2009, pg 44) the 8/80 rule is:

“Step 1: Think of a child that you love and care for who is approximately 8 years of age. This could be a child, grandchild, sister, brother, cousin, et cetera.

Step 2: Think of an older adult, approximately 80 years of age who you love and care for. this could be a parent, grandparent, friend, et cetera.

Step 3: Ask yourself: would you send that 8 year old along with the 80 year old on a walk, or a bike ride on that infrastructure? If you would, then it is safe enough, if you would not, then it is not safe enough.”

Action

Walkability audits should consider the full range of factors that affect walkability in a community or neighbourhood, specifically: directness; continuity; street crossings; visual interest and amenities; and, security. A single methodology shall be used throughout the auditing process. However, amendments can be made if determined to be appropriately addressing a shortfall or concern resulting from experience with previous audits. This approach would help increase awareness and help develop the priorities of the community in terms of future active transportation initiatives.

The Institute of Transportation Engineers’ *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* (2010) describes the “Continuum of Walkability” as falling into a range which includes: Pedestrian Places; Pedestrian Supportive; Pedestrian Tolerant; and Pedestrian Intolerant.²⁶ The walkability audit process is designed to help the community identify and categorize its corridors, neighbourhoods, places, and districts within this continuum with specifically identified characteristics. This information is useful during the preparation of a list of implementation actions.

This process would be conducted with the input of stakeholders in the associated area with facilitation by Town staff and external agencies/consultants as necessary (e.g., potentially Parks, Recreation and Culture, Economic Development or the Health Unit. The purpose of this is to inform future necessary initiatives, programs, or improvements that could be added to the near-range and 100 projects sections of the ATP. These audits should be conducted in daytime hours as well as after dark to identify concerns for personal security; which will better facilitate targeting of improvements. These should also include assessments by persons with disabilities²⁷

The Walking Audit developed by the Walkable and Livable Communities Institute is an excellent tool for use in Collingwood for a number of reasons: it is a well established tool that has been used with hundreds of communities, and as of 2012 promoted by the United States Environmental

²⁶ Institute of Transportation Engineers, *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, 2010, pg. 5

²⁷ Walk21, *International Charter for Walking*, 2010

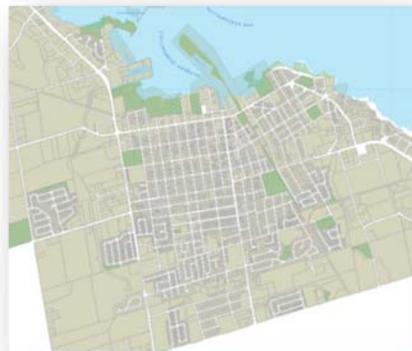
8. Annual Community Assessment

Supportive Land Use Planning and Design

Challenge

Often plans are referred to as being “living documents”, implying that they can be amended to deal with changes in community circumstances or needs. Unfortunately there is seldom a process or mechanism for the plan, or even its elements, to be reviewed and potentially changed within a timeline that is effective and not reactive. When changes are made to these kinds of plans it is often done well past the time when it could have been most effective to deal with evolving circumstances, and instead results in a plan that becomes inherently less effective at guiding the community’s actions. These kinds of amendment processes also generally require extensive study for their periodic reviews because there is no baseline or benchmark information available about the plan and it’s impacts, except that which was used at the initial writing of the plan.

Accordingly, to make sure that Active Transportation is progressing appropriately in Collingwood, an annual assessment process could be undertaken. The AT assessment would help to guide priorities and initiatives and allow for progress to be measured from year to year.



- Connectivity
- Accessibility
- Safety
- Interesting
-
-

Action

The specific characteristics of the yearly assessment would be determined at the time of its development with the involvement of Town Departments and Stakeholders as appropriate.

The assessment should at a minimum include tracking and measurements that address the Guiding Principles of the Active Transportation Framework. Other criteria that could be considered include the following characteristics from the Share the Road Cycling Coalition’s “5 Es” for reviewing bike friendly communities ³⁰:

- Engineering - a review and assessment of what is on the ground and what has been built to promote active transportation in the community;
- Education - determining the amount of information and education there is available for both active transportation and motorists;
- Encouragement - assessing how the community promotes and encourages bicycling;
- Enforcement - examining the way enforcement personnel are trained and conduct their duties specifically associated with the rights and responsibilities of all road users. The enforcement category contains questions that measure the connections between the cycling and law enforcement communities; and,
- Evaluation & Planning - reviewing the systems and plans in place for AT and their success and/or progress toward implementation.

³⁰ The Share the Road Cycling Coalition uses the “5 Es” outlined when reviewing communities for their Bicycle Friendly Community award. These, along with the walkability audits from the Walkable and Livable Communities should be adapted to outline the basic structure of the audit for this Element of the ATP.

The 2009 Walk21 presentation “Understanding the characteristics, needs and abilities of walkers” identifies the kinds of walking specific indicators that should be part of the audit:

- Walking activity;
- Activity in the public realm;
- Local accessibility;
- Motivations;
- Barriers;
- Perception of the walking environment;
- Measures to improve the walking environment; and,
- Transport spending priorities

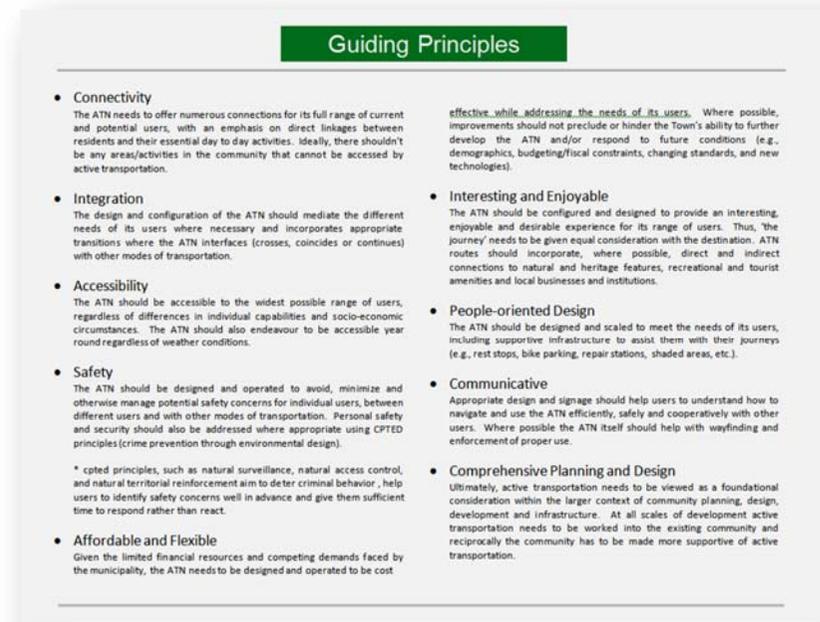
Opportunities to partner with the local school administration, parents of students, and students, shall be integrated into this Element. These partnerships can help provide “safe route to school” and youth specific assessments of the quality, effectiveness, and evolution of Collingwood’s active transportation system. The criteria used for this portion of the annual audit should mirror the “Key Indicators of Success for Safe Routes to School Efforts” described in the Center for Health Training and the National Highway Traffic Safety Administration’s *Safe Routes to School Practice and Promise*, (2010, pg. 14); these include before and after measures of the:

- Behavior of Children;
- Behavior of Drivers;
- Community Facilities;
- Crashes and Injuries;
- Community Buy-in; and,
- Environmental Quality.

The community audit shall also include developing an understanding of the people in Collingwood and how they use the urban spaces of the community. There are many resources available to the community and its citizens that can instruct and assist with this work. One noteworthy example is *Neighbourhoods for People, Seattle Toolkit* by Gehl Architects (2010). This document was specifically designed for a municipality and the diversity of people that will be engaged in this auditing process: neighbourhoods, non-profit organizations, professionals, and students. The public life and public space analysis methods that are

described in the document, and could be used for the ATP audit include: Pedestrian Traffic Counts; Stationary Activity Surveys; Assessments of Public Space Qualities (Atmosphere, Physical Space, Ground, Connections).³¹

The measures and benchmarks that are used in the audit should be broadly based, including local, regional, and province-wide comparables.



The Guiding Principles of the Town’s Active Transportation Framework are an important way of evaluating.

³¹ Gehl Architects, *Neighbourhoods for People, Seattle Toolkit*, 2010, pg. 39

9. Bicycle Friendly Communities Status

Supportive Land Use Planning and Design

Challenge

In 2016 Collingwood submitted an application to the Share the Road Cycling Coalition to receive recognition as a bicycle friendly community. The submission was subsequently evaluated and Collingwood was awarded the status of Bicycle Friendly Community – Bronze Level. This initiative could serve as an organizing principle or goal for future improvements to cycling in the community and help to further promote and educate residents and tourists around this aspect of active transportation.

Action

The challenge for this Element would be to identify improvements and initiatives which would allow Collingwood to have its Bicycle Friendly Community status upgraded to the Silver Level and eventually the Gold Level. Whether this element would require the development of a workplan to specifically achieve upgrades in status or a periodic review to determine if initiatives undertaken would allow for an upgrade would need to be determined with senior management and Council as appropriate.



10. Shared Walkways/Promenade Strategy

Supportive Land Use Planning and Design

Challenge

To improve active transportation opportunities throughout the community a number of “shared walkways” have been created in recent years. These were intended to provide a safe alternative to on-street riding for cyclists. To date, “shared walkways have been implemented along sections of three of Collingwood’s busiest streets - First Street, High Street/Balsam Street and the southern portion of Hurontario Street. Similar shared walkways are located as part of the redevelopment of the shipyards, and along the waterfront of Sunset Point Park.

The difficulty with these is related to the conflict potential between cyclists and pedestrians; and, conflicts at driveways between cars and cyclists. These are issues related to expectations, familiarity, travel speed, and lack of signage. Note that these facilities are generally too narrow to allow for separation of users. The TAC *Bikeway Traffic Control Guidelines for Canada* states the preference not to separate these uses but indicates that the Pathway Organization Signs can be used in specific instances:

On multi-use paths, segregation of bicycles and pedestrians should be avoided, wherever possible. However, where study has shown that this type of operation is suited, these signs may be used.³²

This Element will involve creating an effective community-wide strategy for these shared pathways to improve their functionality and safety for users.

³² Transportation Association of Canada, *Bikeway Traffic Control Guidelines for Canada*, February 2012, pg. 25

Action

Town staff from a variety of Departments (with specialized consultant assistance if determined necessary) should conduct a review of all the shared use pathways in Collingwood to determine the best course of action to improve their function. This would be developed with clear direction for the specific characteristics of each pathway’s context, including use, neighbouring land uses, appearance, conflicts, purpose of pathway, and, linkages to other active transportation routes.

An excellent resource that has recently been published is from the UK Department for Transportation. Their September 2012 document *Shared Use Routes for Pedestrians and Cyclists*³³, and other similar reference materials should be used to inform the underlying principles, cyclist



Pictured is an example of signage that could be used in locations where the use of bicycles on shared pathways would create conflicts and safety concerns for other users.

³³ Department for Transportation, *Shared Use Routes for Pedestrians and Cyclists*, September 2012

categories, strategy, process, and design criteria used throughout this project.

This process should include, at a minimum, the following:

- Assessment of pathway use (including on-site monitoring);
- Review of best practices documents;
- Development of preferred options;
- On-site testing of preferred options with monitoring;
- Review of findings and implementation of recommended actions.



Pictured are examples of the signage that could be used on shared pathways throughout the community. This Element will determine the most appropriate use of such signage.

11. Downtown Parking Analysis

Supportive Land Use Planning and Design

Challenge

The strategies and implementation projects listed are intended to address all forms of transportation in a way that makes active transportation safe, and convenient. Accordingly, integrating elements that facilitate the effective use of vehicles with active transportation is an important consideration.

Making it more efficient for vehicles to park in the downtown district the Town would facilitate a park once strategy with the intention of getting people out of their cars sooner and having them walk between nearby destinations. This might help to cut down on repeat parking throughout the downtown, thus reducing the traffic congestion and supporting a more pedestrian oriented commercial area.

Contemporary knowledge about parking generation rates, needs, management mechanisms, and impact on the success of downtowns continues to be refined (especially since the completion of the Town's 2002 *Downtown Parking Study* and 2009 *Parking Strategy Downtown Collingwood* report). Therefore, this Element seeks to develop a community generated parking analysis of the Downtown district. This will be used to develop an actionable parking strategy for downtown to support businesses, active transportation, and effective parking (linked with the Element on page 46).

This Element will directly inform the Element focused on right-sizing the parking system in the downtown district.

Action

There have been no significant coordinated programs implemented for parking management in downtown (some of which are outlined in the 2009 Strategy Report) that address the "perceived" or practical 90% capacity for off-street parking and support growth, such as: progressive pricing structures; zoned space allocation; refinements to zoning and ITE based estimates for our local context; opportunities for more efficient on-street parking inventory still available as a result of recent downtown improvements; active transportation and transit use; and, employee parking demand management strategies.

The 2004 Edition of the Institute of Transportation Engineers (ITE) *Parking Generation Report* (commonly used to determine parking generation rates) clearly states characteristics of its data that skew its applicability for our parking context, making this kind of updated approach necessary:

Most of the data currently available are from suburban sites with isolated single land uses with free parking.

The information provided in these reports is also admitted by the ITE to not yet address factors such as type or area, parking pricing, transit availability, multi-stop trips, land use mix, and pedestrian friendly design; all of which are downtown characteristics. In reference to the parking generation rates of the ITE Report, the *Transportation Planning Handbook* states "thus, they need downward adjustments where these conditions do not apply, especially in CBDs".

Combined with assistance from the BIA, this Element should allow the Town to more fully understand the need/use of parking in the downtown; access to modes of transportation; and how they work together. This will facilitate implementation of key recommendations from past parking strategy and review studies, along with contemporary best practices.

12. Active Transportation Bridge at Mountain Road

Major Infrastructure Improvements

Challenge

Active transportation systems have to be designed, developed, and managed to connect people to the various destinations they need to reach for their daily activities. This includes linkages to schools and neighbouring communities.

This Element will significantly improve an active transportation connection to the Town of the Blue Mountains, and better link portions of Collingwood that are situated to the west of Black Ash Creek, with those to the east side of this river corridor.

The river in this location is a significant barrier; and neither the road nor the trail system provide practical and comfortable options for active transportation at this crossing of Mountain Road.

There is a need to support an improved connection for safety and efficiency with the Town of the Blue Mountains and the residential areas and job centres to the west with the rest of the built up portions of the town to the east. That is the challenge that is being addressed with this Element.

Action

The Engineering and Parks, Recreation & Culture Departments, with input from the Trails Committee and others as required, will assist with leading the exercise of designing, permitting, and developing this river crossing.



The more northerly and southerly crossings of the Black Ash Creek for active transportation are the pedestrian bridge and Sixth street bridge respectively. Both are not well located for people traveling along this direct corridor to the Town of the Blue Mountains. The bridge crossing of Mountain Road does not facilitate comfortable and safe crossing for pedestrians and cyclists.

13. Sidewalks & Crosswalks at Public Parks

Major Infrastructure Improvements

Challenge

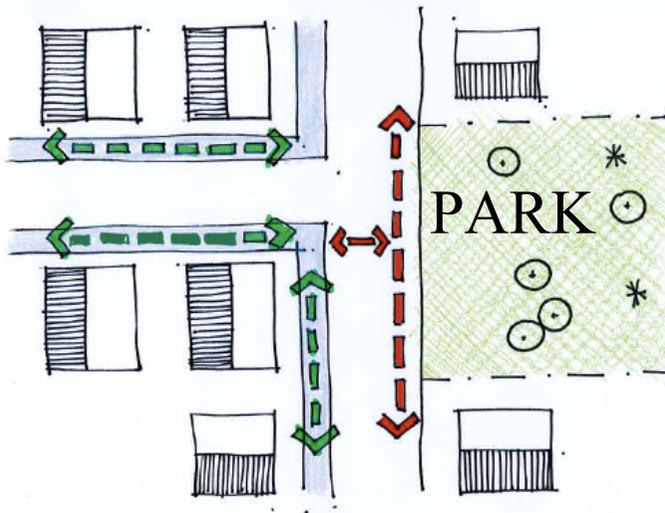
The primary users of Collingwood's public parks are children and their accompanying parents and/or minders. Walking and biking make up their principle forms of transportation. Unfortunately, some of Collingwood's public parks are not fully accessible by sidewalks. Many times there is no sidewalk along the park frontage.

The challenge will be to provide improved access to these parks for pedestrians.

Action

The action for this Element is the development and implementation of a prioritized process to install pedestrian crossings and/or new segments of sidewalk to address the lack of facilities to support walking to these important community facilities.

The Town's Parks, Recreation & Culture Department would likely be the lead in this process with additional assistance from the Engineering and Public Works Departments.



The Ontario Ministry of Transportation's Ontario Traffic Manual (Traffic Manual, Book 11, Pavement, Hazard and Delineation Markings, March 2000, pg. 97) states: "in urban areas, crosswalks must be marked at all intersection where there is substantial conflict between vehicular and pedestrian movements. Pedestrian crossings may be marked at non-intersection points where substantial pedestrian movements occur or where a safe crossing point would not otherwise be obvious, particularly to children".

For this Element appropriate pedestrian crossings will be designed and installed to support safe and comfortable access to municipal parks.

14. On-street Bike Routes

Major Infrastructure Improvements

Challenge

While the Town of Collingwood has an excellent trail system, it is somewhat limited in its functionality for active transportation. Portions of it work well to provide the connectivity and efficiency needed for active transportation, but most of it functions best as a recreational system.

On-street bike routes can provide the directness needed for active transportation, which is difficult for recreational trails to provide:

It is important to note the different needs of different users of trails. Recreational users enjoy the very curvy, winding path of trails that are often outside of the urbanized areas of the city and allow them to experience the natural beauty and green spaces of a city. In terms of transportation, the most effective and well-used bike and pedestrian paths into urbanized areas do not meander around the city, but are straight corridors between places of origin and destination.³⁴

According to ASSHTO a bicycle network is a designated system of bikeways that may include bike lanes, bicycle routes, shared use, paths, and other identifiable bicycle facilities.³⁵ There is a need for this kind of network to support the mobility of our residents. There is also a recognized desire, and need, for this kind of infrastructure throughout the region, province, and nation.

The County's Transportation Master Plan states:

it is recognized that over time the County should be encouraging a greater emphasis on walking and cycling as

³⁴ Walk and Bike For Life, *Trails for Active Transportation: Town of Collingwood*, 2010, pg. 9

³⁵ ASSHTO, *Guide for the Development of Bicycle Facilities*, 2012 pg. 1-3

the preferred mode of travel for short trips (under 5 km in length).³⁶

The 2008 Ontario Walkability Study identified that nearly 75% of students surveyed would prefer to walk or cycle to school; and although 3.5% said they currently ride their bicycle to school, 26.8% would prefer this mode of transportation.³⁷

The Go for Green The Active Living & Environment Program has identified that:

70% of Canadians indicated they would be willing to travel up to 30 minutes to work if they could enjoy the safety and convenience of a bike lane.³⁸

The on-street bike routes network will generally consist of streets with bike lanes; those with marked shared lanes; and streets that are specifically designed as family bike boulevards as defined in a previous Element of the ATP.

The challenge for this Element is to create a network of bike routes throughout the community which addresses the diverse needs of the community.

³⁶ Simcoe County, *County of Simcoe Transportation Master Plan*, 2008, pg. 5-2

³⁷ Catherine O'Brien, PhD. Centre for Sustainable Transportation, *Child and Youth Friendly Planning*, presentation, 2008

³⁸ Go for Green The Active Living & Environment Program, *Fitting Places: How the Built Environment Affects Active Living and Active Transportation*, pg. 18

Action

An effective active transportation system must provide a network of accessible cycling routes. The most appropriate for Collingwood at this time are on-street routes. This Element is designed to implement a network of on-street bike routes that can be easily developed and maintained by the Town. These routes have been strongly influenced by the on-road bike routes illustrated on the Collingwood Trails Network map for many years.

One of the principle features of the on-street bike route network is the wayfinding/notification marking system. The National Association of City Transportation Officials describes this as:

A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes - typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes.³⁹

Although there is no formula for determining appropriate facility selection, it is important to note that the bicycle facility type selection should be determined through a clearly defined process as will be described in the Ontario Traffic Manual: Book 18 Bicycle Facilities (to be released in 2013). The Ontario Traffic Council briefly describes the three basic steps of the process as follows⁴⁰:

- Step 1 – Pre-selection Nomograph
 - Collect and review existing and future volume and motor vehicle operating speed data
 - Plot on Nomograph
 - Nomograph provides a general guide for facility types to be considered

³⁹ National Association of City Transportation Officials web site.

⁴⁰ Ontario Traffic Council, *OTM Book 18: Bicycle Design Guidelines*, Ontario Bike Summit 2012 presentation, page 9

- Step 2 - Examine other factors
 - Skill level of anticipated users
 - Number of lanes
 - Traffic characteristics
 - Number and frequency of potential conflict points
 - Adjacent land uses and lot patterns
 - Frequency of transit stops
 - Pedestrian safety
 - Collision patterns
- Step 3 - Select Appropriate Facility Type
 - Based on results from Steps 1 and 2, plus sound engineering judgment

A multi-disciplinary team would need to work to determine the best routes, design and implement the defined on-street bike network. Without predetermining the outcome, given the basic characteristics of the roads in question, it is expected that this would principally consist of bike lanes and shared lane markings (sharrows), and bike route signage.



The Transportation Association of Canada's Bikeway Traffic Control Guidelines for Canada states; The sharrow (shared lane 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".

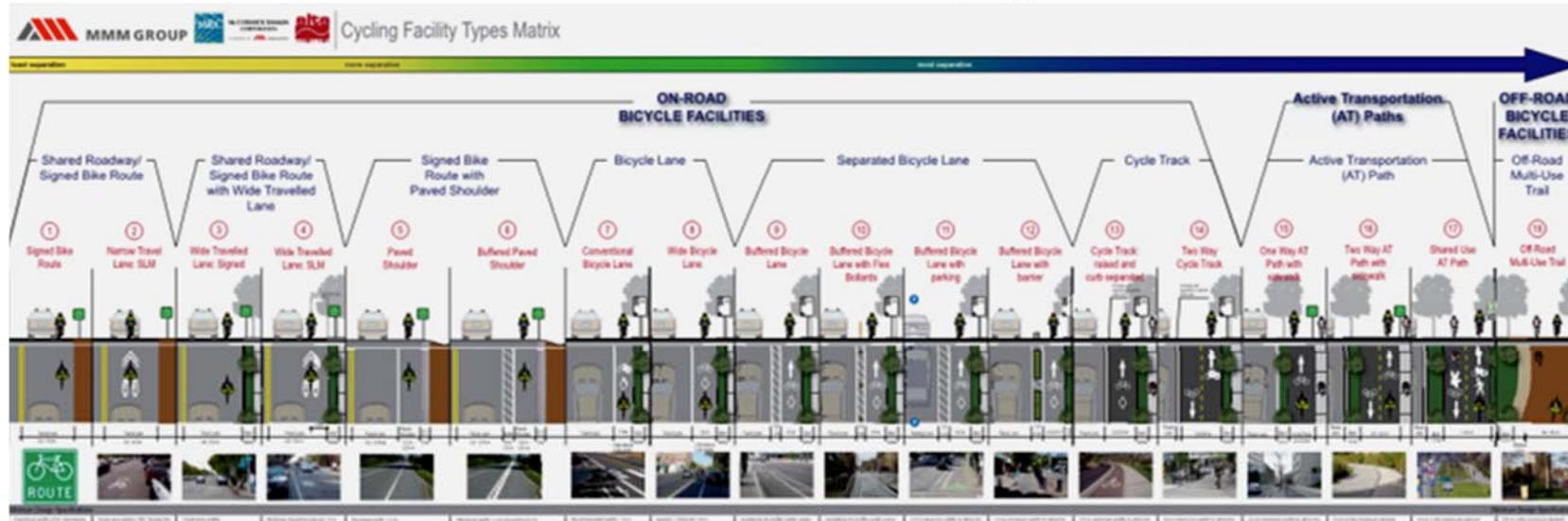
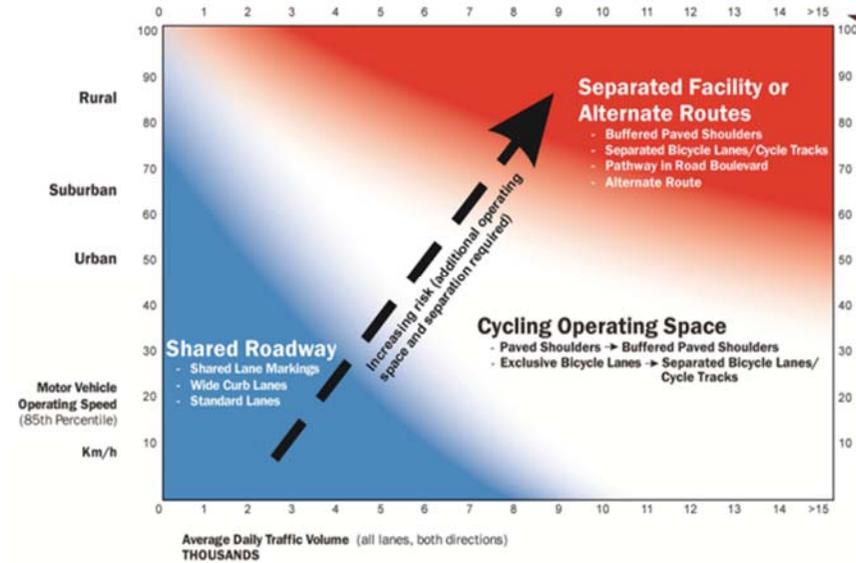
Source: Dan Burden



Pictured is an example of one of the existing bike lanes in

The positive influence sharrow markings have on cyclists' use of the roadway is significant and improves safety, including the following: helps cyclists position themselves safely in lanes; alerts motorists to potential presence of bicyclists; provides wayfinding element along bike routes; increases distance between parked cars and cyclists (outside of "door zone"); motorists' behavior changes to be more safe for cyclists using the road; cyclists increase their use of the roadway (as opposed to sidewalks); and, the number of wrong-way cyclists is significantly reduced.⁴¹

Right is an example of a pre-selection Nomograph (a diagram designed to allow approximate graphical computation) presented by the Ontario Traffic Council (OTC) when outlining the soon to be released OTM Book 18: Bicycle Design Guidelines. Below is a screen shot showing a portion of the Bicycle Facility Type Matrix presented by the OTC. This matrix shows a range of ways for providing bike facilities on roads.



⁴¹ NACTO, *Urban Bikeway Design Guide*, April 2011, pg. 275