Town of Whitby

Active Transportation Plan

June 2021

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Executive Summary

1.0 Introduction

a. The Town of Whitby is located within the Region of Durham. It is bounded by Lake Ontario to the south, Scugog Township to the north, City of Oshawa to the east, and the City of Pickering and Town of Ajax to the west. The population of the Town has significantly increased and will be almost 200,000 persons within the next ten years. There is a need to plan for and provide a meaningful and connected active transportation network to support residents, visitors, businesses, and customers.

b. The Active Transportation Plan (ATP) is a long-range plan intended to create shifts in individual and community behaviour to more active travel. The proposed network and recommendations found within this plan have been developed based on an iterative consultation and engagement-based process which is reflective of the interests and values of community members, Council, and staff.

1.1 The Active Transportation Plan

a. The Active Transportation Plan builds upon the Cycling and Leisure Trails Plan that was completed in 2010 and considers the increase in cycling and active modes of transportation, best practices, new standards and guidelines and emerging technologies. Policy, infrastructure and programs already successful at the municipal, regional and provincial level of government are also considered as the plan was developed. Opportunities and challenges are examined and recommendations and strategies which help make the Town better connected, safer, more convenient, well-maintained and accessible are proposed.

b. The plan is intended to be used by staff, as well as stakeholders, involved in the decision making for active transportation infrastructure, programs and initiatives. A process and approach to educate, encourage and influence people's travel behaviours to encourage non-auto transportation as a viable option for various trip types and purposes is identified. It is noted that the plan should be used as an adaptable tool that is integrated into the Town's existing decision-making process and practices.

c. As set out in Town's policies and Council goals, the Town is committed to creating a community that focuses around the principles of strong,

walkable and complete neighbourhoods while considering sustainability and being fiscal responsible.

2.0 Future Direction

a. As part of developing the Active Transportation Plan a vision, goals, objectives and principles were established for Whitby.

   The Active Transportation Plan vision is a network that is a **convenient, comfortable and safe alternative for people to get to and from work, school and other frequent destinations for people of all ages and all abilities.**

b. In order to achieve the desired vision the goal of the ATP must **Establish an integrated and diversified active system and policy framework that enables the provision of connections to where people want and need to go and enhances the local economy while enabling access to areas of natural and cultural significance.**

2.1 Guiding Influencers

a. In order to develop the vision of the Active Transportation Plan key influencers have been considered. These factors and criteria are integral in the decision making of the conclusions and recommendations of the ATP.

   1. **Equity and Inclusion** - providing equitable and accessible mobility choices for everyone, regardless of age or ability is key to a successful network. Equity and inclusion takes into consideration not only the types of users but also the various uses (i.e. commuter, recreational, touring).

   2. **Sustainability and Socio-Economic Environments** - the Active Transportation Plan considers factors and issues from an environmental and sustainable perspective.

   3. **Place and Planning** - developing policies to support a plan that is connected and integrated to the existing active network.

   4. **Culture Change** - encouraging and promoting active uses in order to shift behaviours from vehicle use to active uses.

   5. **Engineering Realm and Partnership Management** - elements of design and implementation to create a safe and efficient active transportation network.

3.0 Downtown Whitby – Special Study Area

a. The Downtown Whitby Transportation and Pedestrian Safety Action Plan was prepared as a standalone study. However, as it shares many of the same objectives and principles of the ATP it was incorporated into the broader plan and considered a special study area. Existing conditions were considered and an action plan, which considers all modes of transportation for all user groups, was developed to create a walkable Downtown that supports the Town Council's goal to build downtowns that are pedestrian-focused destinations.

b. A complete streets approach that ensures that all elements of the road right-of-way are planned, designed, operated and maintained to support a balanced and safe use by all roadway users was applied.

c. The below guiding principles were used to develop recommendations for Downtown Whitby.

- The pedestrian infrastructure should be accessible to all.
- The pedestrian infrastructure should be safe and comfortable.
- The pedestrian infrastructure should consider the interaction with other modes of transportation.
- The pedestrian infrastructure should provide a positive environment.
- The pedestrian infrastructure should provide adequate connectivity between origins and destinations.

d. It should be noted that the Downtown Action Plan does not include the full and immediate reconstruction of the pedestrian realm servicing the Downtown Area, but provides a set of measurable actions and recommended practices that in time, will improve the safety and comfort of the pedestrian infrastructure.

e. Key recommendations of the Downtown Action Plan include:

- Provide additional pedestrian crossing on Dundas Street and on Brock Street
- Improve the intersections by upgrading traffic signals and adding tactile plates and pavement marking
- Increase support amenities such as benches, bike parking and waste receptacles
- Reduce the speed limit to 40km/h in the Downtown core
- Redirect heavy vehicle traffic to alternate roadways
- Consider reducing the number of vehicle lanes on Brock Street

f. The full Downtown Whitby Transportation and Pedestrian Safety Action Plan is provided as **Appendix E**.

4.0 Implementing the Active Transportation Plan

a. It will take a significant amount of time, staff resources and financial commitment to fully implement the Active Transportation Plan. The phasing of the recommendations of the Active Transportation Plan have been organized into four phases: the first three years, three to five years, five to ten years and beyond ten years. The proposed phasing takes into consideration the Town of Whitby and Region of Durham capital roads projects, anticipated timing of development and priorities.

b. The prioritization of the recommendations takes into account input from stakeholders, residents, agencies and partners and includes the following:

- **Address facility gaps** –gaps less than 1 km
- **Address network gaps** – gaps greater than 1km
- **Opportunities for network growth** – expanding the active network when/where possible
- **Opportunities for facility renewal** – improving aging infrastructure when/where possible
- **Complete Streets initiatives** – designing streets for all users and all ages and abilities

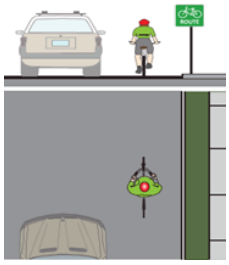
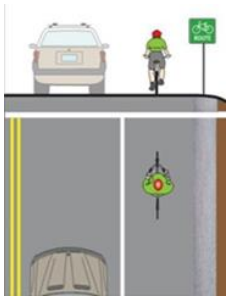
4.1 Strategies and Recommendations

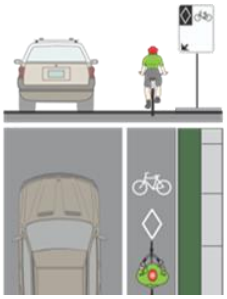
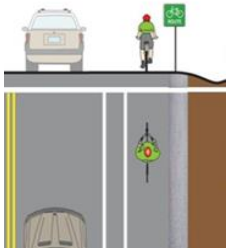
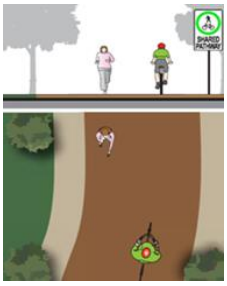
a. The Active Transportation Plan recommendations consists of five overarching themes. Within each theme, there are detailed action items which will improve the active transportation network and implementation of the recommendations and action items will help Whitby achieve the vision, goals, and objectives of the Active Transportation Plan.

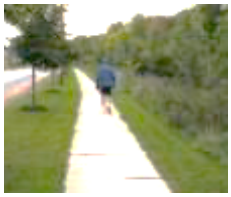
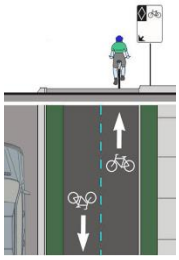
b. See **Table 10.6** (Recommended Guiding Principles and Programs) and **Table 10.7** (Downtown Whitby) of the plan for a full list of action items, timing and costs. Recommended infrastructure is provided in **Appendix A** and **Appendix B**.

Theme		Key Action Items
Resources and Infrastructure 	Considers route planning, selection of the facility type, design of the facility and the implementation and maintenance	✓ Wayfinding signage ✓ Life cycle assessment ✓ Inclusion of amenities ✓ Inclusion of active facilities in Site Plan and Draft Plans of Subdivisions ✓ Development of delivery plans ✓ Provide active improvements in the Downtown
Tools 	Implementation of the ATP takes into consideration engineering design guidelines and standards	✓ Trail design standards ✓ User feedback ✓ User count database ✓ Emerging technologies
Communicate and Coordinate 	Communication of the plan with those that will implement the plan as well as those will use the network is fundamental	✓ Community surveys ✓ Promotional materials ✓ Update the Town's webpage ✓ Annual report to highlight progress and next year implementation plan
Encourage and Educate 	Framework to shift the culture to more active travel (i.e. walking, cycling)	✓ Pamphlets and maps ✓ Information material ✓ Educational campaign ✓ Events ✓ Formalize commenting template ✓ Commenting subcommittee
Policy 	The development of policies will guide the implementation of the proposed network	✓ Develop rights-of-way policy ✓ Complete street design ✓ Policy for micro-vehicle and e-vehicle use ✓ Sidewalk policy ✓ Review Downtown snow removal program

c. The facilities proposed as part of the Active Transportation Plan vary from sidewalks and multi-use paths to cycle tracks. The facilities proposed considers the users as well as the road environment (volume and classification of vehicles and travel speed).

Facility	Typical	Description
Signed Bike Route		Motorists and cyclists share the same travel lane. Bicycle route signs provide route guidelines. Guidance can be supplemented by a Share the Road Sign in select locations i.e. poor sightlines, etc.
Signed Bike Route with Sharrows		Motorists and cyclists share the same space, however, the space for cyclists is identified with a sharrow (a bicycle stencil with two chevrons above it) placed per OTM Book 18 Guidance. In narrow locations there may be the need for a share the road sign – single file.
Signed Bike Route with Urban Paved Shoulder		Cyclists are provided their own space by painting an edgeline in the space normally reserved for on-street parking. Parking is not typically restricted along the road; however, bike route signage is provided. In select locations a diamond may be implemented to restrict other users.
Paved Shoulder		A shoulder or “breakdown Lane” is provided with a hard surface. Cyclists are encouraged to travel on the shoulder. The route is signed as a bicycle route and could include supplementary share the road signage in select locations.

Facility	Typical	Description
Bike Lane		Cyclists are provided with a reserved space which is identified by pavement markings and signage. Bike lanes include green painted treatment along key corridors and in conflict areas. When approaching an intersection dash lines to allow for passing.
Buffered Paved Shoulder		On roads with higher volume and speed within rural areas, in addition to paved shoulders, a buffer may be used. Buffer width depends on the speed and volume of the roadway
Buffered Bike Lane		On roads with higher volume and speed within urban and suburban areas a buffer may be implemented to provide more separation between the cyclist and vehicles. Where appropriate, a physical barrier may be placed within the buffer.
In Boulevard Multi-Use Path (MUP)		A separated facility usually in the boulevard of the road, which accommodates all active transportation users in a shared space.
Off-Road Trail		A separated facility typically through a natural area/park that accommodates pedestrians and cyclists. The surface type can range from natural surface to asphalt depending on the location.

Facility	Typical	Description
Sidewalk		A pedestrian facility implemented within of the road right-of-way parallel to the road to allow for the flow of pedestrian travel within major community areas.
Walkway		A pedestrian facility which is implemented between neighbourhoods of residential areas to connect major communities or community destinations. They are typically wider than a common sidewalk and paved using asphalt or concrete
Cycle Track		A cycle track is an exclusive bikeway that has elements of a separated path and on-road bike lane. A cycle track is located within or next to the roadway, but is made distinct from both the sidewalk and general purpose lane by barriers or elevation differences.

d. Based on the facility, and the social and institutional recommendations, the annual cost of delivering the Active Transportation Plan is estimated to be in the order of $7.2 million dollars. The cost of the plan will be refined as projects are designed.

e. External funding and partnerships will be explored regularly and pursued wherever feasible to offset municipal costs.

f. Successful implementation of the plan will require increased funding for active transportation, increased staff and resources and continued collaboration between Town staff, stakeholders and the general public. Staff and resource costs are not currently captured in the estimate to deliver the ATP.

g. Monitoring is essential to ensure that the Active Transportation Plan is being implemented as it was intended, to determine whether the Plan is achieving its goals and objectives and to allow Whitby staff to appropriately allocate resources. The plan must also be flexible in order to adapt to changes in travel behaviour, changes to best practices and emerging technologies, as well as phasing of the Regional and Provincial infrastructure. The plan can be measured using such indicators as the

non-auto mode share, network growth, funding levels and allocated resources.

h. The progress of the ATP will be reported to Whitby Council on an annual basis. This will highlight successes as well as emphasize the network growth. The report is expected to go through a comprehensive review within five years and an update within the 10 year time frame.

i. Following approval of the Active Transportation Plan Transportation Services staff will prepare a Strategic Action Plan to identify critical paths, responsibilities, implementation partners, and potential funding sources.

5.0 Acknowlegements

a. Special thanks is extended to all those that contributed to the completion of the Active Transportation Plan, including Town of Whitby staff, WSP and CIMA+ staff, members of the Active Transportation and Safe Roads Advisory Committee and members of the public.

b. The time and energy devoted to development of the Whitby Active Transportation Plan, including those who participated in public meetings, open houses, completed the online survey, and the many others who provided written or verbal feedback to the study team is greatly appreciated.

Part I – Setting the Stage

a. In this part of the report is a discussion of the initial framework that was undertaken for the development of the Town of Whitby's Active Transportation Plan (ATP) and those partners that have been and will continue to be involved in its delivery.

b. In particular, the elements discussed in the next three sections of Part I, include:

    1. Scope of the Active Transportation Plan (ATP).

    2. Why this ATP has been undertaken and the purpose of this document.

    3. Who have been the key agency representatives and stakeholders involved and considered in the development of the plan and that will need to be involved in its future implementation.

    4. What are the **Vision, Goals, Objectives and Active Principles** that need to be considered throughout the life of the ATP.

    5. What are the main areas of focus that the plan has considered and why.

    6. What has been the public consultation process as the plan has been developed.

1.0 Introduction

1.1 Background and Scope

a. The Active Transportation Plan (ATP) is a long-range plan designed to create meaningful shifts in individual and community behaviour**.** The ATP completed by the Town with the assistance of WSP Consulting Inc., builds upon the previous work completed and efforts made as part of the Town's 2010 Cycling and Leisure Trails Plan, as well as related active components in other guiding documents including, but not limited to, the: 2010 Town of Whitby Transportation Master Plan and 2017 Brooklin Transportation Master Plan.

b. This Active Transportation Plan has been designed and developed to be used by the Town and various stakeholders involved in the day-to-day decision making for active transportation infrastructure, programs and initiatives which are planned to benefit residents, businesses as well as visitors to the Town.

c. The Whitby ATP is focused on a number of goals which places users first, and ensures that infrastructure decisions and policies are centred on both sustainable and efficient use of resources over the long term.

d. The scope of the ATP is a **strategic living document** that establishes a process and approach to educate and influence people's travel behaviours to encourage non-auto transportation as a viable option for various trip types and purposes.

e. The ATP builds upon the policy, infrastructure and programs that have already been successfully implemented at the municipal, regional and provincial levels of government. The plan identifies options, opportunities and challenges and offers recommendations and strategies which will help make the Town's non-auto mobility system better connected, safer, more convenient, and inclusive.

f. The plan is intended to be action oriented, giving the Town and its partners clear next steps to move forward with implementing active transportation infrastructure and programs in Whitby for the short and longer term. The plan should be used as an adaptable tool that is integrated into the Town's existing decision-making process and practices.

g. The proposed network, policy, programs and outreach recommendations found within this plan have been developed based on an iterative consultative and engagement-based process which is reflective of the interests, values and sentiments of community members, Town Council, Advisory Committees, and municipal partners.

1.2 Why Develop the Plan

a. Whitby's ATP was developed to address community needs and interests while providing the Town with a resource for future decision making related to urban mobility. In particular, the four primary reasons for developing the ATP are noted in the themes below:

1. **Strategize –** to create a long-range strategic guide for the Town and its' community partners.
2. **Improve –** to improve walking, cycling and rolling for fun, fitness, commuting and other utility uses.
3. **Connect –** to better connect the Town and give people more opportunities to be active.
4. **Benefit –** to realize and foster the environmental and economic benefits of active transportation at the individual and community level.

1.3 Development and Management of the Plan

a. Successful development and implementation of the ATP requires a clear understanding of the responsibilities related to active transportation planning, policies, design, costing and finances, construction and maintenance. It is also important to clearly communicate these roles and responsibilities to the individuals involved.

b. Implementation of the plan is primarily led by the Town of Whitby with input and collaborative efforts from the Active Transportation and Safe Roads Advisory Committee (ATSRAC) as well as other stakeholders and partners.
The coordination structure of the delivery team is shown in **Figure 1.1**.

1.3.1 Active Transportation Working Group

a. As part of the development of the ATP, a working group was developed which engaged staff from each of the municipality's key Departments involved in active transportation as well as members from the ATSRAC to discuss and develop elements of the plan.

b. Members of the ATSRAC reflect the special knowledge and insight from the community perspective in its mix of participants and is a Committee of Council.

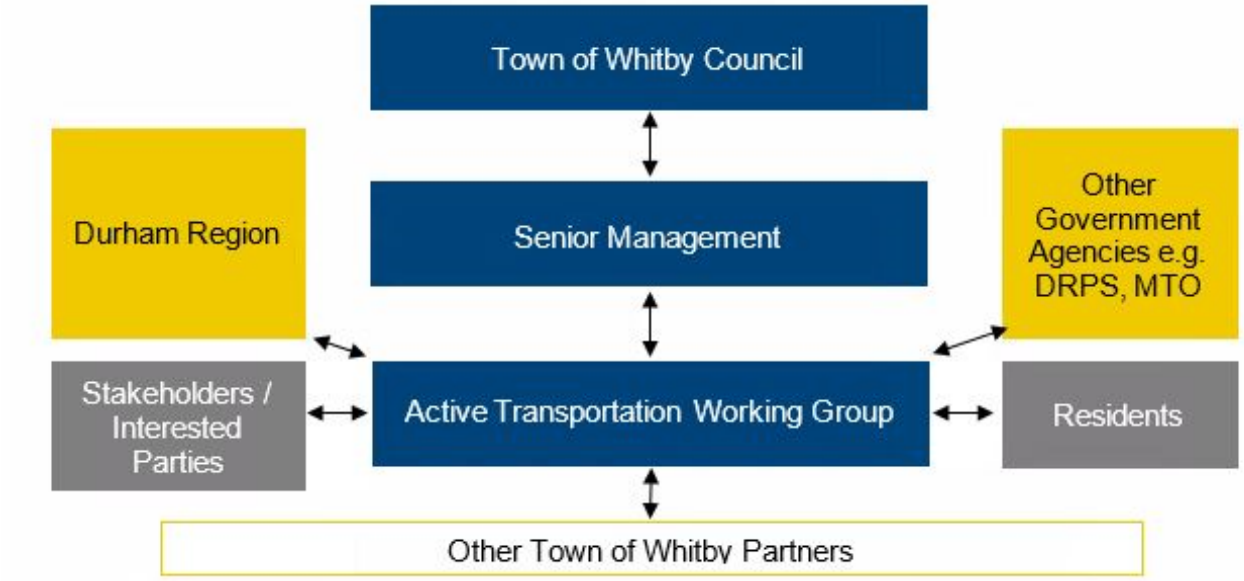
c. The municipal representation on the working group is made up of staff from each of the Town's municipal Departments that are directly impacted by the adoption of the plan, including: Public Works, Community Services, Planning and Development along with support, as required, from the Clerks Department.

d. The responsibilities of this group are to develop and prepare all elements of the active transportation plan and monitor its success and update the recommendations as appropriate.

e. This group is also responsible for ensuring coordination and consultation with other municipal Departments including Corporate Services regarding financial matters and other external stakeholders, partners and government agencies in the development and maintenance of the plan.

f. The Working Group's role is to meet on a regular basis throughout the year, prepare information for budgetary purposes and plans, coordinate with other relevant documents and plans, produce annual reports to Council on progress and ensure updates to the ATP and associated mapping are undertaken as required.

Figure 1.1 Active Transportation Plan Team Structure



1.3.2 External Partners

a. There are a number of stakeholder/interested parties and government agencies (as highlighted in **Table 1.1**) that have been part of the development of the ATP and/or will need to be involved as part of the implementation.

b. Understanding these external partners and their existing/recommended roles and responsibilities will help ensure that there is a greater understanding of each others expectations and needs which will aid with a more efficient and effective implementation process. The recommendations noted in **Table 1.1** are intended to inform how the Active Transportation Plan can be managed, planned and delivered by the Town and its partners. These considerations are not prescriptive; they are meant to be used as guidance to identify potential roles and responsibilities.

c. It is recommended that as part of the implementation process, members of the Working Group further and continue to meet with the various partners to refine roles and responsibilities to ensure clarity.

Table 1.1 – Existing / Recommended Roles

Stakeholder	Description
Durham Region	✓ Coordinate and work with the Town as appropriate, in the planning and construction of routes along regional roads and regional trails, which provide connections to/from Whitby and coordinate programming and messaging on a regional scale.
Surrounding municipalities	✓ Planning and delivery of cross-border connections.
Ministry of Transportation Ontario (MTO)	✓ Planning and delivery of active transportation routes across provincial rights of way including overpasses and underpasses and coordinate with municipalities as appropriate. Delivery of the provincial cycling network.
Durham Public Health	✓ Promote the connection between active transportation and health. Show links to quality of life improvements through active living. Educate residents on safe walking and cycling practices.
Durham Regional Police Service (DRPS)	✓ Monitor and enforce safe and lawful cycling / pedestrian activities and provide the Town with up to date information on collisions or related requests, and participate in local outreach.
Ontario Provincial Police (OPP) Whitby Detachment	✓ Assist regional police service to collect data, enforce safe and proper cycling / pedestrian activities, and participate during local outreach events.
School Boards	✓ Provide input on opportunities to partner with local schools who may be interested in participating in local events. Distribution of safe routes to school and active transportation materials.
Durham Region – Tourism	✓ Identify opportunities to enhance and promote active transportation tourism destinations and identify opportunities to highlight supportive businesses.
Conservation Authorities	✓ Provide input on trail connections which can be made in local conservation lands and opportunities to highlight local natural areas. The Central Lake Ontario Conservation Authority (CLOCA) plays many roles in the planning review process, both as an advisory agency and regulatory agency.
Local Business Improvement Areas and Chamber of Commerce	✓ Partner with representatives from local businesses to identity opportunities to provide active transportation supportive amenities. Local businesses can help promote local tourism initiatives and benefit from a higher number of patrons visiting via active transportation.
Provincial active transportation stakeholders	✓ Provincial stakeholders such as the Ministry of Tourism, Culture and Sport, Ontario Trails Council, Ontario Trails Strategy, the Waterfront Regeneration Trust and Share the Road Cycling Coalition should be engaged as the plan is implemented to: encourage and support recreational and commuter cycling; and active, healthy lifestyles; help municipalities advance safe cycling networks; enhance infrastructure to make roads safer for all road users; and to build on cycling tourism.

2.0 A Vision for Active Transportation in Whitby

a. The 2020 Whitby Active Transportation Plan (ATP) is a living document intended to deliver a multi-modal urban mobility network and support active and healthy lifestyles for residents and visitors in the Town. The active transportation legacy in Whitby included the early adoption of the Waterfront Trail initiative, several km of trail networks, on road cycling facilities, and multi-use pathways, and has been recognized by Share the Road Cycling Coalition as a "Bike Friendly Bronze" community.

b. The plan builds on these past successes through embracing a **Vision** which is that:

> **Active transportation in the Town of Whitby is considered a convenient, comfortable and safe alternative for people to get to and from work, school and other frequent destinations for people of all ages and all abilities.**

2.1 Goals of the Whitby Active Transportation Plan

a. A goal or a series of goals must be successfully achieved, often over many years, in order to reach a desired outcome/Vision. To this end, the **Goals** of the Whitby Active Transportation Plan are to**:**

> **Establish an integrated and diversified active system and policy framework that enables the provision of connections to where people want and need to go and enhances the local economy while enabling access to areas of natural and cultural significance.**

2.2 Active Transportation Plan Strategic Objectives

a. The **Vision and Goals** are supported by objectives that more clearly define how they will be achieved. The objectives were considered at all key stages in the plan and network development and planning process, and represent best practices and lessons learned from the Whitby active transportation experience and from comparable municipalities found within Ontario.

b. Defined below are the primary **Objectives** of the Whitby Active Transportation Plan. The following objectives are presented in recognition of existing and projected mobility, economic and environmental conditions and from the opinions and sentiments expressed by the public and affected stakeholders, interested parties and agencies. The objectives are not presented in any order of importance as they are all considered to be significant in their own right.

c. The Town of Whitby active transportation system should strive to be/have:

1. **Continuous and Connected** – a system of active transportation routes that link the community and surrounding areas.

2. **Walkable Downtowns** – create pedestrian friendly and accessible Downtown cores.

3. **Equitable and Inclusive** – so that the various different user types and uses of the network, including those who require special considerations, have opportunities, and are accommodated and incorporated in the plans and programs in a respectful and meaningful fashion.

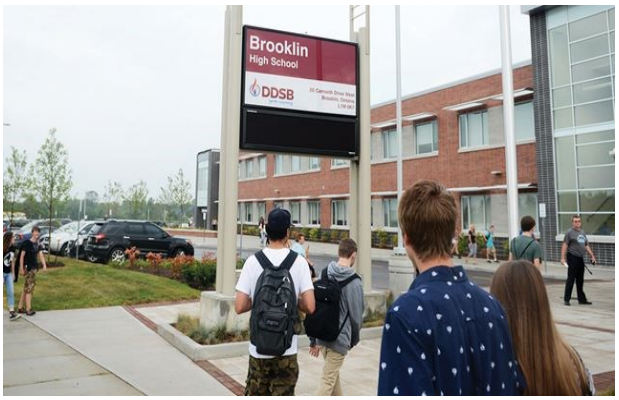
4. **Environmentally Sustainable –** so that environmental impacts are considered and sustainable solutions are incorporated in the network planning and designs.

5. **Active Partnerships** – so as to create and foster a framework that builds relationships and understanding of each others roles to optimize integration and implementation efficiencies.

6. **Culture of Active Transportation** – implement active transportation into the day to day planning and design of community services and infrastructure and processes that encourage and grow the active transportation community which lead to sustainable and healthy choices.

7. **Support for Public Health** – encourages the use of active modes to support health through active travel to frequent and desirable destinations.

8. **Year Round Maintenance** – provides users with well-maintained infrastructure including year-round opportunities for active transportation in select locations.



9. **Fiscally Responsible –** so capital works and maintenance programs ensure the use of taxpayer dollars in an efficient and responsible way, and that projects are phased to take advantage of opportunities presented through grants, development and inter-agency initiatives.

10. **Best Practices in Design and Management –** by using a tool kit of engineering standards and professional knowledge to ensure efficient project delivery, and that predictable and safe infrastructure is built for all ages and all abilities. Examples include Ontario Traffic Manual (OTM) Book 15 (Pedestrians) and 18 (Bicycles) approach to design.

11. **Planning and Policy Framework Integration** – by creating policies that prioritize active transportation initiatives and programs and create spaces that are integrated and adjacent to the active transportation network that are welcoming and inclusive to all user groups.

d. It should be noted that the above Objectives in some cases may have competing needs/results and are disparate in their reflective elements. While the goal is to meet all these Objectives, often there will be a need to strike a balance based on the priorities of the day for the municipality. For example, the Fiscal Responsibility Objective 9 may affect reaching the other objectives such as the Continuous and Connected Objective 1 in a desired timeframe – a reasoned and sound approach that weighs all objectives in a balanced fashion will be required.

e. In order to successfully achieve the above Strategic Objectives, the following active transportation **Principles** are required in the development and implementation of the ATP:

    1. Ongoing feedback and input on the ATP from internal and external sources is to be embraced in order to deliver a plan that is achievable, sustainable, inclusive, and user-focused.

    2. While the ATP cannot be all things to all people, it must offer an active transportation model that progressively improves connectivity and usefulness with a focus on urban mobility.

    3. The plan must strive to improve equity by connecting active transportation users to all neighbourhoods and business nodes regardless of affluence, geography, and other barriers.

    4. The plan must recognizes that budget restraints and topography will present challenges in connecting neighbourhoods isolated by natural and man-made barriers such as freeways, rail lines, ravines, and wetlands, and will strive to find mechanisms to connect across these barriers.

    5. Route planning should endeavour to optimize existing corridors to address deficient active transportation systems and complete missing gaps and linkages before new systems are built.

    6. Opportunities to enhance the active transportation system and supportive amenities should be considered, and included where/where possible, in all major capital road and parks new/retrofit works to enable efficiencies in delivery and economies of scale.

    7. A high degree of non-auto use should be encouraged by optimizing access between future developments and transit.

8. A walking and cycling network should be established that achieves pleasant, convenient and safe access to and between all land uses, transit stations/stops, parking areas, public streets and recreational destinations.

9. The active network should be integrated and complement other agency mobility systems so as to be seamless across municipal boundaries.

10. Use of open space, utility corridors and unopened road allowances for walking and cycling linkages should be maximized.

11. The pedestrian and cycling system should be oriented and developed to encourage maximum use of transit systems.

12. Intersections and roads should be designed to be attractive, safe and inviting for pedestrians, cyclists and motorists which must share the space.

13. Development (both new and retrofit) should incorporate amenities and be strategically integrated with the municipal active systems and provide on-site safe access, so as to encourage bicycle and walking, and other active modes, by employees and patrons.

14. Protect new linkages and rights of way in the transportation corridor that maximize active mobility opportunities.

15. Incorporate accessible design standards in the active built environment to foster equity and inclusiveness of the network.

16. Context sensitive designs of new active systems should seek to minimize impacts on sensitive environmental features.

17. Context sensitive designs of new systems should be utilized to minimize property/proximity impacts of infrastructure to residential properties. The proposed off-road trails within natural heritage systems and greenbelt designations are subject to further analysis and review to determine facility need, precise location and design elements. Should the underlying land use designations change after adoption of the ATP, further analysis would be required to confirm trail locations.

18. The design and construction of new, redeveloped or realigned active systems should identify where applicable opportunities for wildlife connectivity across potential barriers.

3.0 Study Approach

3.1 Process

a. A four-phase approach was used to develop the ATP. The components represent the work that was completed as part of this project and does not reflect the work that will need to continue to be done once the ATP has been completed and adopted by Council.

b. The study process was based on the Municipal Class Environmental Assessment (EA) process which considers potential environmental impacts and mitigative measures. In particular, the study was completed to ensure phases one and two of the EA process was undertaken which includes identification of the problem/need assessments and the identification and assessment of various alternatives to solve the problem.

a. The four phases and major components of the Study included:

Part I – Setting the Stage – establishing the framework and foundation for the ATP

1. Establishing the Vision, Goals and Strategic Objectives
2. Identification of the scope and goal of study outcomes and desired state
3. Undertaking Stakeholder and Public Consultation

Part II – Guiding Influencers, Developing the Vision – core themes and needs to be considered in the development of the ATP

4. Review of existing conditions and future considerations
5. Assessment and review of key guiding influencers, factors and criteria to be considered in the development of an ATP
6. Development and review of various alternatives and actions

Part III – Downtown Whitby Special Study Area – issues and opportunities for creating a vibrant and walkable Downtown

Part IV – Making it Happen – the strategic action plan for achieving the ATP Vision and Goals.

7. Identify the recommended active transportation network, system and programs
8. Understanding the costs and future requirements for the ATP
9. Creation of a strategic policy framework, implementation plan and monitoring strategy
10. Report documentation and Mapping

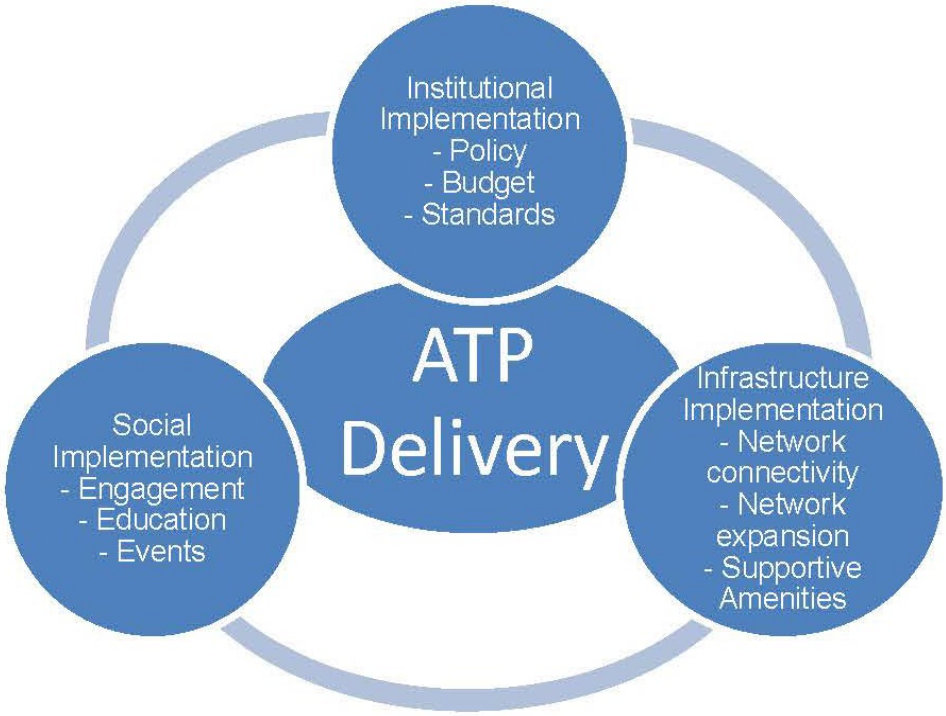
3.2 Areas of Consideration

a. The desired outcome of the Active Transportation Plan is documented throughout the preceding sections. Generally these can be divided into three categories which are described below and depicted on **Figure 3.1**:

   1. **Infrastructure outcomes** - outcomes which are reliant on engineered improvements specific to the urban mobility network. These outcomes focus on developing a complete critical grid or spine network, closing gaps in the existing network, and expanding the network to reach new destinations and users.
   2. **Institutional outcomes** - outcomes which are influenced by the business of the Town and include design guidelines, detail designs and plans, budget and planning policy, programs, training, and working groups.
   3. **Social outcomes** - outcomes which are influenced by the social adoption of the plan and which rely on community partners, advocates, cycling clubs and coalitions, and individual activists, and through community engagement. These outcomes include events such as Bike Month, commuter and cycling engagements, and community outreach and education.

b. The above outcomes have a great degree of interdependency, and it is impossible to suggest that any of them can move ahead independent of each other. For instance, it is difficult to make network improvements without social acceptance of the need for the improvement, and funding, design standards and facility guidelines.

Figure 3.1 ATP Delivery Outcome Approach



c. The contents of the Active Transportation Plan were developed to support the various planning and design components with the recommendations generally organized into the five (5) themes/categories noted in **Table 3.1**. These various categories are referenced in the implementation plan presented in **Part IV** of this document.

Table 3.1 - ATP Implementation Themes

Symbol	Theme Description
	1. **Encourage and educate:** proposed initiatives or programs related to the design or implementation of the network or promotion and outreach of behaviour change.
	2. **Policies:** Potential policy enhancements to support future active transportation planning.
	3. **Resources and Infrastructure:** References, standards and guidelines that are recommended for consideration to support design and implementation as well as recommendations regarding physical/operational installations and future maintenance.
	4. **Tools:** Proposed supports that are intended to help facilitate coordination and implementation of the ATP and support long-term decision making.
	5. **Communication and Coordination**: Suggested steps to support the implementation of infrastructure as well as programming initiatives both internally and externally following adoption.

3.3 Public and Stakeholder Consultation

a. Consistent with the requirements of the Municipal Class Environmental Assessment process, one of the key components of any functional planning project is to consult and engage with members of the public and stakeholders.

b. In developing the Active Transportation Plan, three types of engagement were used to gather input from key audiences – in person engagement which included workshops, meetings and public open houses; online engagement which included multi-activity tools embedded onto the Town's webpage and promotion and outreach.

c. A summary of the three types of engagement undertaken is presented in **Table 3.2** with a more detailed summary is provided in **Appendix C**.

d. Ongoing public and stakeholder consultation will be an integral part as the ATP is refined, and projects and programs are designed and delivered.

Table - 3.2 Summary of Engagement Process and Activities

In-person engagement	Online engagement	Promotion and outreach
Purpose: To provide residents and stakeholders with an opportunity to meet with members of the project team one-on-one to learn more about the project, ask questions about key issues and provide input on project deliverables. **Events:** ✓ Project team working group sessions ✓ Stakeholder workshops ✓ Public open houses	**Purpose:** To provide residents and stakeholders with an opportunity to provide input on the Active Transportation Plan beyond the in-person engagement tactics in an interactive manner which provides flexibility for time and schedule. **Events:** ✓ The team created and hosted an interactive online engagement tool at two points in the project ✓ Draft ATP placed on public record for comment ✓ Future virtual sessions and engagement to accommodate new post Covid working/public meeting requirements.	**Purpose:** To encourage and educate people on project process and milestones including the various consultation opportunities including both on-line and in person engagement where and when feasible, and to maintain awareness over the course of the project. **Types of tactics:** ✓ Social Media ✓ Project webpage ✓ Notification ✓ Promotional materials ✓ Documents

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Part II – Guiding Influencers, Developing the Vision

a. In this part of the report, is a discussion of the core themes, factors and criteria that need to be considered and that will influence the development of the ATP. These factors and criteria are integral in the decision making on the conclusions and recommendations that have been formed as part of the implementation strategy.

b. The particular guiding influencers presented in the following sections include:

    1. **Equity and Inclusion** – creating a plan for all.
    2. **Sustainability and Socio-Economic Environments** – creating a plan that is sensitive, that lasts and is viable.
    3. **Place and Planning Context** – creating a plan that is connected and integrated.
    4. **Cultural Change** – creating a plan that shifts the mobility realm to healthy choices.
    5. **Engineering and Partnership Management** – creating a plan that is safe and efficient.

c. The following sections includes a review of both existing conditions along with suggested future needs and desires to be considered in the development of the plan and implementation strategy.

4.0 Equity and Inclusion

4.1 Overview

a. This chapter discusses, recognizes and identifies measures to improve how to provide equitable and accessible mobility choices for everyone. An equity and inclusion viewpoint ensures that the needs of various groups are considered and addressed to remove barriers that could prevent them from accessing, utilizing and enjoying active transportation.

b. Moreover, equity and inclusion recognizes vulnerable populations as part of the active transportation conversation and that the recommendations, strategies and initiatives have been designed specifically to respond to the wants and needs of all users to promote a barrier-free Whitby.

c. Provided in the following sections is a discussion of the different **Users** and **Uses** by mode and trip type of the active transportation network, including those who may require additional consideration and accommodation to allow for increased opportunity of involvement and use of active facilities.

4.2 Existing Conditions

a. The Town of Whitby Active Transportation Plan has been developed with a **User (U1) and Use (U2) focused approach**.

b. To achieve this, it is critical to understand who is using the existing network and to identify the target audiences that the network is being designed to encourage and accommodate. When designing an active transportation network, the type of trip being taken is a key consideration including how it integrates into day to day function of the route and overall system.

c. One of the primary goals of the Active Transportation Plan is to identify and design a continuous and connected system of active transportation facilities to address the interest of people of all ages and abilities. This means that routes, facilities and amenities should consider both the existing users and uses and strive to accommodate and encourage a wider range of users and uses.

d. There are many factors that have a strong impact on the different types of users and uses. The Active Transportation Plan must consider each of these factors when building the network as well as when developing educational and promotional materials to encourage community adoption of active travel. An overview of the influences that shape and encourage the uptake of active transportation by the community are provided in **Table 4.1.**

e. It is important to note that the design and implementation of active transportation facilities and routes is not a one size fits all approach. When addressing equity and inclusion, there is only so much research and socio-demographic understanding that can be applied. It is also important to use the input, experiences and ideas that are provided by members of the community for insight into what is needed.

Table 4.1 – Active Transportation User U1 and User U2 Considerations

User	Consideration
Age	✓ As people age, their experience increases but mobility decreases ✓ Younger individuals may be more confident and interested in exploring different or new routes ✓ Very youthful, and older adults are more likely to rely on active transportation as their primary mode
Education	✓ People who have a greater understanding of the impacts of active transportation on the environment ✓ Confidence may increase as people are more educated about road safety laws or trail safety etiquette ✓ Network education through maps and signage will encourage adoption of the network
Trip Purpose	✓ The destination that is the target for the trip will heavily influence which route is taken ✓ The purpose of the trip will impact the type of facility that is being used
Values	✓ Personal values related to healthy living, fitness, the environment, exposure to nature, etc. may increase interest in using active modes ✓ Convenience, directness and preferences for access may have an impact on whether people use the routes and facilities
Gender	✓ Males and females have different interests and experience when it comes to the type of routes or facilities that are used including a difference of opinion on the level of comfort and safety of various facilities
Location	✓ There is a difference in where routes are planned and facilities are designed based on where they are located i.e. urban, suburban or natural area

4.2.1 Understanding the User U1

a. Throughout the Active Transportation Plan development process, engagement tools were used to gather information about Whitby's travel habits and mode choice. During the data collection phase, residents were surveyed about their transportation behaviour and the following was concluded:

   1. Residents are heavily dependent on private automobiles to fulfill their daily travel needs.
   2. The average household owns two or more vehicles, with higher ownership in the rural and suburban areas of Whitby.
   3. Car ownership is lower in urban areas, with more access to local and regional transit options.

b. Active transportation refers to self-propelled forms of transportation which could include but are not limited to: walking, cycling, running, hiking, in-line skating, and so on. Provided in **Table 4.2** is an overview of the range of active transportation users that are typically considered and addressed as part of an ATP.

c. Beyond identifying the various active transportation users, it is critical to understand which users the network is currently accommodating, their overall level of satisfaction with the network connectivity, facility types and function as well as opportunities for improvement and enhancement.

d. To better understand the relationship that residents have with active transportation, information about Whitby residents' perceptions of urban mobility was also collected. Using this data, it was determined that a large portion of Whitby's population uses the existing active transportation network primarily for traditional recreational walking and cycling; however, input from key audiences indicates an emergence of new user types such as micro-mobility and powered mobility devices, including e-bikes, are growing in popularity.

e. Age also has a direct influence on the types of users and in Whitby, a significant portion of the population falls between 15 to 64 years. Based on current and past trends, it has been concluded that Whitby has a significant presence of young families, including school age children, as well as an aging population.

f. Based on input received through the consultation process as well as emerging trends such as **Complete Streets and Vision Zero**, high-level conclusions can be drawn about the existing active transportation user, and how user populations will change with the adoption of principals found in Complete Streets and Vision Zero.

g. Complete Streets and Vision Zero initiatives are planning and design tools which help municipalities deliver a user experience that is safer and more welcoming than the traditional experience of a volume and capacity focused road design. Where a traditional design focuses on auto movements, **Complete Streets** initiatives focus on urban mobility, considering all ages and abilities, and including consideration of transit, pedestrian and cyclist connectivity in the planning and design realm. Similarly, **Vision Zero** principles address safety as a primary design consideration. As Whitby embraces Complete Streets and Vision Zero, it is anticipated that the user experience will improve and that the Active Transportation network will see an increase in usership.

Table 4.2 Active Transportation Users U1

User	Description	Considerations
Pedestrian	Those who travel by foot including walkers, joggers, hikers and runners.	✓ Based on the online survey 54% of residents who responded want more walking trails through parks and open space. ✓ The pedestrian system should also offer more options to access trip generators. ✓ A typical pedestrian trip is 5 km or less, and connects to community destinations within hamlets and community areas in Whitby.
Cyclist	Those who use a bicycle to get to and from their destinations	✓ According to Statistics Canada, 0.2% of Whitby's population regularly travels by bicycle. ✓ The online survey responses show a 79% preference for cycling facilities that are separate from the roadway. ✓ Respondents voice concern about comfort and perceived safety. ✓ Whitby's cycling system attracts a wide range of cyclist types including experienced and new cyclists.
Pedestrian with Mobility Device	Users that require mobility devices (e.g. wheel chairs, power chairs) to travel locally.	✓ Online survey responses show a high demand for accessible recreational and utility trips. ✓ Considering the aging population, Universal Design standards must be taken into account. The built environment should meet the needs of all users and satisfy the Accessibility for Ontarians with Disabilities Act.
Others	Other user groups anticipated to use the active transportation network including families, tourists, students and for fitness.	✓ Whitby's 2010 Cycling and Leisure Trails Plan outlines the Town's multi-purpose trails which allow for other user types such as strollers, mobility scooters, in-line skating and running. ✓ Consideration should be given to proper trail design and clear signage of trail regulations. ✓ As new devices emerge, the Town should address conflicts between users and mitigation measures through design updates, by-laws, and enforcement as appropriate.

4.2.2 User U1 Related Findings

a. Summarized below are the primary conclusions regarding active transportation usership based on the engagement and consultation undertaken as part of this study, as well as trends that are currently experienced within Ontario and the Greater Golden Horseshoe (GGH). These findings have been considered in the development and evaluation of the various policies, routings and implementation strategies associated with the Whitby ATP:

   1. Typically residents prefer cycling routes and facilities that are considered "family friendly" meaning that there are options for both the more experienced confident parent cyclists and the less experienced and somewhat cautious child rider. More typically these cyclists will use the off-road trail system in the parks or the in-boulevard path system adjacent to the roadways, as there is more separation from motor vehicle traffic.

2. Pedestrian routes are more general in their use and application; however, the frequency and purpose differs. While most pedestrians use the sidewalk system for day to day travel, there are some that prefer to use trails for more leisurely travel.
3. As the population ages, many seniors are rediscovering cycling. Many individuals in this profile are becoming more active and exploring cycling routes in Whitby and the surrounding area. These cyclists include long-distance recreational cyclists, and utility cyclists replacing short, local auto trips.
4. There are a few who are avid cyclists and pedestrians for day to day commuting travel. These individuals, commonly referred to as "strong and fearless" will ride wherever and whenever they can and typically do not require a formal facility. In the Town of Whitby, this group is a resource which can be used to strengthen active transportation users who may show hesitancy to migrate from an auto-dependant lifestyle towards more sustainable mobility choices.
5. Safety and comfort were identified as major priorities especially when it comes to the design and implementation of infrastructure and the various considerations for different user groups. The perception that a number of current links or facilities are not considered "safe" or "comfortable" or "sufficient" by primarily cyclists has a significant impact on which routes are being used and how they are being used.

4.2.3 Understanding the Uses U2

a. How the various active transportation users use the network is another key consideration in the development of a successful active transportation network. When discussing "network use", reference is made to the different trip types that could be achieved by using the system or by the purpose of that trip. Trip type / network uses can most commonly be organized into three categories – **Commuter, Recreational and Long Distance Trips**. Provided in **Table 4.3** is a description of each of these groups and destination considerations.

b. Information regarding the existing uses of the active transportation network was primarily gathered through the consultation and engagement activities undertaken over the course of the project. Input through online and in-person consultation activities indicate a strong preference for recreational off-road trail riders, recreational long-distance touring riders, and select short-distance day to day riders within the "Downtown" core.

c. Many participants who use Whitby's active transportation network as a means to complete short-distance commutes or day-to-day activities, use the network to travel to the Whitby GO Station, arenas, employment areas, parks, schools and community centres. Public consultation respondents identified these areas for future improvements for active transportation facilities.

Table 4.3 Active Transportation User Groups

Users	Description	Destinations
Commuter	✓ Those who use active transportation as their day to day mode of travel to get to and from work, school, errands, etc. ✓ Often use routes that make up the active transportation network year-round in all weather conditions. ✓ In some cases, they may choose to use public transit or other modes of transportation during the winter season. ✓ Use all infrastructure available to connect their origin and destination.	✓ Schools ✓ Employment areas ✓ Shopping centres ✓ Grocery stores ✓ Whitby GO Station
Recreational	✓ Recreational users typically use the network for fitness or leisure purposes. ✓ Trips are typically used for travel on weekends as opposed to weekdays and will consist of trips to and from destinations of cultural or natural significance including off-road recreational trails. ✓ They will typically use off-road trails or secondary route connections as part of the overall network.	✓ Local parks and major trail systems ✓ Conservation areas ✓ Waterfront ✓ Community centres or gathering points ✓ Libraries ✓ Rural roads ✓ Scenic and rolling terrain,
Touring	✓ Touring users typically engage in active transportation as a means of exploring areas of significance and long-distances from their point of origin. ✓ Trips can vary from full day excursions to multi-day excursions. ✓ Trips require more planning since the route, destinations and accommodation are important factors in their travel.	✓ Surrounding municipalities ✓ Areas of culture or historical significance ✓ Conservation areas and provincial parks ✓ Waterfront Trail

d. In addition to the input gathered through the consultation activities, a preliminary assessment of publicly available data was undertaken to provide a more comprehensive understanding of the preferred trip types. This noted:

   1. Based on Statistics Canada data, approximately 78.40 percent of Whitby's labour force aged 15 and over living in private households, drive a motor vehicle as their main mode of commuting to and from their place of work while 12.50 percent use public transit, 2.60 percent walk, 0.30% bike, and 0.90% use another form of transit.

   2. The above shows that currently Whitby has a 16 percent non-auto mode split, which is quite good for a suburban community.

e. When people consider using active forms of transportation they are typically utilizing it for recreation, fitness and fun. While this is a strong foundation from which to grow, the greatest challenges to any community lies in increasing the mode split for utility (commuter) walking and cycling. In many cases and in most communities, it typically comes down to convenience. The existing recreational network should be used as a base to connect existing parks and neighbourhoods to employment nodes, shopping and schools.

f. There is an existing demand for and commitment to off-road trail development, and a need for a comprehensive and connected systems that includes safe and comfortable on-road facilities. There is also a need for facilities which link the downtown cores and major nodes and provide accessible options for all user and trip types. Some of these routes/trails include the below:

1. **Municipal Trails** - there are several significant off-road trail systems that are maintained by the Town. Most are found within park lands and accommodate primarily walking and hiking. They include but are not limited to:

- ✓ Brooklin Lions Trail
- ✓ Cullen Central Park Trails
- ✓ Iroquois Trail
- ✓ Otter Creek Trail
- ✓ Scott Trail Whitby Scout Trail (natural surface trail)
- ✓ Hydro Electric Power Commission trail (HEPC)

2. **Greenbelt Cycling Route** - is a 600-kilometre trail that travels through Ontario's Greenbelt, with a portion of this trail in the north end of the Town of Whitby. This trail provides route options for a variety of users including cyclists, walkers, and hikers.

3. **Great Lakes Waterfront Trail** - is a primarily off-road trail network which spans a significant portion of the province. The trail is made up of many components and connect to other significant trail systems such as the North Shore Cycling Route and Greenbelt Cycling Route.

Within Whitby, the Waterfront Trail provides residents and visitors with a paved trail connection which enables access to numerous natural and cultural heritage features. There is a total of 14km of the Waterfront Trail located within Whitby.

4. **The Greenbelt Route/Waterfront Trail Connection** - is a 22 kilometre signed route connecting two provincial cycling routes. The connector carries athletic, recreational, and touring cyclists between the Hamlet of Ashburn and Lake Ontario via on and off-road facilities, country roads, and through conservation areas.

5. **The Meadoway -Durham** – will connect with Rouge National Urban Park and The Meadoway project in Scarborough. The Meadoway, led by Toronto and Region Conservation Authority, is a proposed linear park system made up of trails and flowery meadows. The Durham Meadoway section, planned to extend from Pickering to Oshawa, is being planned by the Region in concert with the local municipalities and conservation authorities.

The Meadoway
COMMUNITY POWERED GREEN SPACES

4.3 Future Considerations

a. Implementing an active transportation network that considers the users and understands the issues and needs of the community can provide considerable benefit to the most vulnerable populations. It is crucial for the future active transportation network to empower residents to explore their mobility as independent users with a diverse range of modes which integrate with the network and surrounding land uses.

b. Creating a user and use-focused approach to the Active Transportation Plan and network helps achieve some of the high-level strategic community objectives which places an emphasis on inclusion, equity and accessibility.

c. Wider community and society benefits can also be a direct result of additional investments in active and accessible community planning, design and development as noted below.

4.3.1 Societal and Accessibility Benefits

a. Greater access to a range of travel options can benefit a wide range of the Town's population. Low cost travel options can be a social benefit as well as an economic one as it increases access to jobs, amenities and opportunities for lower income people. Enhanced pedestrian environments permit a higher number of seniors and individuals with disabilities to live independently and access goods and services. Furthermore, environments that support walking and cycling enable vulnerable populations to move about their communities in an easier and safer manner.

b. Increased mobility and social equity lead to a better quality of life – planning communities to support active transportation is vital to provide access to employment and services, and to improve social connections (reduces feeling of isolation where public transit may be limited or non-existent).

c. Built environments that are walkable allow for greater opportunities to age in place. Walkable communities are important to facilitating the independence, health and social well-being of aging populations and other vulnerable community members.

4.3.2 Community Benefits

a. Any time active transportation usage increases in a community, there are benefits. Congestion can be reduced resulting in increased safety within the road right-of-way and at intersections for vulnerable road users such as pedestrians and cyclists. Benefits also include bringing a sense of community back to streets that have been dominated by motor vehicles. An increased sense of community and livability will also result with active modes. Through the use of sidewalks, bicycle lanes, and pleasant landscaping, vehicle noise and other undesirable impacts of traffic, can be reduced making the community more attractive to residents and visitors. In addition, as more people use active travel

modes, there are more eyes on the street and more street activity, thereby increasing safety and decreasing crime.

b. Developing programs that provide education, encouragement and support for students to walk and bike to and from school can improve the health of children, increase concentration and improve overall grades. More walking students would reduce the number of children being driven to school which in turn could lead to an increased feeling of safety as there would be fewer cars in school zones. As the routes to school feel safer and more comfortable, more parents may be willing let their children travel to school by active modes.

c. Weather can play an important role in the promotion of active modes of travel. A decrease in the level of travel by active modes often occurs during the winter months, especially when the temperatures are significantly below zero degrees Celsius (0º C). Other weather conditions can also have varying impacts upon active transportation users. Pedestrians are generally affected less by wind speed and precipitation than cyclists. A plan that encourages more people to use active modes more frequently during the winter months should be considered as the ATP evolves.

4.3.3 Future Users

a. The intent of the Active Transportation Plan is to provide proposed routing, infrastructure and programming which not only accommodates the traditional active transportation users but creates a shift to a “for all ages and abilities” user approach.

b. In addition, it is important for the plan to consider and plan for emerging technologies such as e-bikes and micro-vehicles as appropriate. Through public consultation and engagement sessions, several needs have been identified for improving and implementing new components into Whitby’s active transportation network to address future users, including:

    1. The “interested but concerned” pedestrians and cyclists. Many of these users value safety and comfort and require additional incentives i.e. access to major community destinations, support at those destinations such as the development of bike hubs and access to information about how and where to walk and cycle so as to encourage them to become more active.
    2. A wider cross-section of pedestrians and cyclists of all ages and abilities using the system is the goal. To incorporate this need into the design of the active transportation network, it is important to consider the needs and preferences of different users, as well as accessibility standards as per the AODA to ensure that all individuals can use the network.
    3. Accessible and safe routes to schools present an opportunity within Whitby’s active transportation network. Recommended routes should take into consideration the location of schools, the proximity to major neighbourhoods, the identification of appropriate facilities as well as

programming and outreach initiatives to educate and encourage active travel by both youth and parents to and from school.

4. Long distance cycling is already a significant trend whether it be using the Town's premiere Waterfront Trail or connections to surrounding municipalities to the north, east and west. Greater encouragement of those types of trips and drawing cyclists from surrounding areas by promoting and encouraging bike friendly end of trip facilities will help to enhance the presence of this user group.

b. There is some ambiguity and concern around how to best address and integrate e-bikes, micro-vehicles and other emerging technologies into the broader transportation network. There currently are disparate views on these systems and how they should be integrated within the traditional road system and active network. The province provides some guidance/regulations on which facilities they are to use and how they are to be enforced. A greater emphasis on education of these potential uses, clarity in policy documents and by-laws and more proactive communication with those who will be enforcing legislation, may help to mitigate potential challenges while also creating a more clear and supportive environment for a greater range of users.

c. The plan is ultimately developed to identify the community's preferences and interests in how the active transportation network will be used in the future and how to better accommodate those desires. Provided in **Table 4.4** is a summary of those interests based on the consultation undertake and input received.

d. Convincing individuals to walk and cycle to work is heavily impacted by day to day schedules, weather, traffic, etc. To shift from a recreational to a commuter based active transportation community requires not only infrastructure investment, but also community based social marketing and outreach initiatives. Information regarding current active transportation user habits and preferences indicates a strong opportunity to improve and enhance targeted and localized education and outreach initiatives. Generating a greater understanding of the challenges that are experienced or perceived by the "interested but concerned" audience may help to provide additional insight to the Town to help prioritize education and outreach initiatives.

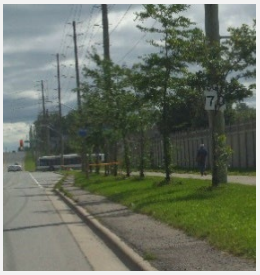
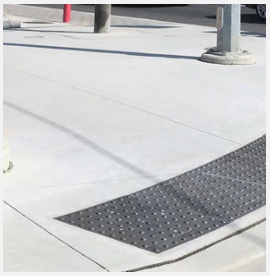
Table 4.4 - Summary of Community Active Transportation Desires

Community Desires	Community Desires
Users want more - cycling culture ✓ There needs to be more promotion of active transportation. ✓ Provide more active transportation routes to encourage active transportation and shift from a car-centric culture.	**Users want - diverse facilities** ✓ Consideration not just of the facility types but an understanding of how they should be used. ✓ Consideration of active transportation amenities in addition to the facilities throughout the Town.
Users want more - safety and comfort ✓ User safety needs to be a priority when planning for active transportation. ✓ Presence of more focused law enforcement would help to enhance the sense of safety for all road users. ✓ Facilities should be well designed and maintained to ensure that people feel comfortable and safe when using them.	**Users want - enhanced crossings** ✓ Improve intersection design to be safe for all active transportation users. ✓ Add more crosswalks to improve the connections and safety of users.
Users want more - education ✓ Education should suit different groups and learning styles. ✓ Focus on partnering with youth outreach groups. ✓ Education should focus on behaviours and etiquette e.g. along trails.	**Users want to develop - connections** ✓ Direct and well connected, north-south and east-west routes. ✓ Focus on eliminating gaps in the active system.

e. The Active Transportation Plan's recommendations should be built to deliver a user experience that is informed by the community's interests and provides inclusive and equitable actions that fulfill the interests identified above. At its core, the Active Transportation Plan holds dual objectives of encouraging active transportation culture and providing infrastructure and initiatives which create a greater cross-section and balance between the various trip types. More specifically, the routes and facilities that are implemented should facilitate travel between work and home, home and school, and day to day activities as well as recreational / fitness trips.

f. Provided in **Table 4.5** are design considerations for each of the user groups and should be incorporated as appropriate in the network development process to better address and ultimately encourage the use of active transportation for a wider range of trip types and purposes and specifically for short-distance commuter travel.

Table 4.5 – Active User Design Considerations

Type of Consideration	Pedestrians	Cyclist	Mobility Assisted	Other
Description	Those who travel by foot including walkers, joggers, hikers and runners.	Those who use a bicycle for commuting, recreational and touring / long-distance trips.	Users that require mobility devices (e.g. wheel chairs, power chairs) to travel locally.	Other user groups anticipated to use the active transportation network include skateboards, e-bikes and emerging micro-transit.
Application	✓ Low travel speeds ✓ Minimum 1.0m operating distance but typically 1.2 - 1.5m for sidewalks	✓ Average speed ranges from 15 – 20 km/h; may increase in excess of 30 km/h on downhill roads. ✓ Typically require 1.5m of horizontal operating space and 2.5m of vertical operating space.	✓ Sections 80.8 and 80.10 of the Accessibility Standards for the Built Environment provide technical requirements for the design and construction of new sidewalks.	✓ E-bikes are typically permitted on roads where conventional bicycles are permitted. Use is often limited for safety reasons on trails and paths through by-laws. ✓ Multi-use trail widths of 3.0-6.0 m to accommodate various active travel modes
Visual Example	 Sidewalk in Whitby	 Bike route in Whitby	 Accessible curb cut	 Multi-use trail

5.0 Sustainability and Socio-Economic Environments

5.1 Overview

a. This section of the document highlights the factors and issues from an environmental and sustainability perspective that need to be considered in the development of the ATP to encourage active and healthy behaviours.

b. Such factors and issues include emerging trends and concepts around healthy community design and walkable cities; and the environmental benefits that arise with the implementation of active transportation initiatives.

c. The significant impacts on our environment that has been created due to our reliance on single occupancy vehicles can be addressed, and at times mitigated by a greater emphasis on implementing and promoting active forms of transportation.

d. In response to emerging environmental trends, communities around the world are adopting mandates which focus on the environment through sustainable development and policies. Applying principles of sustainability and environmentalism to the Active Transportation Plan emphasises innovation, creativity, and alternative thinking, creating a more resilient community.

e. In 2019, Whitby declared a climate emergency, recognizing the need to reduce greenhouse gas emissions and to slow global warming. Whitby has also embraced **Bee City** and **Tree City** initiatives as ways to encourage a greener, more sustainable urban model. Active transportation and strong urban mobility supports these initiatives by reducing auto dependency and encouraging the use of lower impact travel choices.

f. Sustainability is established through a multi-faceted approach which includes social, financial, and environmental considerations. By embracing urban mobility and non-auto trip making, the Town and individuals in it live more sustainable, both collectively and individually.

5.2 Benefits of Sustainable Mobility

a Current policies and guidelines which support urban mobility in Whitby must focus on the environment and healthy communities through sustainable transportation. In 2019, Whitby adopted a sustainability plan that established a vision for sustainability, that being **"The Town of Whitby will be a healthy, sustainable and complete community***".* This Sustainability Plan identified milestones and actions which aligned with guiding principles on creating a more resilient Town. These include:

1. We will reduce our environmental footprint by protecting, conserving and enhancing our shared natural resources.
2. We will improve quality of life by valuing people and places.
3. We will improve our economy through the efficient and effective utilization of our resources.

b. Complimenting sustainability, there are many additional benefits that are associated with investing and developing a robust active transportation network. Research demonstrates the sustainability benefits that can be realized. For example, the Canadian Automobile Association published a report in 2017 that recommended investing in active transportation to reduce congestion and increase safety on roadways for all users.

c. Communities have placed increasing importance on active mobility over the past decade due to the benefits derived. As communities are shaped by the environment, there is an increased understanding of the impacts that sedentary lifestyles and dependence on cars have had on our health and the environment.

d. There are a number of benefits which can help to rationalize and support future investments for active transportation. Highlighted in **Table 5.1** and in the following sections are the environmental and health benefits that a comprehensive and committed active transportation system and policy framework can provide to residents now, and in the future.

Table 5.1 – Summary of Active Transportation Benefits

Types of Benefits	Types of Benefits
Healthy Communities ✓ Improved Local economy ✓ Increased sense of 'togetherness' ✓ Opportunities for place making ✓ More attractive urban spaces ✓ Reduces societal cost of mobility ✓ Lower health care costs ✓ All residents to life to their full potential	**Health and Walkability** ✓ Improved fitness ✓ Improved mental health ✓ Improved lifestyle ✓ Improved quality of life ✓ Reduced obesity ✓ Reduced chronic illness
Sustainable Environment ✓ Greenspace preservation ✓ Livability improvements ✓ Emission reductions ✓ Reduced fossil fuel dependency ✓ Reduced noise pollution ✓ Reduced road runoff to creeks and streams	**Sound Socio-Economics** ✓ Increased mobility for people with disabilities ✓ Increase job access for those who do not travel by car ✓ Improved inclusion and equity ✓ Increased productivity ✓ Enhanced tourism ✓ Reduced user cost of mobility ✓ Lower infrastructure costs
Financial Responsibility ✓ Life Cycle Management ✓ Capital costs – tax based, development charges ✓ Operation and maintenance costs ✓ Partnerships, grants	

5.2.1 Healthy Communities

a. The healthy community approach highlights how the design of municipalities and communities has a major influence on its' social health and well-being. As cities experience increased social and environmental stressors to physical and mental health, it is important to design communities that promote healthy and

active lifestyles. This approach emphasizes the importance of providing opportunities for people of all backgrounds and ages to live to their full potential, connect with other people and resources, and feel part of their community.

b. In terms of active transportation, the healthy community approach encourages the design of networks that are accessible, safe, affordable, and account for local climate change conditions. Similar to the Complete Streets approach, this concept considers the needs of all users in both urban and rural areas and provides a sense of safety and comfort for all users. Despite increased research and resources connecting physical activity and overall individual and community health, many individuals still struggle to reach their daily physical activity targets and experience diseases and health issues related to physical inactivity.

c. The development and implementation of the Active Transportation Plan is not just about getting people out of their cars but also about the bigger picture of ensuring that the quality of life and health of the community is reaching its greatest potential.

5.2.2 Health and Walkability

a. A walkable city is defined by neighborhoods that promote active transportation through urban design. A municipality can be classified as walkable if it has a high number of destinations within walking distance to most users, a continuous and connected street network, and a mix of land uses. Walkability can be used to indicate the success of various aspects of communities including their active transportation network. Providing walkable neighborhoods can have many health, social, environment, and economic benefits for communities. While, Whitby's central business districts have high walkability, there is more that can be done.

b. Walkability can be further enhanced through the adoption of Complete Streets planning approaches. Complete Streets are roadways that treat all users as equals regardless of mode choice, and feature elements which empower active transportation users, and calm automobile traffic through passive measures. Complete Streets embrace universal design standards which allow all ages and abilities to feel engaged in the community, especially in its downtowns. A greater emphasis on Complete Streets would enhance opportunities in mode choices and more easily walk to – and between – destinations in the downtown area. The **Downtown Whitby Pedestrian Safety Action Plan** (see **Section 9)** identifies opportunities to improve walkability in the urban core, and embraces many of the first principles of a Complete Streets planning approach.

c. Through thoughtful design, Whitby's communities can be developed to fit the needs of all users and provide convenient, accessible, and safe methods of transportation to various destinations. Tools such as walk-score and other walkability assessments can be used to gain a better understanding of the status of the municipality to determine what can be done to improve or enhance the overall walking experience of existing and future users. In addition, the

implementation of a more pedestrian focused and walkable town can be achieved through a more intentional approach to Complete Streets design and implementation including a holistic review of street typologies and community focused / context specific set of design considerations.

5.2.3 Sustainable Environmental

a. The environment is impacted by many activities and developing active transportation infrastructure can help mitigate these effects as people choose active modes more often. Changes in water quality, green spaces and natural environments may be apparent as dependence on the automobile decreases and sustainable modes of travel are selected more often. Some environmental benefits that can be realized by supporting active transportation include:

    1. Reductions in carbon dioxide emissions from motor vehicles can occur when people choose to cycle and walk more often, particularly for short trips.
    2. Reductions in the levels of air pollution due to the increased use of active modes can decrease the overall occurrence of many health problems including asthma, heart disease and cancers through improved air quality.
    3. Improvements to water quality can also result when people change their mode of travel even occasionally to sustainable options. This can reduce water pollution that results from run-off and other pollutants related to driving, less construction, fewer parking lots and less overall paved land, which increases permeability and allows for water to be naturally filtered.
    4. The implementation of more efficient and compact mixed land use policies can increase active travel to local destinations rather than having to drive in auto-oriented communities. Complete Streets, which include all users in the initial design, help to create a sense of place, liveability and vibrancy to the area leading to increase in mobility choice and less pollution and sprawl.
    5. Decrease heat island impacts.

b. Less land dedicated to road expansion projects to move more vehicles and Greenfield development can lead to preservation of rural hamlets, green spaces and natural environments. Across the north of Whitby, the Greenbelt Route provides an example of a cycling destination where the natural environment is an attractor to touring and athlete cyclists on country roads.

c. Small scale projects can also have great impact on sustainability, and such initiatives as providing bike parking at bus stops can encourage people to transition from driving to more sustainable choices. Similarly, supporting walkability through complete sidewalk networks, providing seating in parklets, and providing repair stands and other small projects can create a favourable environmental outcome.

d. For many large-scale civil infrastructure projects, they typically require the completion of a Municipal Class Environmental Assessment (EA) as prescribed

by the Ministry of Environment, Conservation and Parks (MECP). Refer to **Appendix D** for further details on the Class EA process. Given the scope and costs of typical active tramsportation projects, they are either exempt from the Class EA process, or are included as part of a larger scale transportation EA inititive, such as a road widening or extension.

e. In particular, the Municipal Class EA Act which pre-approves the construction or operation of walking and cycling facilities both within and outside of the road right-of-way, notes the following examples of active transportation projects that are exempt from the EA process:

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

f. Not withstanding the above, as the active transportation projects proceed through the planning, design, approvals and implementation phases, it will be necessary to confirm any EA/regulary approval requirements and permits necessary well before prior to construction.

5.2.4 Sound Socio-Economics

a. In a report published by the European Cycling Federation, a number of benefits of an active lifestyle based on health, environment, and other factors were offered. In this report, it was identified that moderate physical activity contributes to a 26 percent decrease in cognitive decline and a 29 percent reduction in risk for Alzheimer's disease. The study also attributes moderate physical activity to 17 percent lower odds for developing depression.

b. There are significant economic and tourism benefits that the Town can leverage to harness future support and prioritization for the ATP. Active transportation can improve the local economy beginning with the planning stages and continuing once the infrastructure has been constructed and is being used. Below are some examples of how active transportation can have a positive impact on the local economy:

1. The more that people walk and cycle, the more disposable income there is in a community due to less money being spent buying gas, making car and insurance payments and regular vehicle maintenance.

   This money stays within the community and supports local businesses.

2. The development of streets with a pedestrian focus increases consumer spending.

   It has been shown that pedestrians and cyclists are more likely to frequent local businesses more often and become regular customers since they are not likely to carry home large purchases while walking or cycling.

3. Cycling and pedestrian infrastructure costs can often cost less to build and maintain than traditional infrastructure and be more efficient and flexible in moving people. This can result in reduced costs to municipal governments when active transportation facilities are constructed rather than just new or expanded road facilities.

4. Cycling infrastructure investment is a small proportion of the total investment in transportation facilities but can yield significant benefits. For example, in the Netherlands, 6 percent of the money spent on transportation infrastructure is spent on bicycle facilities which led to an overall 27 percent mode share for cycling.

5. Bicycle and pedestrian infrastructure projects create jobs, which in turn can help the local economy. For example, in Baltimore, it was found that pedestrian and bicycle infrastructure projects created 11 to 14 jobs per $1 million spent whereas road infrastructure projects created 7 jobs per $1 million spent.

6. Increases in employee productivity as the more physical activity employees undertake, the less sick days they use, there are lower turnover rates, lower health care costs to the company and increased productivity.

c. Pedestrian and bicycle friendly communities can have a positive impact on tourism, either as destinations for cycling tours or places that are considered desirable to explore on foot. Cycling tourism is growing in Ontario at a fast rate. Research conducted in 2019 by Transportation Options indicates:

   1. There were 1.6 million cycling visits to Ontario in 2016 and they spent $517 million, accounting for 1.9 percent of total visitor spending in Ontario.

   2. Cycling visitors generally spend more on average per trip than other visitors; $317 per trip for cycling tourists compared to $186 per trip or total visitors in 2016.

3. Cycling tourists to Ontario stay longer than regular visitors and 94 percent of Ontario visits by cyclists were overnight.
4. 66 percent of cyclists spent $50 per night on accommodations in 2018 while on a bike trip.

d. From a tourism perspective, several current members of the ATSRAC have world wide experience and should be utilized when and where possible in the relevant sections of the ATP development and implementation.

e. Benefits of an active community have been well documented with common outcomes being improved employee performance, improved mental and physical health and reduced personal transportation costs as compared to private automobile ownership. In their 2004 article *"*The Business Case for Active Transportation*"* Richard Campbell and Margaret Wiggins give a comprehensive list of socio-economic benefits of active travel which are noted below and continue to be relevant to this day:

1. Reduction in road construction, repair and maintenance costs
2. Reduction in costs due to greenhouse gas emissions
3. Reduction in health care costs due to increased physical activity and reduced respiratory and cardiac disease
4. Reduction in fuel, repair and maintenance costs to users
5. Reduction of costs due to increased road safety
6. Reduction in external costs of traffic congestion
7. Reduction in parking subsidies
8. Reduction of costs of air pollution
9. Reduction of costs of water pollution
10. Positive impact of bicycle tourism
11. Positive impact of bicycle sales and manufacturing
12. Increased property value along trails
13. Increased productivity and a reduction of sick days and injuries at the workplace"
14. Increased retail sales in pedestrian friendly areas

f. As well, in a UK study published in 2017, researchers found that where employees transitioned from automobile trips to commuting by e-bike, increases in physical health, and more productive organizational behaviour outcomes were noted compared with passive commuters. In addition, there was an interactive effect of commuting mode and commuting distance: a more frequent active commute was positively associated with more productive organizational behavior and stronger overall positive employee well-being whereas a longer passive commute was associated with poorer well-being, although there was no impact on organizational behavior.

5.2.5 Financial Responsibility

a. The ATP plan must also be fiscally responsible from a long term perspective. The financial management also refers to the financial impacts and longer term implications and benefits of investing in active transportation not only from a capital works infrastructure perspective but also related to lifestyle, operations, maintenance, asset management, promotion and communication.

b. In particular, costs to implement the Active Transportation Plan is not limited to construction, funds are also required for the operation and maintenance of the active transportation network as well as education and encouragement initiatives to promote active transportation.

c. The various costs requirements and streams, whether they be construction or maintenance for example, need to be strategically identified and be aligned to ensure successful implementation and performance.

d. There are often financial management and implementation scenarios to capitalize on that can enhance the active transportation network and these often occur as part of other more broad initiatives. Economies of scale of projects and partnership opportunities, including grant monies from all levels of government must be considered as well as value for dollar over the longer term. For example, if portions of a sidewalk need replaced due to safety issues with condition, and the section is planned for an ultimate multi-use path, then consider advancement of the pathway.

6.0 Place and Planning Context

6.1 Overview

a. Active transportation in Whitby is supported by policies at the provincial, regional, and local levels. Strong policy is required to establish significant change and over the past number of years, planning policies have been reviewed, revised and refocused to support active transportation and sustainable development.

b. These regulatory and statutory policies and strategies that are adopted by all levels of government, help shape the way in which the community is designed and how it grows.

c. This section of the report includes an overview the key policies and plans at the various levels of government and the themes that emerge relative to active transportation. Information in the following sections also includes suggested policy considerations that should be integrated into local policy as they are reviewed, amended or developed to support long-lasting active transportation planning changes within the Town. Further details on these policies are provided in **Appendix D**.

6.2 Existing Policies and Themes

a. The provincial government provides a robust and prescriptive framework for the evolution of active transportation in urban, suburban and rural areas. These provincial policy documents include the conservation of natural features and the intensification of urban areas, which aim to support walking and cycling.

b. Regional guidance in active transportation is provided mainly through the Durham Region Cycling Plan (currently being updated at the time of this report preparation), Durham Regional Trail Network, and through participation on such Regional initiatives as the Active and Sustainable School Travel Program and Durham Regional Active Transportation Committee. Whitby connects with 7 adjacent municipalities and the plan must function within the context of a larger network allowing cyclists to move between neighbouring jurisdictions.

c. At the local level, the Town of Whitby has developed a number of plans and policies from which the Active Transportation Plan has drawn significant inspiration and guidance. These documents include the Town's Official Plan, Waterfront Trails and Open Space Plan, Cycling and Leisure Trails Plan, as well as various secondary plans and urban design guidelines that apply to specific communities and areas within the Town.

d. The most relevant policies at each level of government are presented in **Table 6.1.** These plans emphasize the need to connect Whitby's rural, urban and waterfront areas by more direct, convenient, and accessible active facilities, and enhance both on and off-road trails with a strong emphasis to/from/along the Town's Waterfront.

Table 6.1 – Summary of Policies and Key Themes

Location	Policies	Themes
Ontario	✓ Provincial Policy Statement ✓ Greater Golden Horseshoe (GGH) Growth Plan ✓ Ministry of Transportation Cycling Strategy ✓ Greenbelt Plan ✓ The Big Move ✓ Accessibility for Ontarians with Disabilities Act ✓ Oak Ridge Moraine Conservation Plan ✓ Municipal Class Environmental Assessment Act ✓ MTO Freight Supportive Guideline – Section 3.9	Includes the conservation of natural features and intensification of urban areas, aiming to support walking and cycling as an alternative or primary form of transportation.
Durham	✓ Regional Official Plan ✓ Regional Transportation Master Plan ✓ Regional Cycling Plan, Trails Network ✓ Durham Region Transit Bike & Ride Program, Bus Stop Design Criteria ✓ Cycle Durham Programming ✓ Durham Tourism	Provides a framework to help guide the ATP and ensure consistency between neighbouring municipalities.
Whitby	✓ Official Plan ✓ Waterfront Parks and Open Space Master Plan ✓ Downtown Whitby Pedestrian Safety Action Plan ✓ Brooklin Community Secondary Plan and Transportation Master Plan ✓ Port Whitby Sustainable Community Plan ✓ Whitby Transportation Master Plan ✓ Cycling and Leisure Trails Plan[1] ✓ Capital and Operating Budgets ✓ Development Charges Bylaw	Highlights the need to connect Whitby's economically significant, rural and waterfront areas and ley destinations by a more direct, convenient and accessible set of active transportation facilities while accommodating a range of routes for different trip purposes.

1 - Superseded by this plan

6.3 Future considerations

a. Policies are the planning tool which most directly influence community development and design thus having one of the greatest potential impacts. The Town of Whitby and its partners at the federal, provincial and regional level have some very strong policies which support active transportation. There are also emerging planning and design trends and considerations which should be addressed when existing policies are next updated or new policies are developed.

b. Over the course of the study, input was received from residents, stakeholders and staff about some of the key active transportation policy issues experienced within the Town of Whitby. Best practices and lessons learned from comparable municipalities were also considered. Using this input, a number of policy trends and considerations were identified and are discussed in the following sections and can be used to inform future relevant active transportation and related policy additions, revisions or amendments.

6.3.1 New Developments

a. When a new development is being designed, developers need to create an appropriate network within their development area that reflects and encourages active transportation and is consistent with the Town's Active Transportation Plan. The added value that these features provide can have a positive effect on the viability and prosperity of the development whether it be commercial or residential, and desirability of the surrounding community and neighbourhood.

b. In particular, the following are recommended for new developments:

    1. When integrating active transportation into new development areas, developers should consider topography, drainage, slopes, soil conditions, plant and animal communities, microclimates and human comfort, historic / cultural resources, public education and significant views and vistas. Trail alignment should consider limitations and opportunities in its design.
    2. The implementation of active transportation facilities within new development areas, particularly those that connect to existing and proposed active transportation routes, should be considered a priority. Developers should demonstrate where and how these connections are being made at the time of Site Plan application and for Draft Plans of Subdivisions.
    3. The Active Transportation Plan and relevant Engineering Design Standards should be provided to local developers to highlight the intended active transportation connections within various areas of the Town at the pre-consultation stage of new development. The proposed development plans should be reviewed and updated (as needed) early in the process to reflect the implementation of new facilities, connections and modifications to existing systems. New/improved facilities (both internal to a site as well as connections) should complement the Town's active transportation

system and be reflective of density, variety, hierarchy and character of the users and uses.

4. The consideration and inclusion of active transportation facilities throughout the development process; including at the various stages (DC bylaw preparation, draft plans, detailed design drawings, development agreements) should be explored.
5. Site plan requirements should be reviewed to ensure compliance with Active Transportation Plan requirements and to capitalize on new opportunities while considering the experience gained in past developments.

6.3.2 Retrofitting and New Capital Installations

a. Retrofitting projects includes Town projects to improve existing streets, as well as development opportunities through infill projects along active transportation corridors.

b. New installations may be those on existing street and park systems or implemented as part of a broader capital project.

c. Creating changes within established areas in an effort to support intensification and urban growth can be challenging. The implementation of new active transportation routes and facilities or the enhancement of existing facilities within established neighbourhoods is important to ensure that transportation planning reflects land-use planning. Though planned improvements are identified within a strategic planning document, they may prove to be more challenging when they get to the point of detailed design and construction and will require a considerate and collaborative consultation process.

d. The Whitby Official Plan sets out clear directions and policies regarding areas where intensification should occur and identifies the need for integrating land use and transportation planning.

e. It is important that the recommended improvements and programs noted in the ATP be inline and coordinated with the capital works identified in the Town's 10 Year Capital Budget Forecast and Development Charges Study, as well as in annual Operating Budgets. The source of funding for these retrofit and new installations is important to identify.

f. As part of the preparation of accurate cost estimates and detail designs for both the Town and Developer related projects, up to date and accurate Engineering Design Standards need to be maintained that are sensitive to the environment, consistent with new technologies and social desires, and sustainable from a financial life cycle perspective.

6.3.3 Consultation

a. Where new on or off-road facilities are proposed to be implemented or significant improvements are being made to the existing routes, differing levels of consultation may be required to advance the project through the detailed design and implementation stage.

b. The level of consultation required for individual projects could be impacted by project location, required design approvals, scope and complexity and whether or not the proposed link is part of the Active Transportation Plan or other Town planning policies. To respond to these considerations, the following levels of consultation can be used to guide projects or initiatives where necessary:

    1. **Notification** –projects proposed on Town-owned lands may need a public notice.
    2. **Focus Group Sessions** – an outcome of a neighbourhood meeting where revisions to the design concept are made to move forward with approvals.
    3. **Consultation for Environmental Assessments** – where a project triggers an Environmental Assessment study and consultations are completed to meet Environmental Assessment requirements.

c. When exploring the proposed consultation levels, the different groups that need to be consulted must be considered, such as the relevant Committees of Council, input from seniors, youth and individuals with disabilities are all important to capture. The intent of the Active Transportation Plan is to build a network through projects and initiatives that can be used by people of all ages and abilities.

d. Promotion of public consultation and involvement in the planning process is considered a regular practice in the Town and is outlined in the Town's Official Plan and other guiding documents and policies.

e. When a project progresses to the next steps of implementation, the appropriate means of consulting with the public should be determined through a thoughtful and effective stakeholder assessment and engagement strategy. Engagement should be tailored to the project and the objectives of the assignment and should build upon the consultation that has already been completed through this plan and other related studies/initiatives.

6.3.4 Cycling on Sidewalks

a. The Highway Traffic Act (HTA) has been interpreted by transportation and local enforcement professionals to prohibit cyclists from riding on a sidewalk unless authorized by a specific municipal by-law and/or directed by traffic signs or traffic control devices. A bicycle is defined as a vehicle under the HTA and states that a vehicle (including bicycles) shall be operated in a traffic lane. A sidewalk is not considered a traffic lane.

b. The Ontario Traffic manual Book 18 (OTM-18, Ontario's guide for design and provision of cycling infrastructure) defines a sidewalk as a travelled way intended exclusively for pedestrian use.

c. According to the Provincial Manager of Specialized Patrol from the Ontario Provincial Police, the HTA does not specifically state that a bicycle cannot be operated on a sidewalk but designates that a vehicle is to be operated in a lane and a sidewalk is not a lane. Given the OTM-18 definition of a sidewalk and the HTA provisions for vehicle travel, a cyclist is expected to operate a bicycle within a traffic lane or bike lane, unless otherwise permitted.

d. Currently within the Town of Whitby, cycling on sidewalks is not legally permitted. However, due to the lack of dedicated and separated cycling facilities and/or a lack of a sense of comfort and safety, there are still a number of people of all ages and abilities who chose to cycle on sidewalks. Typically cycling on sidewalks is not enforced by Durham Regional Police Services.

e. Relevant policies and traffic by-laws should be updated to permit youth (e.g. children under the age of 12) and/or vulnerable users to ride on the sidewalk. Additional tactics will be needed as policies are updated to educate individuals on proper facility use and location.

6.3.5 E-Bikes and Micro Vehicles

a. A definition of motorized and non-motorized personal vehicles should be added to Whitby's traffic and parks by-laws to enable enforcement of by-laws related to use of trails, sidewalks and multi-use pathways.

b. An e-bike is a two or three-wheeled vehicle having an electric motor. Micro-vehicles are small vehicles generally for a single user which are powered by a small motor. Examples of micro vehicles include powered mobility devices, hoverboards, powered skateboards, e-scooters and so on.

c. A more detailed definition of what e-bikes are and regulations on where it is appropriate to use them have been defined and adopted by the Ministry of Transportation. These regulations provide municipalities with some challenges on where and how e-bikes and micro-vehicles should be permitted.

d. E-bike use is currently not enforced. Riders typically use the space in which they feel most comfortable. E-bikes are technically guided by high level policy i.e. Highway Traffic Act. Any enforcement or practice related to safe and appropriate e-bike movement would need to be consistent with those regulations. For micro-vehicles there is emerging legislation and policy guidance continues to be reviewed and developed.

e. E-bikes are currently restricted (Parks Bylaw 7419-18) from the current trail system, sidewalks and multi-use pathways within the Town. Motorized mobility devices however are permitted for accessibility reasons.

f. There remains numerous safety and conflict issues mixing the e-bikes with the pedestrian and cyclist off road community, and further options to safely accommodate emerging technologies such as e-bikes, needs further exploration and design review. Provincial legislation also continues to evolve on this matter and it is necessary to continue to monitor best practices and any changes in governing legislation regarding both e-bikes and micro-vehicles including autonomous vehicles.

g. There should be additional consideration for how e-bikes and micro-vehicles can be integrated and accommodated into the active transportation infrastructure which uses bicycles as the design speed.

h. Where safely possible and practical, e-bikes (as defined by design parameters such as speed, throttle, weight) and micro-vehicles should be considered, as future transportation systems, including those related to active (excluding e-motor cycles), are planned and designed. The appropriate by-laws, education, signage etc. would need to be developed in concert with such installations.

i. There may also be specific applications where controlled use of e-bikes and micro-vehicles can be used by municipal agencies such as by police and emergency services for use for patrols and emergency access, and maintenance staff while performing duties.

6.3.6 Amenities

a. “Gateway” entries to the Town and “Trail Head” features along major active transportation networks such as the Waterfront Trail and arterial multi-use paths will show users Whitby’s commitment to active transportation. These Gateways and Trail Heads should consider the inclusion of amenities such as washrooms, waste receptacles, benches, signage and wayfinding, bicycle parking and vehicle parking where applicable, to make active transportation users feel welcome.

b. Gateways should be correlated with the Official Plan community gateways in order to avoid duplication of effort and to ensure consistency of design.

c. Rest areas should be implemented along the active transportation routes to provide users with a comfortable location to stop during a walk or cycle trip. Rest

areas may include the features of lighting, seating, parking, signage, waste receptacles, bike repair stations, water stations, washrooms, etc.

d. Existing rest areas should be audited for improvements in signage and facilities to serve active transportation users. Retrofits may include provision of bike parking, water bottle fill stations, signage, etc.

e. Mobility hubs which serve as a community gathering point for tutorials and engagements should be considered. The hubs should include an all-weather “classroom”, Wi-Fi connectivity, tools and repair facilities, and water station.

f. The Town’s Official Plan recommends development be designed and located so that people can walk to services and amenities, and that tourism include recreational mobility users by encouraging cycling and walking to and from open space systems and trails.

g. End of trip facilities can be implemented throughout the Town at key destinations i.e. community centres or retail nodes. End of trip facilities could include water stations, showers, change rooms, bike rooms, lockers, bike repair stations, etc.

h. End of trip facilities and rest areas should be provided at strategic locations (e.g. GO Station, major transit nodes, District Parks, Shopping Districts, Libraries) where users are expected to stop in Whitby. Refer to **Section 7.0** for additional details about the design of active transportation amenities.

7.0 Culture Change

7.1 Overview

a. Culture change considers how urban mobility initiatives can help encourage and promote active transportation and the adoption of healthier transportation options to reduce social barriers and foster a shift towards a more active community.

b. The need for community-based outreach and initiatives that: **Engineers** solutions**, Encourages** users**, Educates** the community**, Evaluates** work completed, and provides **Equity** for all users**,** to influence a shift of mobility from vehicles to active modes, is the basis of this section of the report and includes:

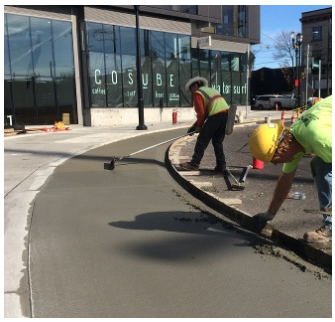
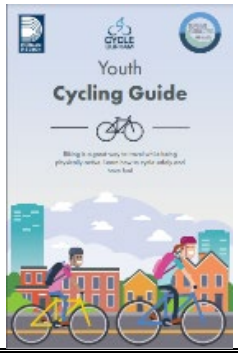
   1. An overview of the **Five E Approach**, definitions of each of the elements and suggested best practices from comparable municipalities.
   2. A set of recommended initiatives and strategies designed specifically to respond to the wants and needs of all users that can be used in active transportation planning decision making.
   3. Suggested strategies to build upon and integrate elements of community-based marketing to target specific groups and individuals for meaningful behavioural change.

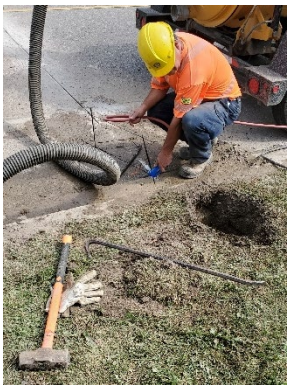
7.2 Five E Overview and Best Practices

a. Beyond facilities and routes, more must be done to encourage and educate people on the benefits and opportunities of active transportation. Programming to encourage utility and commuter users are required. Moreover, evaluation and enforcement of facilities and rules are needed to help improve and enhance the active transportation network from the user perspective.

b. The **Five E's** refers to initiatives, strategies and policies which address **Engineering, Encouragement, Education, Evaluation and Equity**. Together, these initiatives along with the active transportation network form the plan to shift from a car focused community to one that embraces and uses more human powered transportation for recreation as community activities. Summarized in **Table 7.1** is a description of the Five (5) E approach, along with the best practices and initiatives that should be considered by the Town and in the ATP.

Table 7.1 – Five "E" Overview and Best Practices

Description	Purpose	Best practices for Consideration
Engineering 	Create safe and convenient places to walk, ride and roll and consider land uses which are supportive of active forms of transportation.	✓ Implement effective and well-designed transitions between different facility types ✓ Identify design solutions for high conflict areas ✓ Design facilities for comfort, safety and accessibility ✓ Provide and strategically locate end-of-trip facilities ✓ Consider active transportation at the outset of development.
Encouragement 	Build community and reason for active transportation as a cultural feature of the Town of Whitby.	✓ Create programs, and prior to implementation, identify desired behaviour changes and barriers ✓ Create incentive programs and challenges for residents. ✓ Ensure designs that accommodate all users (age/ability) ✓ Work with local employers to pilot programs
Equity 	Ensure active transportation is available to a diverse community of users	✓ Build facilities that are accessible and available to all ages and abilities. ✓ Include educational components that focus on marginalized and under-represented communities. ✓ Hold inclusive, intersectional events focused on encouraging diversity in the urban mobility community.
Education 	Teach people of all ages and abilities the skills they need to use active transportation safely.	✓ Make information easily accessible ✓ Partner with not for profit organizations and local agencies ✓ Utilize existing platforms such as local newsletters, Town webpages, social media platforms, etc. ✓ Target centralized/popular locations

Description	Purpose	Best practices for Consideration
Evaluation 	Monitor the success of the Active Transportation Plan – infrastructure, programs and planning – and undertake complementary initiatives to reinforce active transportation in Whitby	✓ Application of ongoing and continuous evaluation tactics to gauge potential change and influence ✓ Establish partnerships with local agencies, stakeholders, clubs / organizations ✓ Develop and apply of a range of measures including planning, engineering and design considerations ✓ Integrate technology and manual documentation

7.3 Future Considerations

a. Several initiatives to improve the culture of active transportation in Whitby have been identified and represent those gleaned through engagement with the public and stakeholders, discussions with staff and best practices.

b. While each of the proposed initiatives will help achieve key outcomes of building rapport with residents and visitors regarding active transportation, it is important to acknowledge that it will take a significant amount of effort to pursue, implement and maintain each of these initiatives.

c. To focus the Town's efforts, nine (9) priority initiatives have been identified and are discussed in the following sections and have been based on the project objectives, input from staff and stakeholders, as well as the overall Vision for the plan.

d. The Town of Whitby will be responsible for the implementation of these initiatives along with input from key partners, including but not limited to those identified below:

- ✓ Active Transportation and Safe Roads Advisory Committee
- ✓ Road Watch Committee
- ✓ Region of Durham and other area municipalities
- ✓ Local Cycling/Trail Clubs, Waterfront Trail Trust, Greenbelt Foundation
- ✓ Central Lake Ontario Conservation Authority
- ✓ School Boards
- ✓ Local and Downtown businesses and property owners
- ✓ Office / Building managers, BIA and Chamber of Commerce representatives
- ✓ Whitby Library
- ✓ Durham Regional Police Service (DRPS) and OPP
- ✓ Public health agencies

- ✓ Transportation providers (e.g. Durham Transit, private transport services)
- ✓ Local Bike shops and equipment suppliers
- ✓ Durham Region Tourism
- ✓ The Centre for Active Transportation
- ✓ Durham Outdoors Club

e. Together, these initiatives are intended to help form a culture shift and build rapport between the various agencies and stakeholders and the public with regard to active transportation in the Town of Whitby.

7.3.1 Signage and Pavement Markings

a. **Guiding Principle** - design a consistent wayfinding, signage and pavement marking program for trails and active transportation routes throughout the Town of Whitby. To achieve this, the following is recommended:

1. Utilize best practices in design standards such as OTM Books 15 and 18.
2. Determine whether an internal or external approach is needed and develop a Request for Proposal (as needed).
3. Develop an Etiquette and Wayfinding concept for Whitby active transportation routes.
4. Identify and map routes where signage will be applied.
5. Develop criteria for and identify where and when routes, trails and active features should have markings such as centre lines, cross rides, etc.
6. Implement signage and wayfinding consistent with user needs and expectations. Focus first on key routes such as the Waterfront Trail and recommended Spine Network.
7. Establish an education campaign and a **"Marketed Strategy"** around use of the wayfinding cues and pavement markings.

b. Relevant examples that can be referenced for this action item include:

1. Thunder Bay Wayfinding Study
2. City of Hamilton Wayfinding Study
3. Town of Orangeville Directional Wayfinding Master Plan

7.3.2 Bike Parking

a. **Guiding Principle** - Install bike parking at strategic locations (e.g. parking lots, store fronts) throughout the Town to encourage increased ridership and active transportation use. To achieve this, the following is recommended:

1. Work with partners, e.g. businesses, to identify specific locations to install bike racks in locations that are visible, accessible and have the potential to increase ridership.

2. Develop a bike parking standard for use in development applications. This standard should include a bike parking ratio as well a physical standard for acceptable bike parking facilities.
3. Purchase bike racks designed to build on the concept created for the signage to meet current and anticipated demand.
4. Develop promotional and educational materials to inform residents of bike rack locations and how to use them. Distribute materials at local events or make them available at centrally located venues.

b. Relevant examples that can be referenced for this action item include
   1. Toronto District School Board Bike Rack Program
   2. Ingersoll BIA Bike Rack Initiative

7.3.3 Urban Connections

a. **Guiding Principle** - Work with partners (local businesses, local clubs, Downtown Steering Committees) to distribute materials at Town events and key community destinations connecting to downtowns. To achieve this, the following is recommended:
   1. Develop promotional materials to educate active transportation users on existing routes that connect to the downtowns, supportive active transportation amenities in the downtowns and the implementation of new routes connections.
   2. Develop hard-copy promotional materials and utilize information contained within the Active Transportation Plan report i.e. maps or other resources.
   3. Design an online / social media education campaign.
   4. Launch social media campaign including potential hashtag #WhitbybikeDT or #CycleWhitbyDT and social media contest.

b. Relevant examples that can be referenced for this action item include
   1. Barton Village BIA – Cycling on Barton
   2. City of Edmonton Downtown Bike Network

7.3.4 Programs for Youth

a. **Guiding Principle** - develop youth specific programs and materials to encourage students to engage in active travel to / from school. To achieve this, the following is recommended:
   1. Reach out to school communities to identify schools willing to participate in a pilot program.
   2. Develop programs and promotional materials to educate and engage students. The programs could be based on a one-day activity or a longer

more competition based activity. Target specific grades or populations with programming i.e. Grade 5 active pass.

3. Distribute materials to schools to support promotion.
4. Develop a completion survey and conduct a review of pilot program's success once completed.
5. Work with community agencies to promote cyclebility

b. Relevant examples that can be referenced for this action item include
    1. Metrolinx Stepping It Up pilot program
    2. Ottawa Safety Council "Walksafe 2020" program. CycleSafe Program
    3. Durham Region Youth Cycling Guideline.

7.3.5 Active Transportation Friendly Businesses

a. **Guiding Principle** - Partner with local businesses (through agencies such as the BIA and Chamber of Commerce) to identify business specific approaches to encourage and support active transportation. To achieve this, the following is recommended:
    1. Undertake a workshop on "bicycle friendly" practices and approaches to support cycle tourism and patrons engaged in active travel and invite local BIA and Chamber of Commerce representatives.
    2. Provide supportive materials and tactics to local businesses to improve active transportation encouragement.
    3. Conduct regular audits to assess success of approaches and number of patrons who have travelled by foot / bike.
    4. Businesses offer water bottle filling.
    5. Acknowledge Bicycle Friendly businesses annually.

7.3.6 Website and Application

a. **Guiding Principle** - develop a dedicated website/page to serve as the central source of information regarding active transportation in the Town of Whitby. To achieve this, the following is recommended:
    1. Determine whether the existing active transportation webpage is sufficient for promotion or if a new external site should be developed.
    2. Depending on the outcome, identify the need to design an active transportation specific app/webpage that is mobile-friendly.

3. Work with Corporate Communications and Community Services to establish a “brand” for the Town’s active transportation initiatives.
4. Provide mapping which shows walking zones, crossing guard locations, and traffic control for all schools within Whitby.
5. Ensure the applicable website is updated as needed.

b. Relevant examples that can be referenced for this action item include
   1. County of Essex CWATS
   2. Cycle, Walk, Oakville

7.3.7 Monitor and Evaluate

a. **Guiding Principle** - Identify and implement a monitoring and evaluation program to assess the implementation of the Active Transportation Plan and how active transportation infrastructure / programs are being used in the Town and utilize technology to support these initiatives building on existing technology and data collection practices. To achieve this, the following is recommended:
   1. Work with committee members, the Durham Regional Police and Ontario Provincial Police to identify a set of measures to form a monitoring program.
   2. Utilize existing tools to document input regarding active transportation conditions and that specific modules be explored for active transportation data collection.
   3. Procure trail or bicycle / pedestrian count equipment or contract a traffic counting firm to count active transportation users.
   4. Consult with Conservation Authority staff and local clubs to determine locations to install equipment i.e. install equipment along key routes including Town roads, Regional roads, off-road trails in conservation area lands, the Waterfront Trail, etc.
   5. Create an annual report to summarize results from data collection.

b. Relevant examples that can be referenced for this action item include
   1. TRCA Monitoring and Assessment
   2. Oakville – Livable Oakville Performance Dashboard
   3. Hamilton active transportation Benchmarking Program
   4. Oakville Cross-Town Trail

7.3.8 Urban Mobility Hubs

a. **Guiding Principle** - Identify location(s) within the municipality where a community space for active users can be provided with open and accessible programming including learn-to-ride, bike repair, active routes, and where urban commuting topics are discussed. The hub can be identified and implemented to support active transportation initiatives. To achieve this, the following is recommended:

    1. Identify a location where a mobile Active Transportation hub could be home-based, based on the existing user information, as well as access to existing and future facilities. The facility should be municipally owned.
    2. Identify a design for the potential hub “pad” where the services will be housed and provided.
    3. Work with the ATSRAC committee to identify the services that will be provided at the hub and to reach out to community partners to help with coordination.
    4. Design and implement the hub and develop a launch event and promotional tools to increase awareness.

b. Relevant examples that can be referenced for this action item include

    1. Scarborough Community Bike Hub
    2. Building Bike Culture Beyond Downtown

7.3.9 Celebrate Active Transportation Successes

a. **Guiding Principle** - Develop social media and community tools to report active transportation successes and landmarks including newly implemented routes, datasets/infographics, upcoming events and new promotional information. To achieve this, the following is recommended:

    1. On the Town’s webpage post active transportation “success stories.”
    2. Work with members of the ATSRAC to generate content i.e. interviews with local active transportation users, promotion of new routes, etc.
    3. Develop content / graphics that can be used on the Town’s webpages and social media pages.

b. Relevant examples that can be referenced for this action item include

    1. CWATS Project Highlights
    2. City of Ottawa Cycling News and Events

8.0 Engineering Realm and Partnership Management

8.1 Overview

a. The Engineering Realm and Partnership Management refers to the various elements of design and implementation that will need to be considered including not only to route facility types, but points along the network where decisions are made. In particular, it includes:

   1. Accepted design guidelines and standards, best practices (e.g. OTM Book 15 and 18) and processes that are recommended for use in the planning, design and layout of proposed active facilities.
   2. A systematic process to facilitate the effective implementation of the active transportation network from feasibility through the detailed design, budgeting and construction stages.

b. While engineering is not the only element of a successful active transportation plan, it does provide the blueprint for future planning, design and implementation of active transportation routes, facilities and other supportive amenities.

c. Moreover ongoing partnerships will be needed to achieve a coordinated design and implementation strategy recognizing the various jurisdictions that have ownership of the existing and proposed network.

d. The notion of a “human mobility first” design realm has been suggested as the template for future streetscapes. This notion embraces active travel included as a primary mode of transportation. Without the facilities and a shift towards more comfortable and safe design principles, there will be limited changes made to community behaviour.

e. Engineering includes the planning and design of the Town’s active transportation network, including physical route alignment, facility types and various supportive enhancements. Active plans and designs are intended to be consistent with widely-accepted guidelines and standards for cycling, pedestrians and active transportation design.

f. This section of the report outlines existing considerations to aid practitioners in the planning and design of the various components of the active transportation network, as well as future considerations to guide in its implementation.

8.2 Guidelines and Standards

a. There are a number of design guidelines and standards that are available when considering pedestrian facilities, cycling, and multi-use trail design. While resources exist at all levels of government, provincial guidelines and standards are considered to be the most applicable and should be the primary resource in the planning, design and implementation of active transportation infrastructure.

b. When designing the network, a mixed and complimentary design realm should be embraced while also recognizing that there may be competing needs and disparate mobility desires. For example, considerations for various realms, uses and users should be reviewed and incorporated in designs such as:

    1. An active transportation design realm to encourage pedestrian interactions (art, rest stops and amenities).

    2. An active transportation design vehicle to accommodate accessibility (wheelchair or walker).

    3. A separated cycling facility design speed (e.g. 30 km/hr) to accommodate commuter cyclists.

    4. A design realm that considers user safety, Complete Streets and Vision Zero as key guiding principles to encourage more users.

c. Provided in **Table 8.1** is a summary of the various documents that provide design standards, guidelines and best practices that contain active transportation that should be referenced by the Town and its partners as they move forward with the implementation of the active transportation network. A highlight of the main elements of these documents include a number of important references, such as:

    1. Design guidelines for trails and active transportation in the public realm including parks, open spaces, road network and streetscape elements.

    2. The road network by road classification and active transportation routes by roadway type.

    3. Design considerations including sidewalks, pedestrian crossings, enhanced intersections, trails, multi-use pathways and active transportation integration with transit.

    4. Guidelines to inform the development review process and ensure a blended approach when planning and designing the public realm and development lands.

    5. Accessibility standards and design guidelines to enhance pedestrian circulation and barrier-free pedestrian networks.

    6. Design guidance for trails and active transportation infrastructure in key areas of including the downtown, gateways, intensification corridors, neighborhoods, and employment districts.

d. It should also be noted that the Ontario Traffic Manuals Book 15 (Pedestrian Crossing Treatments) and Book 18 (Cyclist Facilities) are the most current municipal references for active transportation planning and design in Ontario. These are key documents that should be considered in building the Town's

Active Transportation Plan. At the time this report was prepared, the Ontario Traffic Manual Book 18 is in the process of being updated to reflect best practices and emerging active transportation innovations.

Table 8.1 – Existing Design Guidelines and Resources for Active Transportation

Area	Guideline
Local	✓ Design Criteria and Engineering Standards, Whitby ✓ Town of Whitby Official Plan ✓ Town of Whitby Transportation Master Plan(s) ✓ Whitby Cycling and Leisure Trails Plan ✓ Parks and Open Space Master Plan ✓ West Whitby Architectural/Urban Design Guidelines ✓ Brooklin Urban Design Guidelines
Regional	✓ Regional Cycling Plan ✓ Durham Region Transportation Master Plan ✓ Durham Region Design Guidelines ✓ Arterial Corridor Guidelines
Provincial	✓ Accessibility for Ontarians with Disabilities Act – Built Environment Standards ✓ Ontario Traffic Manual Book 12 Traffic Signals ✓ Ontario Traffic Manual Book 15: Pedestrian Crossing Treatments ✓ Ontario Traffic Manual Book 18: Cycling Facilities ✓ Ministry of Transportation Ontario Bikeways Design Guidelines
National	✓ Transportation Association of Canada Geometric Design Guide for Canadian Roads ✓ Transportation Association of Canada Bikeway Traffic Control Guideline for Canada
International	✓ National Association of City Transportation Officials Urban Bikeways Design Guide and Urban Street Design Guide ✓ American Association of State Highway and Transportation Officials ✓ ITE: Protected Bikeways Design Practioners Guide

8.3 Future considerations

8.3.1 Partnership Management

a. Delivery of the Town's urban mobility portfolio depends on the collaboration and coordination of all internal Departments, as well as with interested/stakeholders and Committees, the private sector, and with external agencies such as Durham Region, the Province, Conservation Authorities, School Boards, and so on. Many of these partners have been identified in **Section 1** of this report.

b. When considering partnerships, it is important to understand where the proposed active transportation network is located or maintained. From a user perspective, jurisdiction should not impede the network. It is critical for all contributors and partners to work together in creating a strong urban mobility network.

c. One of the primary goals of the plan is to identify and design a continuous and connected system of on and off-road active transportation facilities to address the interest of people of all ages and abilities. As such, the routes and facility types that form Whitby's urban mobility network should be continuous through jurisdiction changes.

d. The implementation and management of individual plan elements goes beyond who will build and pay for the plan. It speaks to the cooperation of various partners whom each have a role in the Active Transportation Plan and collectively, contribute to the successful delivery of recommendations contained within the plan.

e. It is critical that a proactive and concentrated effort be put forth by the Town in the development, fostering and maintenance of respectful and meaningful partnerships so as to ensure the successful implementation of a well balanced and effective active transportation system and to achieve the Vision and Goals articulated in this ATP.

8.3.2 Physical Implementation Process

a. The construction/implementation of an active transportation facility requires a number of steps, often in an iterative process. Consistent with provincial best practices, a multi-step process can be applied to identify, review, design, implement, and monitor new facilities.

b. This five-step process, as shown in **Table 8.2** (source OTM Book 18), shows the proposed routes from plan adoption through to implementation and policy review.

c. The development of an ATP is part of the first phase of this iterative process and is often followed by refinements in budgetary elements and partnerships.

d. Partners in the implementation need to include other agencies as well as the development community. As new developments are planned and constructed,

and as facilities are added to the urban mobility network, it is important that consideration is given to the integration of the active transportation network and destinations along it. Integrating active travel into site plans to ensure local connectivity to destinations is critical to achieve the Vision of this plan.

Table 8.2 – OTM Book 18 – 5 Step Implementation Process

Stage	Purpose
1. Preliminary review When any project moves to the planning stage, or when a new opportunity arises, a preliminary review should be completed to consider responsibility, timeline, cost-effectiveness, and feasibility per the OTM Book 18 5-step process.	Identify routes to be implemented as part of the active transportation network.
2. Feasibility assessment A feasibility assessment should consider route selection criteria, design principles, characteristics, and context-specific considerations. A preliminary functional design should be prepared, potentially at the same time as a municipal class environmental assessment.	Evaluate identified active transportation routes. Conduct assessment based on engineering best practice processes.
3. Design, tender and construction Detailed design should be completed based on guidelines and standards. The phasing should be consistent with the plan. Construction is completed during this stage, and the Town should explore partnerships for cost-sharing and update the mapping database to reflect the status of the project.	Design, tender, and construct the selected active transportation route that has been assessed from a feasibility perspective.
4. Monitoring Following construction, the active transportation facilities should be monitored to ensure functionality. The facilities should be properly maintained and upgraded when necessary.	Monitor the active transportation facility to determine whether it is functioning well and being maintained appropriately.
5. Policy/Plan updates When appropriate, policies should be updated to reflect the status of the active transportation network.	Update Town documents to ensure that they are reflective of the latest legislation from upper-tier governments.

8.3.3 Network Management Tools

a. The following tools have been developed to support the implementation of the active transportation network. Together they are meant to be used by the Town for asset management and implementation of the Active Transportation Plan:

1. GIS Database

- All information related to the active transportation network has been organized into a geographic information system database. The database was developed based on information provided by the Town and updated as part of the active transportation process to include more detailed route information including facility types, phasing, etc.
- The updated database can be used to track the implementation of the active transportation network. The database should also be updated on an ongoing basis as projects are delivered or changes are made to the network, phasing and project details.

2. Google Earth KML Database

- During field investigations geo-referenced waypoints and pictures were taken to document route conditions and characteristics. Together with the geographic information system database, these photos and waypoints are used to develop a KML file which geographically positions the photos and waypoints in Google Earth. The information can provide a graphic representation of unique conditions to more clearly highlight their location and communicate the characteristics that are present on the route.
- The geo-located photos can be used to support the implementation of proposed routes that are completed and as a communication tool to help residents, stakeholders and partners understand questions or concerns that arise as they proceed with detailed design and construction. Similar to the GIS database, the KML file should be updated as photos of active transportation facilities – both existing and proposed – are gathered.

3. Excel Database

- Though the GIS database is an effective tool, there are typically few staff members who require direct access to the information contained within the database. To expand the use and understanding of the active transportation network information, an Excel database has been created containing the same information as the GIS database. The file should be updated on a regular basis provided to those who require it for day to day work. In addition to the information contained within the GIS database, the Excel database contains additional information related to costing for each of the proposed routes. This information is intended to be used to inform budget discussions on an annual basis with Council and other municipal departments as well as external stakeholders.

Part III – Downtown Whitby Pedestrian Safety Action Plan

a. The Town of Whitby is pursuing a goal in that Downtown Whitby becomes a more vibrant and inviting space where people want to work, play and shop and have the opportunity to use other non vehicular modes of transportation like transit, walking and cycling.

b. Recently Council adopted a set of goals for the 2018-2022 period which included the goal of **Accelerating the Pedestrian Focus of the Town's Historic Downtown Cores.**

c. To assist in achieving this goal, a Special Study was undertaken (refer to **Appendix E for the full report**) for Downtown Whitby that included examining essential elements that influence pedestrian mobility and actions including safety, comfort, connective and accessibility. By developing a strategic action plan to improve these elements, the aim will be to improve the experience for pedestrians and encourage an increase in the tendency for people to favour walking.

d. While the Downtown Whitby Pedestrian Action Plan was prepared as a standalone document to support a Complete Streets approach to Whitby's downtown heritage neighbourhoods and surrounding areas, it has been incorporated into this broader Active Transportation Plan as it shares many of the same objectives, principles and resulting recommendations. It can also be used to support future improvements and recommendations for Downtown Brooklin.

9.0 Downtown Whitby Pedestrian Safety Action Plan

9.1 Overview

a. The intent of the Downtown Whitby Pedestrian Safety Action Plan is to help in the creation of a benchmark downtown area which has distinct cultural and heritage nuances and which is inviting as a destination. The work to transform the urban core will involve creating a "pedestrians first" space and planning context and an inviting area using textures and streetscapes that function to draw pedestrians in to a defined realm. This special plan is an example of Whitby taking ownership and pride in its heritage neighbourhoods and showcasing what a downtown designed for all ages and abilities can offer.

b. Downtown Whitby is intended to become a more vibrant and inviting place where people who work, play and shop can embrace all modes of transportation like transit, walking and cycling, rather than the current auto-centric modal split. As a companion report to the Active Transportation Plan, the Downtown Whitby area has been treated as a Special Study Area, intended to be integrated within the Active Transportation Plan.

c. Provided in the following sections is a highlight of the key findings of the Study. The details of the implementation proposal are included in **Section 10.3** of this report. The comprehensive report for the Downtown Whitby Pedestrian Safety Action Plan can be found in in **Appendix E**.

9.2 Study Objectives

a. The objective of the Downtown Action Plan has been to consider all modes of transportation for all user groups with an emphasis on creating and encouraging a walkable Downtown that supports the Town Council's goal to build downtowns that are pedestrian-focused destinations.

b. To accomplish this objective, a holistic Complete Streets approach was applied that ensures all elements of the road right-of-way are planned, designed, operated and maintained to support a balanced and safe use by all roadway users: vehicular traffic, pedestrians, and cyclists.

c. It should be noted that the objective of the Downtown Action Plan is not the full and immediate reconstruction of the pedestrian realm servicing the Downtown Area, but to provide the Town with a set of measurable actions and recommended strategies that – in time, will improve the safety and comfort of the pedestrian infrastructure servicing the area.

d. To integrate and compliment the work and recommendations from the Downtown Action Plan with that other key guiding documents, such as the Parking Master Plan (currently being finalized) and future Downtown Whitby Secondary Plan.

9.3 Guiding Principles

a. The following guiding principles were utilized to lead the direction of the Downtown Study:

    1. The pedestrian infrastructure should provide connectivity between origins and destinations.
    2. The pedestrian infrastructure should be accessible to all.
    3. The pedestrian infrastructure should be safe and comfortable.
    4. The pedestrian infrastructure should consider the interaction with other modes of transportation.
    5. The pedestrian infrastructure should provide a positive environment.

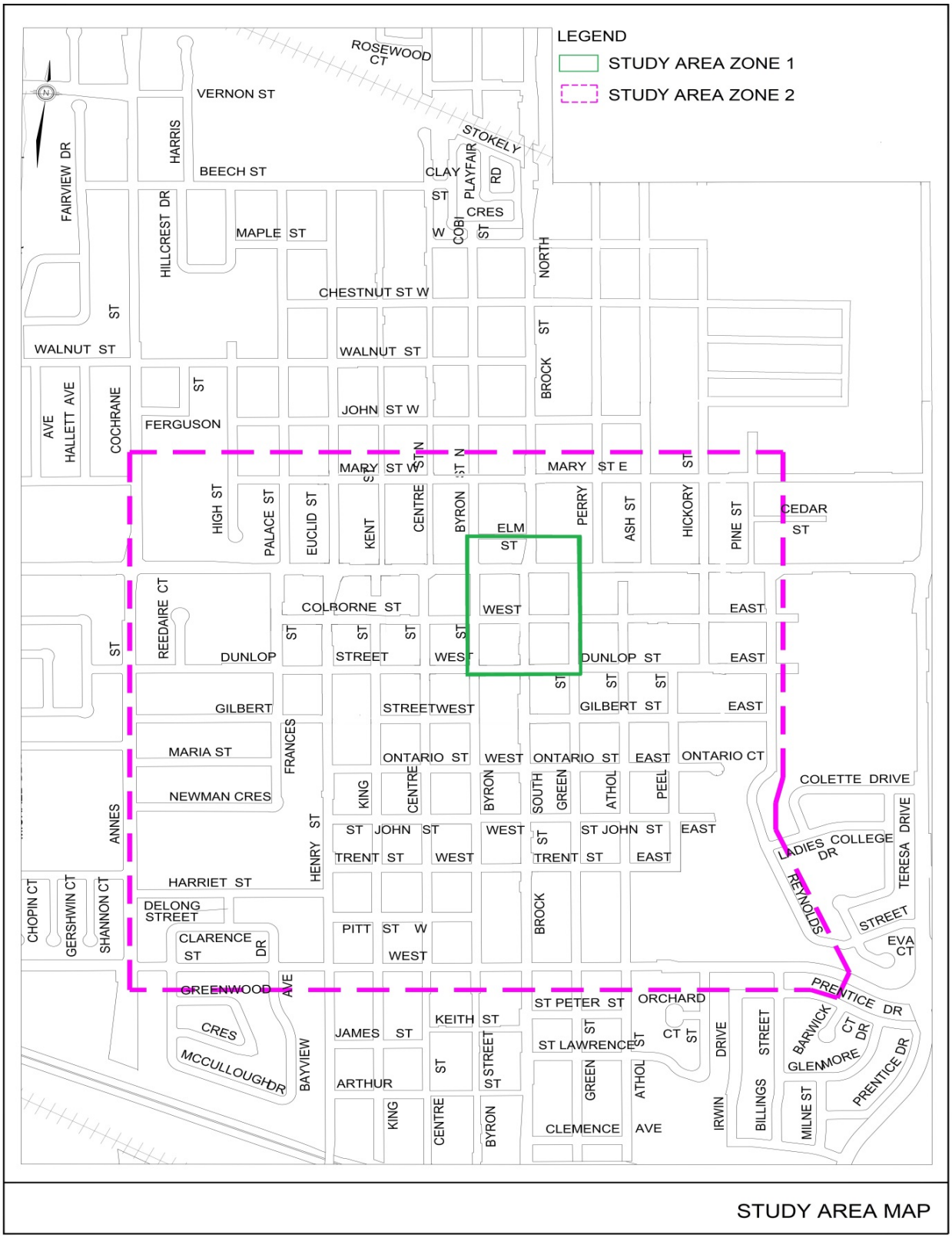
9.4 Study Area

a. There were two zones as shown in **Figure 9.1** that indicate the main areas of emphasis for this Study, they are:

    1. Zone 1 which indicates the core heritage area of Downtown Whitby and is bounded by Elm Street to the north, Dunlop Street to the south, Green Street to the east, Bryon Street to the west.

    2. Zone 2 which indicates the overall Downtown area and is bounded by Mary Street to the north, Burns Street to the south, Annes Street/Cochrane Street to the west and Reynolds Street to the east.

b. It is within these two zones that physical and operational improvements and modifications were reviewed and considered.



STUDY AREA MAP

Figure 9.1

9.5 Potential Improvement Opportunities

a. As part of identification of potential improvements for the Downtown, field reviews were undertaken to gain an understanding of existing pedestrian and bicycle facilities, travel patterns, and any elements that may enhance or compromise safety for users. The area was sub-divided by corridor and neighbourhoods to consider contiguous areas in terms of neighbourhood and street character.

b. These field reviews included an inventory of gaps in the pedestrian network and insufficient sidewalk widths (refer to Tables 17 and 18, respectively of the detailed study report in **Appendix E**).

c. Based on the field and analysis of information, a summary of the main findings and potential opportunities for consideration were developed and are summarized in **Table 9.1**.

Table 9.1 – Potential Improvement Opportunities

Location	Pedestrian safety related actions and strategies for consideration
Dundas Street between Henry Street/Euclid Street and Hickory Street	✓ Pedestrian crossings on Dundas Street ✓ Reduction in the number of vehicle travel lanes on Dundas Street ✓ Reduce speed limit to 40km/h ✓ Enhancement of transit related infrastructure
Brock Street between Mary Street and Dunlop Street	✓ AODA compliant features at intersections ✓ Wider sidewalks with trees and street furniture ✓ Pedestrian crossing at Brock/Colborne Streets ✓ Reduce speed limit to 40km/h
Dundas Street and Brock Street Intersection	✓ Channelization improvements to reduce crossing distance and pedestrian exposure ✓ Add AODA compliant features
Central residential/commercial area bounded by Mary Street, Gilbert Street, Henry Street and Hickory Street	✓ Provide benches and bike parking and other ✓ AODO compliant features at intersections ✓ Reduction in the 50 km/hr posted speed limit
Residential Area South of Dunlop Street and North of Burns St	✓ Pedestrian crossing on Brock Street at Trent Street ✓ Consider sidewalks on both sides of local roads ✓ Crosswalk improvements where needed ✓ Curb extensions to reduce crossing distance ✓ Consider Brock Street road diet (i.e reduce lanes/width) ✓ Make sidewalks continuous throughout area ✓ Enhancement of transit related infrastructure
Rights of Ways and Municipal Parking Lots	✓ Provide amenities to support and encourage walkability, such as bicycle parking, benches, washrooms, safety zones, call boxes, etc.

9.6 Public and Stakeholder Consultation

a. As part of the review of the various alternatives, public and stakeholder consultation was undertaken to present the findings and receive comments on the potential improvement solutions.

b. A summary of the comments provided by the public is presented **Appendix E** (refer specifically to Tables 21 and 22).

9.7 Recommended Alternative Solutions and Concepts

a. A diverse set of engineering, urban design and streetscape treatments were considered as recommended alternative solutions for the study area to be further carried forward for consideration. These are outlined in **Table 9.2.**

b. The implementation strategy and further details on the recommended solutions is presented in **Section 10.3** of this document.

Table 9.2 – Downtown Whitby Pedestrian Safety Action Plan Alternative Solutions

Opportunities	Alternative Treatments	Considerations
Major Pedestrian Intersections	Implementation of New Pedestrian Crossing Treatments/Signal (Brock Street and Dundas Street)	✓ Dundas Street at Centre Street ✓ Dundas Street at Athol Street ✓ Brock Street and Trent Street ✓ Brock Street and Colborne Street
	Intersection Redesign - Dundas Street and Brock Street (channelized westbound right turn)	✓ Option 1: Enlarge the channelized right turn island ✓ Option 2: Enlarge the channelized right turn island and truck apron around outside channelization ✓ Option 3: Smart Channel (increases adjacent road entry angle to reduce turning speed and includes truck apron - Recommended)
Pedestrian Elements at Intersections	Crosswalks Pavement Markings	✓ Opportunities for additional pavement markings (Refer to Tables in Appendix E)
	Tactile Plates	✓ Intersections where tactile plates may be installed (Refer to Tables in Appendix E)
Pedestrian Crossing Indicators	Push Buttons	✓ Signalized intersections where push buttons may be installed
	Locator Tone	✓ Signalized intersections where locator tones may be installed
	Leading Pedestrian Intervals	✓ Provide advance pedestrian phase for crossing ahead of the vehicle green indication where/when applicable.
	Countdown Timer	✓ Signalized intersections where countdown timers may be installed
Pedestrian Crossing Indicators - Continued	Sidewalk Improvements	✓ Missing links of the pedestrian network ✓ Preferred sidewalk widths ✓ Provide complimentary amenities such as benches
	Curb Extensions	✓ Proposed curb extension

Opportunities	Alternative Treatments	Considerations
	Parking	✓ Removal of on-street parking on at least one side of Brock Street and reconstruction of the corridor to improve pedestrian environment ✓ Provide bicycle parking in municipal parking lots
	Transit Infrastructure Related Improvements	✓ Transit infrastructure related improvements
	Cycling Facilities	✓ Proposed cycling facilities for Downtown Whitby (East-West/North-South)
	Gateways	✓ Enhanced design elements (noted in a separate Gateway Study)
	Road Diet	✓ Road diet or lane diet on Dundas Street (Not Recommended) ✓ Brock Street road diet between Dunlop Street and Burns Street (Recommended to be further reviewed and considered)
	Heavy Vehicular Traffic	✓ Diversion of truck traffic from Dundas Street to alternative route ✓ Potential for diversion of Brock Street truck traffic ✓ Options to be investigated in more detail in order to limit heavy vehicles through the Downtown
	Support Amenities	✓ Provide amenities that support and encourage pedestrian movements such as rest areas, washroom facilities, outdoor seating, streetscaping, improved lighting, etc.
Active Connections to Downtown	Dedicated facilities and Multi-Use Path Connections	✓ Establish active transportation corridors from areas beyond the Study area into the Downtown to provide opportunities for cycling, roller blading, walking etc. Routes such as along Garden Street and Colborne Street including its proposed active only extension to Garden Street should be included in future capital planning.

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Part IV – Making it Happen

a. Provided in this part of the ATP is the **strategic action plan for achieving the ATP vision and goals.** In particular, the following sections provide a discussion on:

   1. The identification of the recommended active transportation network, system and programs.
   2. The associated resource efforts, costs and future management requirements for the ATP.
   3. The creation of a strategic policy framework, implementation plan and monitoring strategy.

b. More specifically, the implementation of the Whitby ATP includes the identification of a recommended set of implementation strategies, the associated costs of the infrastructure and programs, and a set of principles to guide in the decision making. Future implementation requirements have been identified along with a suggested monitoring program to ensure that the ATP investment priorities are matched to actual needs as they materialize with the municipal fiscal realities.

c. The implementation strategy also provides an estimate of the broad timelines and priorities for the recommended capital improvements as well as when services, programs, policies and studies should be in place/completed to support the growth of the municipality and overall vision of the plan.

d. As the population and employment grows within the Town, infrastructure must be built and services provided to meet the demands. The improvements and strategies must be staged in a timely fashion so that they are provided when needed and in a fiscally responsible fashion.

e. Policies and programs that encourage greater use of the existing network, quick wins, routes that eliminate gaps and opportunities for partnered implementation should be designed and implemented in the near term to start changing user's behaviour.

f. High priority routes, such as network spines, and future corridor planning should also occur in the near term and be included in appropriate future plans and programs.

g. While the recommendation tables in this section mostly focus on institutional and social outcomes, infrastructure implementation is addressed through mapping and implementation tables found in **Appendices A and B,** respectively**.**

10.0 Recommended Implementation Strategies

10.1 Recommended Routings and Phasing/Prioritization

10.1.1 Network Development

a. The Active Transportation Plan identifies a network of existing and newly proposed active transportation routes and facilities using an iterative process founded in provincially accepted guidelines, standards and best practices.

b. The active transportation network was developed using a step process as highlighted in **Table 10.1** which was informed by input gathered through consultation and engagement activities with members of the public and stakeholders.

c. There are several considerations and outcomes from each of the network development steps prior to establishing the proposed active transportation network. These are discussed in the following sections.

10.1.2 Existing Conditions

a. The first step of preparing the network was to understand the work that has already been done by the Town and its partners on improving the existing active transportation network.

b. Information was provided by the Town of Whitby and Durham Region and used to develop a geographic information system database of existing and previously planned active transportation routes and facilities. The database was updated on an on-going basis as part of the study process to reflect new information and the network development process. Included in **Appendix A** (**A1**) is a map depicting the existing active transportation routes in Whitby along with a copy of the current User Guide map.

c. The existing network, while connected in some areas still contains gaps and missing links. In its current state, the active transportation network is made up of unique systems which include routes and facilities under the Region and Town's jurisdiction as well as other key partners such as the Province of Ontario.

Table 10.1 – 7 Step Plan for Network Developments

Step	Description
1. Existing Conditions	✓ Data received from the Town and through consultation was used to confirm existing and proposed routes and to prepare a map of existing conditions. (see **Appendix A – A1**)
2. Route Selection	✓ Input from consultation, provincial guidelines, and best practices were used to establish a set of criteria which were reviewed and confirmed by staff.
3. Candidate Routes	✓ Missing link and new corridors to be added to the network were proposed based on the Town's Transportation and Parks Master Plans, and input from stakeholders. These new connections were illustrated through mapping.
4. Field Investigation	✓ Field investigation of candidate routes was undertaken to document context specific conditions.
5. Preferred Routes	✓ Using documented conditions, the route selection criteria and staff and stakeholder input active transportation routes were confirmed and mapped.
6. Facility Types	✓ Facility types for proposed routes were identified using the process outlined in OTM Book 18, Cycling Facilities. The proposed facilities were mapped and summarized. These maps are included in **Appendix A**.
7. Route Phasing and Costing	✓ A proposed timeline for implementation was identified in the form of route phasing and cost considerations were identified for each proposed network segment. Refer to **Appendix B**

10.1.3 Route Selection and Candidate Routes

a. The intent of the active transportation network development process is to utilize a consistent set of criteria and considerations to identify, evaluate and ultimately select the preferred routes and facilities.

b. The route selection criteria as noted in **Table 10.2** (and **Appendix A6**) were identified and serve as the foundation for the network development process. The criteria are intended to reflect the Town's overall active transportation vision and input received from residents and stakeholders. They are also consistent with the planning and design principles outlined in Ontario Traffic Manual Book 18: Cycling Facilities, the primary bikeway design guide in Ontario, and best practices of plans of similar scope and scale.

Table 10.2 – Summary of Route Selection Criteria

Criteria	Criteria
A mix of **urban** and **rural** connections and corridors	Consideration for routes that accommodate **recreation** as well as **commuter** trips
A **continuous** and **connected** set of routes that avoid missing links where possible	Recommendations that are **context sensitive** when identifying and selecting alignment and facilities
Routes that are considered **easy to access** from all areas of the Town within a 1km distance	The balance of design effectiveness with **cost effectiveness** from a budget perspective
The identification of routes which provide users with a **diverse experience**	**Destination specific** routes which provide access to major community nodes
The identification of **attractive and interesting** routes by surroundings and design	The balance of providing both **direct** routes as well as **scenic options**
The consideration and emphasis on overall user experience as defined by **comfort** and **safety**	The selection of routes where there is either demonstrated or anticipated **demand** by users

10.1.4 Field Investigations and Data Review

a. It is important to have a strong understanding of the context within which the active transportation routes are being considered prior to confirmation and design. Field investigations give a better understanding of the existing conditions and locations of proposed candidate routes.

b. Several other route considerations were also utilized to refine and confirm the proposed routes. Many of these elements and guiding influencers have been discussed in other sections of this report including review of Strava data – publicly sourced and available cycling route information – to understand high demand routes; and the results of spatial analysis which used socio-demographic information to understand areas of need and potential.

10.1.5 Preferred Routes and Facility Types

a. Following the confirmation of route alignments was the identification and selection of recommended facility types. The process used to select the most appropriate facility types was based on the facility selection tool identified in OTM Book 18: Cycling Facilities. The steps and considerations of the facility selection tool are outlined in **Table 10.3**. Often **Step 2** can be an iterative process from planning through detail design as more information etc. is obtained.

Table 10.3 – Facility Selection Process Overview

Step	Considerations	Outcome
Step 1: pre-selection	Within the urban and rural areas the current average annual daily traffic volumes and the posted or operating speed are plotted on a nomograph which recommends an initial level of separation for the active transportation facility.	There are five potential levels of separation which could be identified: ✓ Shared ✓ Designated ✓ Separated ✓ Off-road ✓ No Route
Step 2: examine factors –this can be an iterative process thru the planning and design phases	Once a preliminary level of separation has been identified, the routes are further investigated and assessed based on more detailed factors such as collision history, experience, on-street parking, maintenance, AODA compliance, etc. The factors are different for on and off-road routes.	The level of separation is either confirmed or is revised based on this assessment and a more detailed facility is identified. For example, if a designated facility has been selected as part of step 1 a bike lane or urban shoulder may be recommended because of step 2.
Step 3: document	The final step is a detailed review, confirmation and documentation of the preferred facility type. Additional insights may emerge from staff or stakeholders which shift the recommendation. If this is the case or if the outcomes from step 2 are maintained the process and recommendations must be documented.	The Active Transportation Plan report provides the support for documentation as well as project records such as meeting minutes or consultation summaries and reports.

b. In total, there are close to **500 kilometres of proposed** active transportation facilities that make up Whitby's ultimate active transportation network. This builds upon the Town's **existing network of approximately 700 kilometres** of facilities. The proposed network can be found in **Appendix A** (**A2 and A3**).

c. The Whitby Active Transportation Plan focuses on pedestrians, cyclists, those who require mobility assistance and "others" such as micromobility users, rollerbladers, skateboarders, etc.

d. In most cases, walking and cycling facilities are wide and smooth enough to accommodate mobility devices, and are used by small-wheeled micro vehicles (strollers, rollerblades, kick-scooters, etc.), and offer connectivity to desired destinations for all users, regardless of their mode.

e. Accommodation of the following categories have also been considered in the development of the proposed network to ensure that the active system provides opportunities for all various user groups:

1. **Multi-Use** - route and facilities that accommodate all active transportation users including disabled, micro-mobility, and other users in one designated space.
2. **Pedestrian Use** - routes and facilities that have been designed with pedestrians in mind, where cyclists are discouraged from use.
3. **Cyclist Use** - routes and facilities that have been specifically designed with cyclists in mind. Some may restrict use by other users through signage and / or pavement markings (i.e. dedicated bike lanes).

f. At its core, the Active Transportation Plan holds dual objectives of encouraging active transportation culture and providing infrastructure and initiatives which create a greater cross-section and balance between the various trip types. More specifically, the routes and facilities that are implemented should facilitate travel between work and home, home and school, and day to day activities as well as recreational and fitness trips.

g. Also provided in **Appendix A (A6)** are maps that illustrate Whitby's existing and proposed active transportation network organized by intended use (commuter, recreation, and touring). A few examples of these are also summarized in **Table 10.4**

Table 10.4 – Network User Type

Type	Route and Facility	Example Location Routes	Example Location
Commuter Most users confident and skilled with a good understanding of the rules of the road	**Commuter cyclists** will use all facilities and are comfortable both using on and off road facilities. **Commuter pedestrians** will accept a route determined by the destination, opting for the most direct connection, regardless if there is a sidewalk or not. **Features include -** direct north-south and east-west connections, Routes that provide crossings of major barriers, Connections to surrounding municipalities, Routes to key employment areas	**Cyclists** ✓ Ashburn Road ✓ Brawley Road ✓ Kendalwood Road	**Pedestrians** ✓ All routes, plus desire lines.
Recreational A mixture of confident athletes, infrequent users, new users, children and families	**Pedestrians and cyclists**: The facilities that are typically used include multi-use pathways both in-boulevard as well as through park space and natural areas. Athletic cyclists will use major roads to access rural routes and training loops, especially in the north Whitby area. Pedestrians use sidewalks or neighbourhood pathways to access the trail system as a destination. **Features include** - routes that connect to existing regionally significant trail systems and locally significant trail systems, provide access to major community destinations, loops connecting key destinations and points of interest	**Cyclists** ✓ Ashburn Road ✓ Brawley Road ✓ Garden Street ✓ Waterfront Trail ✓ Iroquois Trail	**Pedestrians** ✓ Waterfront Trail ✓ Iroquois Trail ✓ Downtown Whitby ✓ Local Parks
Touring Most users are confident, good understanding of the rules of the road as well as the existing routing that is in place.	**Touring groups**: The facilities that are typically used include multi-use pathways that make-up part of long-distance networks as well as more rural facilities such as paved shoulders, buffered paved shoulders or signed bicycle routes to access surrounding areas. Long distance cyclists may opt for more direct routes, not being aware of facility types available. Thru-hikers and long distance runners tend to use major trail systems such as the Waterfront Trail, but may divert to access local facilities. Some will follow well connected arterial roads. **Features** – routes that provide connections to the rural areas of the municipality specifically small communities, to surrounding municipalities, to regionally significant trail systems	**Cyclists and Pedestrians** ✓ Waterfront Trail ✓ Taunton Road ✓ Dundas Street/ Highway 2 ✓ Greenbelt Route ✓ Dundas Street	

10.1.6 Phasing and Prioritization

a. To better understand the impacts to partners in their various roles, it is important to outline the proposed implementation, or in short, the expected project timelines. The proposed implementation of the Active Transportation Plan has been organized into four phases:

    1. First three years;
    2. Three to five years;
    3. Five to ten years; and
    4. Beyond ten years.

b. These phases are intended to reflect the Town's current processes and how other large-scale infrastructure projects are scheduled and budgeted within the Town's capital program. The phasing plan is meant to be flexible and should be used as a guide to inform future planning and decision making.

c. The proposed phasing comes with degrees of flexibility, allowing prioritization and coordination with other projects and partners. It is recommended that projects be revisited and reviewed on an ongoing basis in concert with the broader Town's capital program to reaffirm the appropriate phasing and to assess methods and opportunities for funding and implementation.

d. Opportunities for implementation with works completed by others, such as through development, should also be capitalized on when and where feasible.

e. The recommended infrastructure routings, proposed phasing and preliminary construction costs are included in **Appendix B**. Some connections may be accelerated as development or capital construction projects provide opportunities.

f. The prioritization of the improvements has also taken into account input from stakeholders, residents, agencies and partners and through setting the following goals. They represent linkages that are considered a "desired need" or "high interest" based on comments received. A detailed list associated with each of the **Priorities** is included in **Appendix B** and are illustrated on **Maps A4 and A5 in Appendix A (**the current recommended Spine Network is also shown on Maps A4 and A5**).** These priorities and recommended spine system should be reviewed on an ongoing basis and revised as appropriate**.** The types of priorities are noted below with a few examples:

    1. **Addressing Facility Gaps** - where short (under 1 km) gaps prevent safe and meaningful connectivity of two adjacent facilities. For example, on Henry Street there is a need for a paved shoulder and multi-use path between Iroquois Park Sport Centre/Whitby GO Station Driveway and Highway 401 bridge. Current constraints in this section are the existing CN Rail and GO Transit rail structures.

2. **Addressing Network Gaps** - where longer (over 1 km) gaps prevent safe and meaningful connection between desired destinations. For example, the provision of a multi-use path along Dundas Street between Des Newman Boulevard and Jeffrey Street.
3. **Opportunities for Network Growth** - where the network can be expanded to improve active transportation connectivity to existing and new destinations. For example, for the proposed Mid-Block Arterial in south Brooklin, ensure that the pedestrian and cycling realm is incorporated into the design plans and EA recommendations.
4. **Opportunities for Facility Renewal** - where aging infrastructure can be improved to offer better user experiences or to improve user safety. For example, reconstruction and widening of key sections of the Waterfront Trail.
5. **Complete Streets Initiatives** - Opportunities to transform auto-centric corridors through application of complete streets principals to create more welcoming spaces for pedestrians. For example, redesign the corridors of Brock Street and Dundas Street through Downtown Whitby to enhance overall user experience, walkability and the public realm.

g. While sidewalks are acknowledged as an essential element of urban mobility and active transportation, they have not been specifically identified in the infrastructure table. It is important to note that sidewalks are required to be implemented in association with development. As well, there is currently a full sidewalk program for new and replacement installations in the Town's capital program.

h. In addition to the routing and design considerations, short-distance trips i.e. less than 5 km for cyclists and less than 1 km for pedestrians are seen as having the greatest potential for encouraging people to use active modes of transportation. These 'high potential' areas have been identified as priorities for investment and implementation.

i. The lengths of facilities being proposed over the ten year and ultimate planning horizons of the Active Transportation Plan implementation are presented in **Table 10.5.** These include those to be built by the Town and by others as part of future development (known at the time of preparing this report).

Table 10.5 – Existing and Future Recommended Network Km

Facility type	Existing Lane Km	Additional Future within 10 Year Planning Horizon (rounded) Lane Km	Additional Future Ultimate 10+ Planning Horizon (rounded) Lane Km	Total (rounded) Lane Km
Bike lane	6.8	50	5	62
In-Boulevard Multi-Use Path	23.7	80	45	148
Buffer Bike/Cycle Track	0	8	2	10
Off-Road Trail	81.6	61	16	155
Paved Shoulder	30.6	0	11	42
Signed Route	27.4	28	14	69
Sidewalk	521.7	90 estimated (West Whitby + Brooklin + Other)	90 estimated (Brooklin + Other)	702
Total	**691.8**	**317**	**183**	**1188**

Note 1 – Based on best available information to date regarding growth in infrastructures

10.2 Recommended Guiding Policies/Programs, Strategic Action Plan

a. While in **Section 10.1** and illustrated on the maps in **Appendix A** are the recommended infrastructure components of the ATP, there are several opportunities from a social and institutional outcome perspective that are recommended to be pursued.

b. In particular, in this section of the report highlights those recommendations and action plans from a policy and program perspective.

c. The focus on **Tables 10.6** relate to the guiding influencers, namely:

   1. Equity and Inclusion
   2. Sustainability and the Environment
   3. Planning and Place Making
   4. Culture Change
   5. Engineering and Partnership Management

d. For the recommendations noted in **Table 10.6**, while they generally will be required to be undertaken on an ongoing basis or in the near to mid term, it will be important to **establish a detailed action plan** that takes into account, resource capacities, and partnership requirements. This should be **undertaken**

immediately upon completion of this ATP. The action plan should identify critical paths, roles and opportunities to maximize external resources.

e. The recommendations are intended to inform how the Active Transportation Plan can be managed, planned and delivered by the Town and its partners. These recommendations are not prescriptive; they are meant to be used as guidance and should be adaptable as situations/opportunities arise.

f. The majority of the costs associated with this part of the ATP relate to resources and staff/partnership time to implement and coordinate. The ability for implementation and success will be dependant of resource availability and time management.

g. Ancillary and support programming costs are estimates based on staff experience and represent a mixture of staff time, supplies and equipment, consultant and program costs.

h. The items listed in **Table 10.6** will mostly be led by staff from the Public Works Department, however there are several items related to trails that are managed through the Community Services Department. In additional, the majority of the items will require collaboration and involvement from other internal Departments, such as Communications, Planning and Development, Finance and the IT group, in addition to several external partners. The next phase of the Strategic Action Plan will require to discuss and review the items with the various partners in its refinement of priorities and opportunities.

The Detailed Action Plan (DAP) for Delivery/Undertaking of the Below Recommendations is to be prepared annually. Staff will undertake this upon completion of the ATP and Identify critical paths, responsibilities, opportunities to maximize internal, external resources. Work with all internal and external partners in this refinement of the DAP. This is to be led by Public Works**.**

Table 10.6.1 – Equity and Inclusion Reference Part II – Section 4

Theme	Recommendation	Action Items	Timing (yrs.)	Costs/Comment
Resources and Infrastructure 	1. Route Planning (where), Selection (type), Design and Implementation	a. Ensure as part of the ATP route delivery that the existing and long term function of the facility by use and user type, its connection points, configuration and layout is understood and noted on working plans.	Ongoing	Internal resource time
		b. Prepare delivery plans for the network that has a balanced approached to the wide range of users and uses which optimizes connections between origins (e.g. neighbourhoods) and destinations/generators (e.g. schools, parks).	Ongoing	Internal resource time
		c. Consult with members of the community, stakeholders, committees, interested parties, agencies, on the annual route delivery program and adjust as appropriate.	Ongoing	Internal resource time
		d. Ensure all road and active infrastructure designs consider Complete Streets, Vision Zero principles, accessibility needs (AODA) and the vulnerable population.	Ongoing	Internal resources time/possible future capital and operating costs
		e. Utilize the insights and expertise of the ATSRAC committee members throughout the life of the ATP, for example relating to tourism from a global perspective.	Ongoing	
		f. Prepare the cost/benefit and a strategic action plan for an all season approach for active transportation throughout the Town.	3-5	Internal resource time/possible capital and operating costs
Tools 	2. Develop and update trail and engineering design guidelines and standards (Also refer to the Engineering tables below)	a. Ensure/update standards so as safety and comfort from both a design and personal perspective are priority. Routes should feel pleasant, attractive and safe to use and incorporate amenities where/when appropriate.	Annual	Internal resource time

Theme	Recommendation	Action Items	Timing (yrs.)	Costs/Comment
Tools (Continued) 	2. Develop and update trail and engineering design guidelines and standards (Continued)	b. Develop and utilize user feedback in the selection and design of facilities and amenity needs.	Ongoing	Internal resource time
		c. Develop active transportation user count data base and utilize in capital programming and designs.	Annual	$7,000 per count station/yr – annual
		d. Review and summarize opportunities for future integration in the transportation network for emerging technologies such as micro transit, as well as e-bikes.	3-5	Internal resource time
Communicate and Coordinate 	3. Prepare and update active transportation mapping to ensure that the mapping is reflective of existing routes, is useful and relevant to user desires and incorporates pertinent information.	a. Enter active transportation facilities in GIS database as they are proposed and are completed and update mapping.	Annual/Bi-Annual	Internal resource time/$2,500
		b. Develop communications plan so as to empower and encourage users from all mobility and areas of the community to use and enjoy the system	Ongoing	Internal resource time
		c. Prepare community surveys regarding the active transportation network and utilize results in future plan refinement and development.	3-5	$3,000
Encourage and Educate 	4. Provide educational information to residents and visitors regarding the active transportation network and support facilities and amenities.	a. Include information pamphlets and maps in local libraries and public facilities and on the Town's website. Develop an action plan that ensures information on active transportation opportunities, amenities, etiquette, etc. and connectivity is provided (such as through social media) to/at public facing events within the Town.	3-5	$3,000

Theme	Recommendation	Action Items	Timing (yrs.)	Costs/Comment
Encourage and Educate 	5. Engage in community based social initiatives and outreach.	a. Integrate Corporate Communication elements with active transportation initiatives including community outreach and infrastructure announcements.	Ongoing	Internal resource time
		b. Develop program for safe routes to school and promote optimal use of the active network and system.	3-5	$3,000

Table 10.6.2 – Sustainability and Socioeconomic Environments – Reference Part II Section 5.0

Theme	Recommendation	Action Items	Timing (yrs)	Costs/Comment
Resources and Infrastructure 	1. Route Planning (where), Selection (type), Design and Implementation	a. Develop/update as appropriate, rights of way design guidelines and standards that are reflective of Healthy Community approaches.	Ongoing	Internal resource time
		b. As part of the implementation, review value for dollar and opportunities to bundle projects and incorporate active projects into broader capital works projects.	Ongoing	Internal resource time
		c. As part of the life cycle assessment and replacement review, consider applicable criteria between retrofit and full replacement/upgrading for facilities. For example, replacement of failed sidewalk bays to full multi-use path conversion.	Annual / Bi-annual	Internal resource time, asset mgmt. needs review, partner programs, capital budget program review
		d. Confirm the necessary environmental assessment and regulatory requirements as part of the planning and budgeting process	Annual	Internal resource time

Theme	Recommendation	Action Items	Timing (yrs)	Costs/Comment
Tools 	2. Reference should be made to the municipal class environmental assessment process when moving forward with the implementation of active transportation routes and facilities.	a. Prioritize critical infrastructure and accelerate construction when opportunities (e.g. grants, built by others) presents itself.	Annual / Bi-annual	Internal resource time
		b. Consider the advancement of those projects that are stand alone, pre-approved, or high value/low expense so as to expedite overall plan implementation.	Annual	Internal resource time
Communicate and Coordinate 	3. Consider individual and community benefits when education and communication information and resources are prepared.	a. Develop educational materials which focus on sustainability of active transportation. Highlight community and individual benefits to provide rationale for behaviours shifts and increased investment where appropriate.	0-3	$5,000, work with Communications
		b. Develop opportunities and procedures for liaison and collaboration between various Committees of Council and general public in the management and implementation of the ATP.	0-3	Internal resource time
Policy 	4. Utilize the healthy communities, walkable city and sustainability trends when reviewing and revising existing policy or creating new policy to ensure that active transportation principles and values are incorporated into policy statements and design directions/guidelines.	a. Develop Rights-of-Way policies which allow for the adoption of Complete Streets designs and are consistent with sustainable design elements and implement into municipal guiding documents (e.g. Official Plans, Secondary Plans, Master Plans).	0-3	Internal resource time

Table 10.6.3 – Planning and Place Making Context – Reference Part II Section 6

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Resources and Infrastructure 	1. Route Planning (where), Selection (type), Design and Implementation	a. Ensure engineering design standards are reflective of various urban mobility elements.	Ongoing	Internal resource time
		b. Develop a guiding/design document that outline the delivery of active transportation amenities including: coloured, textured or patterned asphalts, trailheads, gateways, signage, rest stops and benches, water bottle fill stations, public restrooms, lighting, parking (auto, mobility device, and bicycle), waste receptacles, repair stands, bike rooms, bike lockers, and any other urban mobility amenities which may be required from time to time, whether as retrofits to existing mobility infrastructure, or for inclusion in new active transportation facilities.	0-3	$5,000-$10,000
		c. Consider and implement new/improved supporting active amenities as other capital works projects are constructed/reconstructed/retrofitted.	Ongoing	Internal resource time/include in capital and operating budgets
		d. Site Plan and Draft Plans of Subdivisions submissions to include active transportation and involve interested partners such as ATRSAC as appropriate in the review.	Ongoing	Internal resource time/coordinate with other partners e.g. Planning
Communicate and Coordinate 	2. Ensure the timing and type of Public and agency consultation is appropriate for the project type.	a. For each project, confirm use and user, magnitudes of impacts and tailor the consultation efforts and modes to those affected/interested groups.	Ongoing	Internal resource time

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Encourage and Educate 	3. Incorporate the policy considerations included within the ATP as existing/new policies are amended/developed.	a. Develop urban mobility policy library that is available to multiple internal groups/stakeholders.	3-5	Ongoing maintenance
Encourage and Educate 	4. As a stakeholder on Regional and Provincial projects, Whitby should consider active transportation and place making opportunities through projects of partner agencies.	a. Develop urban mobility commenting templates for Local, Regional, and Provincial projects.	0-3	Internal resource time
		b. Formalize urban mobility commenting subcommittee within the Active Transportation and Safe Roads Advisory Committee.	0-3	Internal resource time
Policy 	5. Regulate facility use.	a. Develop a policy position on the appropriateness of micro-vehicle use on active transportation facilities including sidewalks and multi-use paths which addresses urban mobility in a way that empowers the appropriate users.	3-5	Internal resource time
		b. Develop a policy and update existing by-laws as appropriate to enforce the Town's position on facility use (i.e. trails, sidewalks and MUP's) for appropriate users and vehicles.	3-5	Internal resource time
		c. Develop a position on staff use of micro-mobility and e-vehicles, and empower staff use of these vehicles in the appropriate environments through policy exemptions or other tools as necessary.	3-5	Internal resource time

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Policy 	6. Provision of "placemaking" through gateways, rest areas, and urban mobility amenities.	a. For all new and retrofit capital works and development initiatives, review opportunities for new/improvement "placemaking".	Ongoing	Internal resource time

Table 10.6.4 Culture Change – Reference Part II – Section 7.0

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Resources and Infrastructure 	1. Route Planning (where), Selection (type), Design and Implementation	a. Design and implement a consistent wayfinding, line marking, and signage program for trails and active transportation routes that is consistent with user needs and expectations.	0-3	Underway. Implementation to be undertaken and budgeted annually.
		b. Install bike parking at strategic locations throughout the Town to encourage increased ridership and active transportation.	Ongoing	$5,000 annual
		c. Identify location(s) within the municipality where a community space for active users can be provided with open and accessible programming including learn-to-ride, bike repair, active routes, and urban commuting topics are discussed. The hub can be identified and implemented to support active transportation initiatives.	3-5	$20,000 capital, operating to be confirmed
Encourage and Educate 	2. Create a educational framework to assist in shifting the culture to a more active based community and enhance rapport with the various agencies and stakeholders.	a. Develop education campaign to support the signage, wayfinding, bike parking, safe routes to school, and distribute through libraries, public facilities and community events.	0-3	$5,000

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
		b. Work with local partners in the development of promotional materials to educate active transportation users on existing/planned routes that connect to the major destination nodes (e.g. downtowns, waterfront, district parks, shopping centres) and supportive amenities connecting to downtowns	Ongoing	$2,000 annual
		c. Work with school boards to develop youth specific programs and materials to encourage students to engage in active travel	3-5 years	$1,000 annual
		d. Partner with local businesses (through agencies such as the Business Improvement Areas and Chambers of Commerce) to identify business specific approaches to encourage and support active transportation.	Ongoing	Internal resource time
		e. Work with DRPS to identify those routes that require priority enforcement from an active and distracted drive perspective to mitigate safety concerns.	Ongoing	Internal resource time
Communicate and Coordinate 	3. Promote the active transportation culture within the Town	a. Review and update as appropriate the Town's webpage as it relates to active transportation in the Town of Whitby	3-5 years	$10,000
		b. Develop social media and community tools to report active transportation successes and landmarks including newly implemented routes, upcoming events, new promotional information	0-3 years	$5,000
		c. Continue to participate in Share the Road Cycling Coalition's "Bike Friendly Communities" program.	Ongoing	Internal Resource time

Table 10.6.5 – Engineering Realm and Partnership Management – Reference Part II – Section 8.0

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Resources and Infrastructure 	1. Route Planning (where), Selection (type), Design and Implementation	a. Utilize the design guidelines referenced in this document when planning, designing and constructing active transportation facilities.	Ongoing	
		b. Prepare/update criteria and design standards for signage, pavement markings (e.g. centre lines, cross rides, symbols), wayfinding, safety devices etc. and implement and maintain on routes both in parks and along road corridors with a focus on high traffic, conflict areas and key decision points for the user. First focus on the Waterfront Trail and the appropriate sections of the Spine Network.	Ongoing	Annual – varies $10,000 to $20,000
		c. Engineering standards should be regularly updated and be reflective of current active transportation and Complete Street and Vision Zero best practices and guidelines (e.g. turning radii, pavement markings, speeds).	Ongoing	Internal resource time
		d. Route planning and design for both on and off road should also take into consideration the need to provide optimize personally safety for all users. Future iterations/updates of the ATP will include consideration of different categories of facilities which may not be accessible for all users (i.e. mountain biking trails).	Ongoing	Internal resource time and future capital and maintenance
		e. As part of the ATP implementation, work with internal partners and Regional staff, to develop a Mid-Block Crossing Strategy for Trails and update plans and budgets accordingly.	Ongoing	Internal resource time and future capital and operating budgets.
		f. Develop bike parking design guidelines and templates for use in new and existing developments showing best practices and preferred designs.	0-3	$5,000

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Resources and Infrastructure 	2. Formalize a staff working group to coordinate the implementation of the urban mobility network and active transportation plan initiatives, policy, design, development, maintenance, operations, etc.	a. Develop a process for review of various development applications from an active transportation perspective that involves the various internal/external partners and that identifies opportunities for new/improve active infrastructure/programs.	0-3	Internal resource time
		b. Create a working group terms of reference and schedule regular (quarterly) meetings to discuss projects, policies, funding, budget etc.	0-3	Internal resource time
Tools 	3. Create and update network management tools on an annual basis to assist in planning, implementation, and management of active transportation infrastructure.	a. Ensure databases are meaningful and easy to use, can be used by multiple groups for reference as part of planning and designs, and are updated as new infrastructure and amenities are implemented.	3-5	Internal resource time
Communicate and Coordinate 	4. Utilize a formalized and strategic implementation process for active components that is collaborative, transparent and supports sound and efficient decision making.	a. Consider a process such as that prescribed in the Ontario Traffic Manual Book 18.	Ongoing	Internal resource time

Theme	Recommendations	Action Items	Timing (yrs)	Costs/Comments
Communicate and Coordinate 	5. Utilize the proposed phasing plan as a guide for staff and decision makers and a communication tool for external stakeholders as they proceed with the delivery of the ATP	a. Align the ATP projects and costs with those in the capital budget program and DC Study.	Annual	Internal resource time
		b. Create an annual reporting template to showcase progress, identification of quantities/scope of works, and delivery of active transportation plan recommendations	0-3	Internal resource time
Communicate and Coordinate 	6. Review the active priorities list on a semi-annual basis to support discussions with partners and for budgeting/planning.	a. Review projects and programs with internal and external partners, pre/post budget to ensure coordination of delivery and reaffirm priorities.	Ongoing	Internal resource time
		b. Participate in relevant working groups, i.e. Region transit, cycling, Downtown committees, Provincial emerging technologies, etc. to foster relationships and align opportunities	Ongoing	Internal resource time
		c. Develop reporting process to encourage open communication through project lifecycle	0-3	Internal resource time
Policies 	7. When new developments are proposed, ensure the designs are supportive of active, healthy and walkable communities and principles outlined in this document. Additional consideration should be given to emerging trends as they are identified	a. Ensure community and commercial development guidelines and neighbourhood designs embrace the goals of the Active Transportation Plan especially as they relate to sustainability, connectivity, and inclusivity.	3-5	Internal resource time

10.3 Recommended Whitby Downtown Action Plan

a. Provided in this section of the report and noted in **Table 10.7** is a summary of the recommended improvement measures for the Downtown to be undertaken in the near-medium term.

b. These improvements range from updating policies and programs, technical analysis, as well as design and implementation/construction of new facilities.

c. Several of these recommendations also require the coordination and partnerships with other stakeholders and agencies. It will be important for the next phase of this strategy to complete a definitive priority list of the below that is in line with expectations, budget and resources.

d. The recommendations should be reviewed and updated on an annual basis and although the objective of this Action Plan is not the full and immediate reconstruction of the pedestrian realm servicing Downtown Whitby, the following are suggested to be implemented in the near term to enhance the Downtown realm:

    1. Update the Town website to provide a dedicated Downtown Whitby mobility map;
    2. Provide street furniture including, but not limited to, benches, garbage receptacles, self cleaning accessible washrooms, information/bulletin kiosks, and wayfinding signage;
    3. Support the work of the Whitby Business Improvement Area, Downtown Whitby Development Steering Committee and business owners to implement murals, sculptures, urban art, patios, etc.
    4. Implement intersection pavement markings and accessibility related improvements (such as tactile plates, locator tones, countdown timers, etc.) at the recommended locations.

e. Opportunities to incorporate improvements as part of other larger-scale capital works/reconstruction initiatives should be considered to mitigate costs and accelerate pedestrian objectives.

f. While further study and design work will be required to confirm total implementation, the known estimated costs at this point based on the scope of work is noted in **Table 10.7**

g. It should also be noted that while this Study did not include Brooklin, many of the recommendations and strategies noted for Downtown Whitby can also be applied elsewhere in the Town **including Downtown Brooklin**.

Table 10.7 Downtown Whitby Pedestrian Safety Action Plan (See Appendix E for further Details)

Theme	Recommendation	Action Item	Timing	Cost/Comment
Resources and Infrastructure 	1. Provide protected pedestrian crossings (signals) at strategic locations on Dundas Street and Brock Street	a. Brock Street/Colborne Street	0-3	$225,000 per signal Design and approvals required by Region/Others Annual operating $8,000 per signal
		b. Dundas Street/Centre Street	0-3	
		c. Brock Street/Athol Street	0-3	
		d. Brock Street/Trent Street	3-5	
Resources/ Infrastructure 	2. Modify northwest right turn channel at Brock/Dundas Streets to reduce pedestrian crossing distance and add accessibility.	a. Undertake as part of other roadway or sidewalk reconstruction works or as part of the planned Bus Rapid Transit (BRT) work on Dundas Street.	3-5	$20,000 Design. Confirm capital costs as part of design works. Consult with Durham Transit and Metrolinx on BRT requirements.
Resources/ Infrastructure 	3. Provide appropriate sidewalk width at deficient locations.	a. Widen sidewalks as needed/as they are replaced, as part of the annual capital and life cycle mgmt. programs.	Ongoing	Ongoing works – specific costs to be included in annual budgets

Theme	Recommendation	Action Item	Timing	Cost/Comment
Resources and Infrastructure 	4. Ensure active and accessibility is planned/protected for in civil works design features and interconnected with adjacent lands.	a. Install new/improved crosswalk pavement markings busy intersections, priority routes and high pedestrian conflict areas.	Ongoing	$3,000-5,000 annual At gateway or key locations, install patterned crosswalks.
		b. Enhance visual cues at high pedestrian conflict areas through various treatment including textured pavement	3-5	$30,000 per location per annum
		c. Include accessibility features at signalized intersections including but are not limited to: tactile plates, locator tone, pushbuttons, and countdown pedestrian signals	Ongoing	Costs vary – 5,000 to $85,000 per location.
		d. Review locations and impacts (including hardware requirements) where push button controls at intersections can be eliminated. Include review of accessible requirements.	3-5	Discuss with the Region.
Resources/ Infrastructure 	5. Eliminate gaps in the sidewalk network through provision of sidewalks	a. Improve existing pedestrian network by eliminating gaps, such as on Trent Street East, St. John Street E, Ontario Street E and Peel Street.	5-10	Costs to be confirmed as part of future design works.
Tools 	6. Undertake a Corridor Operational and Design Review of Brock Street between south of Burns Street to north of Trent Street Re: Road Diet and Streetscape	a. Undertake Traffic/Feasibility Review and Preliminary Design and review opportunities to reduce lane requirements, increase area for active use and walkability and prepare Complete Streets Design.	0-3	$100,000 Incorporate gateway and other streetscape opportunities. Review opportunities for curb extensions.

Theme	Recommendation	Action Item	Timing	Cost/Comment
Tools 	7. Prepare a Complete Streets plan for Dundas Street between Henry Street and Hickory Street	a. Undertake Preliminary Design and review opportunities to increase area for active use and walkability and prepare Complete Streets Design. Include the consideration for pedestrian signal scrambles/Barnes Dances at key intersections e.g. Brock Street/Dundas Street.	3-5	$75,000 Design Incorporate gateway and other streetscape opportunities as appropriate Coordinate with requirements associated with Metrolinx's BRT system.
Policy 	8. Revise the Town's existing policies to improve pedestrian safety, comfort and accessibility.	a. Develop Complete Street policy and related guidelines specific to Downtown Whitby.	0-3	$25,000
		b. Consider revising current sidewalk policies to implement sidewalks on both sides of streets (including local) in the Downtown core, where feasible.	0-3	Internal resource time
		c. Review and analyze the current snow removal program for Downtown Whitby and identify opportunities for improvement and costs.	3-5	Internal resource time
		d. Review current lighting levels in the Downtown Core, particularly along high pedestrian corridors including Dundas Street and Brock Street	5-10	$20,000 – lighting review
		e. Implement Vision Zero countermeasures in the Downtown area as appropriate and work with the Region of Durham for counter measures at signalized intersections	Ongoing	Internal resource time
Encourage and Educate 	9. Provide/improve amenities to support active transportation in the Downtown	a. Provide bicycle parking, new/improved lighting and other various amenities, e.g. public (accessible self cleaning) washrooms in municipal parking lots as part of parking rehabilitation projects.	Ongoing	Costs to be incorporated into broader capital works program budgets. For example, in 2021 there are plans to rehabilitate and expand Lot 5 at Colborne Street/Green Street.

Theme	Recommendation	Action Item	Timing	Cost/Comment
Encourage and Educate (Continued) 	9. Provide/improve amenities to support active transportation in the Downtown (Continued)	b. Update the Town's website to provide more information on walking and cycling in the Downtown, including maps and supportive amenities.	Ongoing	Internal resource time
		c. Work with the Whitby BIA, Downtown Whitby Development Steering Committee, Whitby Chamber of Commerce to identify opportunities for enhanced streetscaping features such as waste receptacles, washrooms, information/bulletin pedestals, outdoor speakers, bike racks, benches, and opportunities for providing murals, sculptures, urban art, patios etc. to enhance downtown realm.	Ongoing	Internal resource time
		d. Following completion of the Brooklin Alternative Route EA for Baldwin Street, undertake a similar Study for Downtown Brooklin.	3-5	Internal resource time
		e. Work with area landowners, developers on the provision of active supportive amenities on their private lands, particularly where it links to the Town's infrastructure.	Ongoing	Internal resource time
Tools 	10. Improve pedestrian safety and reduce speeds in the core Downtown area.	a. Reduce speed limit to 40 km/h in the area bounded between Mary Street to the north, Gilbert Street to the south, Henry Street/Euclid Street to the west and Hickory Street to the east.	0-3	$20,000
		b. Consider curb extensions as part of the redesign/reconstruction of Colborne Street between Brock Street and Athol Street. Also review other possible strategic locations for installation including but not limited to: Brock Street at Trent Street.	3-5	Costs to be confirmed. As part of the design, review drainage and maintenance requirements. Consider temp flexible solutions.

Theme	Recommendation	Action Item	Timing	Cost/Comment
Tools 	10. Improve pedestrian safety and reduce speeds in the core Downtown area (Continued).	c. Construct mini- roundabouts prior to installation of new all-way stop control and explore opportunities to implement mini-roundabouts at existing all-way stop controlled intersections, where feasible. Implement mini-roundabouts at Colborne/Green as part of the Colborne Street reconstruction.	3-10	$600,000 Undertaken with reconstruction of Colborne Street. Complete after Fire Hall development
Tools 	11. Mitigate conflicts with heavy commercial vehicles on Brock Street/through the Downtown	a. Prepare truck route plans for Downtown Whitby and sign alternate route(s) as appropriate.	5-10	Consider suitability of parallel higher order arterials e.g. Thickson Road, Lakeridge Road in addition to Garden Street. Consult with Region of Durham.
Tools 	12. Provide enhancement of transit related infrastructure to support/encourage active transportation in the Downtown	a. Review opportunities as part of future gateways planned for along Brock Street and Dundas Street, the integration of transit shelters and supportive amenities.	3-5	Internal resource time
		b. Work with Durham Region Transit for the consolidation/relocation of bus stops on Brock Street and Dundas Street, where appropriate and practical.	Ongoing	Internal resource time
		c. Work with DRT to confirm bus shelters/stops as part of the future pedestrian crossings along Brock Street and Dundas Street.	3-5	Internal resource time
		d. Work with Durham Region Transit to provide benches and bike racks at bus stops located on major transit routes, where feasible.	Ongoing	Internal resource time

10.4 Cost Estimates and Funding Opportunities

10.4.1 Capital Works Costs

a. A summary of the construction costs is included in **Table 10.8** for the various planning horizons. Refer to **Tables B1 and B2 in Appendix B** for the individual project construction costs and those noted as priority projects, respectively.

b. It should be noted that the projects shown in **Appendix B and Table B1** do not include those active transportation routes that will be implemented as part of future development – these will be installed by others as part of future developments. However, the mapping of existing/future routings shown in **Appendix A** does include the complete network including those projects to be completed by the Town, as well as by others.

c. The estimated construction costs have been based on the unit prices identified in **Table B3 in Appendix B** and have been used for high level planning purposes and do not include: engineering, contingency, property, utility conflicts or drainage. As budgets are developed, the project costs will need to be further refined as further details on the scope of the project evolves. Furthermore, the following should be taken into account when reviewing the capital costing noted in this document:

    1. Unit prices should be reviewed annually and project budgets should be based on current pricing and adjusted to be reflective of market changes and individual project constraints.
    2. Capital budgets and DC Study budgets should include factors for engineering and contingency and other unknowns as appropriate.
    3. The projects and timelines are subject to change as funding opportunities, grants, partnerships (e.g. MTO, Region, and Development) and project coordination allows.
    4. The planned ATP network includes infrastructure on routes not under the jurisdiction of the Town. Modifications to the implementation/design of such routes may be required as the Region further develops and expands on their Cycling Plan. Coordination with the Region's plan should occur when and where appropriate and feasible.
    5. Recommended routes may include segments that are located on lands under the ownership and jurisdiction of other agencies such as conservation authorities and utility companies. As such, as the Town moves forward with planning, design and implementation, it is recommended that the ownership of lands where proposed routes are located, be reviewed and confirmed to support future work with partners.

d. It is important to note that the implementation will be governed on the ability to manage and finance the implementation. **At present, Whitby's annual capital budget for active transportation (exclusive of sidewalks) has been $3,000,000 - $4,000,000 (say 3.5) over the past 3 years for capital spending.** The proposed infrastructure plan has endeavoured to deliver a plan that is financially manageable by the Town and fiscally responsible.

e. Notwithstanding the above, it will be important for the Town to continue to investigate and pursue external funding opportunities to offset active transportation network implementation and initiative costs.

f. While not included in **Table 10.8** below, **the current annual investment for new and replaced sidewalks is currently in the order of 1.5-2.0 M (say 1.75) which is expected to maintain fairly consistent over the next several years.**

g. Maintenance costs in addition to capital costs will also be required to be addressed and accommodated as the additional infrastructure is implemented and should service level standards change.

Table 10.8 Estimated Construction Cost for ATP Capital Works (rounded) – (See Note 1)

Facility type	0-3 yrs	3-5 yrs	5-10 yrs	10+ yrs	Total Investment
Bike lane	$556,000	$277,000	$1,455,000	$115,000	**$2,403,000**
Cycle track	0	0	$7,198,000	$1,677,000	**$8,875,000**
In-boulevard Multi-Use Path	$3,423,000	$9,784,000	$15,780,000	$17,009,000	**$40,520,000**
Off-Road Trail	$5,510,000	$1,266,000	$9,771,000	$5,606,000	**$16,348,000**
Paved Shoulder	0	0	0	$1,592,000	**$1,592,000**
Signed Route	$28,000	$46,000	$9,000	$43,000	**$126,000**
Total	**$9,516,000**	**$11,374,000**	**$34,213,000**	**$26,040,000**	**$81,144,000**
Per Annum over next 20 years	**$3,172,200**	**$3,791,300**	**$6,842,600**	**$8,680,100**	**$4,057,200**

Note 1:

- Above costs/projects are exclusive of future sidewalk projects to be completed both by the Town and by others (e.g. development community) as part of growth. Recent **annual sidewalk works** have been in the order of $1.5 - $2 M – assume for the purpose of this report for estimating $**1.75 M per year** will be spent for the foreseeable future.
- The above costs are for strategic planning purposes only and are exclusive of Engineering, Contingencies, Utility conflicts, drainage and soil adjustments, property requirements, permit fees, modifications required to bridges/structures, retaining walls and administrative costs for project management. Refinement in cost estimates will be required as further planning and design of the facilities proceed.
- The 10+ planning horizon has been assumed to be a time period of 10 years

10.4.2 Social and Institutional Costs

a. In addition to the active transportation network capital costs outlined in the previous section, it is necessary to build up the active transportation community and to encourage and educate everyone on the advantages and benefits of active travel.

b. These ancillary costs including those noted in **Section 10.2** relating to actions to implement programs, policies, improvements, and activities to encourage a culture of active transportation, and in **Section 10.3** for Downtown Whitby, are noted below:

Ancillary and Downtown Whitby Costs
0 to 3 year planning horizon – approximately $1,100,000
3 to 5 year planning horizon – approximately $600,000
5 to10 year planning horizon – approximately $500,000
Total $2,200,000 - $220,000/year

10.4.3 Maintenance Service Levels and Costs

a. A well operated and maintained network encourages more active travel. In addition to funding for building the network, municipal funding should be allocated for the operation and maintenance of active transportation facilities. The level of service that is currently being undertaken on municipal roads would be considered the Town's baseline approach for on-road facilities i.e. bike lanes and signed bike routes.

b. When considering maintenance, it is important that all user types be considered such that competing user groups have opportunity to enjoy their travel modes. Such interests could include walkers and joggers alongside cyclists on MUPs, or winter users such as cross-country skiers where MUPs are cleared for other modes. The maintenance program should be structured such as many users as possible are accommodated by the Town's maintenance practices.

c. Whitby follows Province of Ontario Standards for winter maintenance on all transportation facilities. Within the provincial minimum maintenance standards, roads are classified according to the posted speeds and amount of traffic they normally carry. Higher order roads are generally plowed first as they typically carry a higher volume of traffic and are considered to be a spine roadway system that connects in and out of the Town.

d. Sidewalks are typically cleared of snow after the roads and include some paths through park space which are groomed by municipal vehicles. Trail grooming is completed on trail environments where usage does not warrant plowing, but where smoothing of the surface is helpful to recreational users. A sidewalk plow will visit these trails to groom the surface leaving a flat, passable condition.

e. Bike lanes and paved shoulders are plowed by street plows. This can result in windrows from the street plow blocking/impacting safe passage. A future budget

consideration for possible strategies/actions to address such windrows, such as no stopping bylaws, additional enforcement, removal of windrows where safe passage is impeded, should be investigated.

f. Municipalities currently use the Provincial Maintenance Standards to determine maintenance practices. The standards are based on daily traffic volume and the posted speed and the potential for hazardous road conditions for motorists, including cyclists. As cyclists are more vulnerable to poor road conditions (such as potholes and cracks), additional consideration should be given for standards that accommodate all users.

g. The minimum standards include:

   1. Monitoring of weather conditions and snow accumulation;
   2. Addressing winter road conditions including snow accumulation, ice formation and clearance;
   3. Potholes, shoulder drop-offs, cracks and debris;
   4. Lighting, signs and traffic control signals;
   5. Bridge deck spalling (concrete splintering and breaking); and
   6. Roadway and sidewalk surface discontinuities.

h. Summarized in **Table 10.9** is the level of service for snow accumulation in bicycle lanes based on the roadway class. The below is reflective of bike lanes that are defined as those that have a delineated/physical buffer and clearly marked as a dedicated bicycle lane from the travelled portion of the roadway.

Table 10.9 – Ontario Minimum Maintenance Standards for Snow Clearing

Road class	Depth	Removal time for snow on roadways	Removal time for snow on bike lanes
1	2.5 cm	4 hours	8 hours
2	5 cm	6 hours	12 hours
3	8 cm	12 hours	24 hours
4	8 cm	16 hours	24 hours
5	10 cm	24 hours	24 hours

i. In addition to the minimum maintenance standards as set out by the Province, there is also the expectations of the community that can often drive service level requirements and expectations – which can have an impact on municipal resources and budgets.

j. In consideration of the above, as Whitby sees an increase in active travel, it will be necessary to review and expand management and maintenance operations of the active transportation system which will require additional budgetary resources (staffing, equipment, materials, contracts, etc.).

k. It is recommended that future budgets and service levels be adjusted/adapted as required to address future needs and requirements associated with growth in the community and related active transportation network.

l. It is also recommended that the Town review active transportation routes maintained on an annual basis to ensure the appropriate resources are available to address the critical grid and user needs from both an operating and personal safety perspective.

m. Regular maintenance is required to keep urban mobility facilities safe for the various users. Special attention should be given to core network elements, especially those which serve strong commuter demands. The critical grid, or spine network should be identified in the winter maintenance program and be prioritized for maintenance.

n. The intent of a winter-maintained network is to identify connecting links to the existing winter maintained routes with the intent of establishing a linked system which access major destinations for both work and recreation.

o. As facilities are implemented, the Town will need to consider the available resources and budget to determine the level of service that is possible for both summer and winter maintenance of on and off-road active transportation facilities. Some of the elements include, but are not limited to: sweeping, plowing, grooming, adjacent grass cutting, vegetation/tree trimming, signage, pavement markings, litter and debris, pavement repairs, and so on.

p. The current operation costs to maintain the existing active transportation network (refer to **Table 10.5**) excluding equipment is in the order of **$400,000** per **year**. Based on the recommended 20+ active transportation network, it is estimated the corresponding maintenance costs (excluding equipment) would be in the order of **$700,000 per year** which will be for infrastructure built by the Town as well as others. Maintenance costs for some of the individual items are shown on **Table B4 in Appendix B.**

q. Taking into consideration the above, the following is recommended to be undertaken as the planning and implementation of the ATP evolves:

    1. The Town's maintenance standards should continue to reflect best practices including the most current Provincial Minimum Maintenance Standards.
    2. Procure manpower and equipment to continue to follow provincially mandated maintenance standards.
    3. Explore the identification and maintenance of a seasonal or year-round maintenance approach for the active transportation network by selecting a core system of active transportation routes facilities used by a wide range of residents and visitors. Develop criteria for all season maintained active transportation routes. Determine on a facility by facility basis and reviewed / confirmed based on the number of existing and potential users, network

priority, user type, the condition of the facility and the ability of the Town to maintain.

4. It is recommended that the Town identify a winter mobility spine network, to form the core of a winter maintained active transportation network.
5. Routes should be identified based on overall connectivity, popularity based on input received through consultation and engagement as well as user data, current maintenance practices and access to major community destinations.

10.4.4 Total Capital and Operating Costs

a. Based on the information in the sections above and included in **Appendix B**, the **annual costs based on the ultimate 20+ year build out** of the is estimated at:

Infrastructure Town Works	$4,057,200 (excl eng, cont, etc.)
Social and Institutional Initiatives	$220,000
Sidewalks	$1,750,000
Annual Maintenance	$700,000
Sub Total	**$6,727,000**
Admin and Equipment assume 7.5%	$504,500
Total Costs	**$7,231,700 - say $7.2 million**

b. It is important to note that these costs are based on the ultimate costs averaged over a 20 year period. It is expected that costs may vary higher and lower than the average from year to year. While the above does not include the development capital works to be borne by others, the maintenance required by the Town is reflective of the ultimate network upon assumption.

10.4.5 Funding the Active Transportation Plan

a Funding to build the active transportation network and supportive initiatives is intended to be a collaborative effort. Potential external funding and partnership opportunities should be explored regularly and pursued wherever feasible to offset local costs.

b Current funding for the construction and maintenance of the active transportation system is typically funded by the below sources:

1. Local capital and operating tax dollars that are budgeted and approved by Council annually
2. Funds from projects included in the local Development Charge Studies that are associated with growth.
3. Partnership monies with the Region and Province
4. Private sector (i.e. development) installations
5. Other agency installations such as the local Conservation Authorities

c Summarized in **Table 10.10** are the potential external funding sources that could be explored to support the plan. The funding programs shown were available at the time of writing, however; they are subject to change.

Table 10.10 – Potential Supplemental Funding Opportunities

Funding opportunities	Additional details
ecoMobility (TDM) Grant Program	✓ For details on the ecoMobility Grant Program refer to: http://data.tc.gc.ca/archive/eng/programs/environment-ecomobility-menu-eng-144.htm
Federation of Canadian Municipalities Green Municipal Fund	✓ For additional details regarding the Green Municipal Fund and potential funding alternatives refer to: https://fcm.ca/home/programs/green-municipal-fund.htm
Healthy Communities Fund	✓ For additional details regarding the Healthy Communities Fund refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918
Federal and Provincial Infrastructure / Stimulus Programs	✓ For Federal Government infrastructure stimulus fund details refer to: https://www.canada.ca/en/office-infrastructure.html ✓ For Provincial Government infrastructure stimulus fund details refer to: https://www.ontario.ca/page/ministry-infrastructure
Ontario Trillium Foundation	✓ For details regarding potential funding alternatives refer to: https://otf.ca/
Ontario Rural Economic Development Program	✓ For details refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918
Ontario Sport and Recreation Communities Fund	✓ As part of the Ontario Sport and Recreation Communities Fund: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918
Tourism Development Fund	✓ For additional details regarding the Tourism Development fund refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/OSAPQA005130
Service Club Support	✓ Lions, Rotary and Optimist clubs who often assist with highly visible projects at the community level.
Corporate Environmental Funds (e.g. Shell and MEC)	✓ For example refer to: https://www.shell.ca/en_ca/sustainability/communities/funding-guidelines-process.html for Shell Canada's Social Investment Program or https://www.td.com/corporate-responsibility/fef-grant.jsp for TD's Friends of the Environment Foundation Grant
Private Citizen Funding /Donation/Bequeaths	✓ Can also include tax receipts for donors where appropriate. ✓ Local Improvement Charges (Municipal Act)

10.5 Facility Lifecycles and Asset Management

a. Using existing/required Asset Management resources as well as user feedback, it is recommended that regular (at least every 2 years) monitoring of the condition of active transportation assets be undertaken so as identify operational and/or safety issues and recommended timings to repair or replace the assets. This information is vital to managing budgets and establishing programs.

b. Asset lifecycles can be predicted from historical observations as provided in **Table 10.11**. While some of Whitby's earliest park trails are approaching replacement, the majority of the active transportation network is still relatively new and requires little refurbishment.

c. Provided in **Appendix B5** is an overview of current estimated unit prices for the life cycle rehabilitation costs of different components of an active transportation network. These current costs range from as low as $260/km for a signed route to as high as $9,950 for a buffer bike lane/cycle track.

d. As the ATP continues to evolve, so too must the asset management resource strategy that supports the infrastructure. It is recommended that asset management continue to play a major role in the planning, development and management of the ATP network.

Table 10.11 – Asset Management Strategies for Active Transportation Infrastructure

Type	Useful life	Strategies
Multi-Use Path	25 years	✓ Minor repairs ✓ Resurfacing ✓ Rehabilitation ✓ Full-depth replacement
Sidewalk	50 years	✓ Minor repairs ✓ Replace deteriorating segments ✓ Full replacement
Bridge (Active transportation or motor vehicle)	25 to 75 years	✓ Bridge repairs ✓ Minor rehabilitation ✓ Full replacement
Culvert	25 to 50 years	✓ Culvert repair ✓ Minor rehabilitation ✓ Full replacement
Painted Line Markings	1 year	✓ Refresh annually
Durable Line Marking and Symbols	2 to 7 Years	✓ Refresh annually or depending on wear
Signage	20 years	✓ Depends on type, weather, amount of wear
Physical separation (bollards, curbs, planters, etc.)	Until damaged	✓ Replace damaged or faded signs

11.0 Guiding Principles

a. Given the strategic nature of the work undertaken as part this ATP, there will be a need for future detailed analysis of the active transportation network to be completed in conjunction with the broader transportation and recreational system.

b. A number of principles, strategies and policies have been presented throughout this document for implementation over the next 10 + years in order to achieve the Town's Active Transportation Vision. While several specific principles were identified in **Section 2** of this report, there are other general guiding principles that should be considered in the context of developing and implementing projects and programs and form the decision making when implementing recommendations in this plan. They include:

1. **Success is built on fostering respectful relationships** – ensuring proactive and respectful communication with users of the systems and active partners. The success of the Active Transportation Plan is built upon partnerships between community stakeholders including advocacy groups, conservation authorities, surrounding municipalities and Regional staff as well as Town staff. These connections are critical to the construction and maintenance of the network and to ongoing usership and feedback.
2. **The Active Transportation Plan is one step towards** implementing the vision for active transportation in Whitby, it is not the last. Successful implementation will require ongoing, and long-term investment. This includes investments in new/improved infrastructure, and appropriate resources for the management and maintenance of facilities, standards and policies, programming, education and awareness initiatives.
3. **The Active Transportation Plan is a flexible and living document** - while the ATP recommendations need to be firm and founded on consultation, engagement and research, they also must be flexible and responsive to emerging planning and design trends and behaviour in the community. Recommendations must be malleable so that they complement both municipal processes and the processes and protocols of Town partners. An ongoing review of the feasibility, desirability and elements of the implementation plan is required considering budgetary, technical, public input, cultural and socio-economic factors.
4. **The Active Transportation Plan will be monitored, reviewed, and updated on a regular basis as needed.** A monitoring and reporting strategy will be needed to measure and communicate progress towards achieving the vision, goals, and targets contained within the plan. The document including mapping will need to be regularly updated to reflect the changing priorities and conditions over time.
5. **Funding of the plan -** As municipal resources are limited, it is important to clearly showing the benefits of a robust active transportation network in terms of health, environmental, and mobility operations, so a strong case

for responsible active transportation spending can be made. Opportunities to fund the program should be regularly investigated and often funding is found to be most effective when partnered with other large scale municipal capital projects, and/or funding and grants from other government agencies.

6. **Ongoing costing and multi-year forecast is part of the annual budgeting process for the ATP** to identify upcoming projects, initiatives, detailed cost estimates, prioritization and implementation partners. Implementing, supporting and maintaining the ATP requires developing realistic budget items.
7. **Ongoing public consultation throughout the life cycle of the ATP-** Public input is an important tool in shaping and nurturing both the built and social networks in urban mobility and that the built form reflect the needs of active transportation users. By understanding and considering the needs of users, Whitby can continue to encourage growth in the active transportation modes and can build infrastructure that meets the needs of the most users. Consultation must consider marginalized groups and people of all backgrounds.
8. **Seemless Coordination** – the ATP does not operate independently and instead overlaps with many jurisdictional studies. It is important that there be ongoing coordination and collaboration both internal and with external partners to avoid duplication of effort and missed opportunities and to ensure that standards and designs are consistently applied across all environments and boundaries.

12.0 Monitoring and Reporting

12.1 Overview

a. The success of long range plans depends on the ongoing monitoring of relevant conditions, actions and impacts. The Town of Whitby must remain aware of its progress towards the ultimate vision of this plan as well as the key objectives, so that it can add, modify, or delete priorities as needed. The Whitby Active Transportation Plan must maintain some measure of flexibility and be adaptable to changes in active behaviours, development plans, and phasing of the Regional and Provincial infrastructure. This can best be accomplished though ongoing monitoring of relevant conditions and periodic updates to the ATP.

b. Through this Study, several strategic directions have been developed and the network plan laid out to attain the active transportation goals associated with it. Many of the components of the plan based on planned and forecasted growth within the municipality. The ATP must be able to respond to changes in development phasing and patterns that might impact the network and priorities.

c. Municipal strategic master plans are living documents and are typically updated every five to ten years allowing municipalities to review and where necessary refine the proposed recommendations to reflect best practices at that time alongside local successes, lessons learned and new opportunities. As such, it is recommended that the Town update the Active Transportation Plan on a regular schedule which would provide staff with the opportunity to revisit the phasing and specifically assess the progress of projects that were identified in the first phase of implementation.

d. Implement a monitoring program to assess the implementation of the ATP and how the active transportation infrastructure and programs are being used will be an important factor in ensuring and determining if the ATP is reaching its goals. Monitoring data can be obtained through Town and Regional initiatives.

e. This monitoring is critical to ensure the on-going success of the Active Transportation Plan and that the Town is successfully working towards its vision to become a leader for active transportation, where walking and cycling are a convenient, comfortable, and safe alternative for people to get to and from work, school, and other frequent destinations for people of all ages and abilities.

f. Monitoring will also enable the Town to appropriately allocate monetary and staff resources to implement prioritized initiatives. Monitoring also provides a means of identifying changing conditions which would require changes to the Active Transportation Plan. The monitoring needs to be:

    1. **Meaningful -** should yield meaningful results and point to the success in achieving the vision, goals, and targets of the Active Transportation Plan.
    2. **Measurable** - needs to utilize criteria that are measurable and for which data or information can be readily obtained.

3. **Manageable -** needs to consider resource limitations and identify measures where information is accessible or data is simple to collect.

12.2 Measures of Success

a. The Active Transportation Plan monitoring program focuses on identifying 'measures of success' for two components: first, the degree of progress in implementing the plan, and secondly, the outcomes of the plan. A number of performance measures are recommended that could be used to monitor the effectiveness of the ATP in achieving the overall vision and are based on the principles that have been identified in this report. A sample of these measures of success are included in **Table 12.1**.

b. Measures of success should be monitored continually in order to focus efforts in areas where efforts are most needed. The outcomes of the recommendations should influence success of the plan and reflect the societal, institutional, and infrastructure improvements as they are embraced by the community.

Table 12.1 – Measures of Success

Measure of Success	Indicator	Source
Non-Auto Mode Share (Commuter)	(%) percent	Statistics Canada Census Transportation Tomorrow Survey
Proportion of each of women, children, and seniors walking, cycling, and using transit (work)	(%) Percent	Statistics Canada Census
Walking, cycling, and transit volumes on key corridors	(#) number	Town of Whitby traffic count program, Region of Durham Transit
Walking and cycling funding levels (% of total budget)	(%) percent	Town of Whitby capital budget process
Town of Whitby resources dedicated to Active transportation (FTE)	(#) Number	Town of Whitby staffing levels, contracted services, equipment, capital and operating budget
Active transportation network growth year over year	(Km) kilometer	Town of Whitby Asset Management Inventories

12.3 ATP Review, Reporting and Updating

a. The ATP implementation plan should be reviewed annually with the main document being updated within a 10 year time frame. Maps for the use by the public should be updated annually as new facilities and amenities are built and information can be shared. At this time mapping of on-road and off-road facilities are accessible surfaces. Future mapping may include undeveloped/natural trails.

b. While the ATP main document may not be updated within the 10 year planning horizon, it is suggested that every five years a more comprehensive report be prepared at the 5 year time frame which highlights the progress and any major changes that may be necessary to consider, e.g. public input, standards, policies

c. Annual monitoring reports should be provided to Council on the status of the ATP either through/as part of the budget process, the ATP Working Committee or through stand alone reports, and be incorporated into annual asset management plans.

d. The annual report can be used to monitor the development of walking and cycling activity and track progress of the implementation steps of the ATP and work done towards achieving the visions and goals of the plan.

e. It is recognized that data may be more challenging to collect for some measures than others and, as a result, it is understood that the Monitoring Program may not include all the measures identified above. Results of the report can be shared with stakeholders, interested parties, partners, and be used for business case purposes, to support funding opportunities and for marketing purposes.

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