TOWN OF CALEDON



Transportation Master Plan

November 2017

Approved by Town of Caledon Council on November 7, 2017

Report prepared by:







TOWN OF CALEDON



Transportation Master Plan

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Executive Summary

Introduction and Background

The Town of Caledon Transportation Master Plan (TMP) is a strategic planning document designed to identify and address the transportation needs of the Town to the year 2031 (and beyond). Building on the directions articulated in the Town of Caledon Official Plan (COP) and the Peel Region Long Range Transportation Plan (LRTP), the TMP establishes the goals, strategies and initiatives necessary to achieve the municipality's future transportation vision. The TMP integrates municipal transportation planning with environmental assessment objectives and land use planning, ultimately providing for a transportation system that is sustainable, integrated and encourages a healthy and active lifestyle.

The goals of the TMP are to:

- Define a transportation vision that encompasses community values and identifies a direction to address the Town's mobility needs in an effective, responsible and sustainable manner.
- Provide a transportation framework that will support an economically sustainable and environmentally respectful growth management strategy consistent with local, regional and provincial policies.
- Identify opportunities for a multimodal approach to transportation service delivery that will maximize transportation capacity and foster the use of sustainable modes of transportation such as transit, cycling and walking, while also considering the needs of automobiles and safe and efficient goods movement.
- Reflect the rural and urban character of Caledon, the rich heritage of the community, and its high quality of life.

Context

The TMP complements, builds upon and implements the existing provincial, regional and local policy framework. The plan also considers a broad range of ongoing initiatives by other government agencies. The following overarching policies and initiatives were considered in the TMP study:

Provincial	Regional	Municipal
▸ Provincial Policy Statement (2014) ▸ Places to Grow, Growth Plan for the Greater Golden Horseshoe (2013 & 2017) ▸ *Accessibility for Ontarians with Disabilities Act* (2005) ▸ Greenbelt Plan (2005 & 2017) ▸ Metrolinx Regional Transportation Plan: The Big Move (2009) ▸ GTA West Corridor Environmental Assessment (2012) ▸ Ontario Ministry of Transportation Transit Supportive Guidelines (2012) ▸ #CycleON Ontario Cycling Strategy (2013) ▸ Ontario Trails Strategy (2010)	▸ Peel Region Official Plan (2014) ▸ Peel Region Climate Change Strategy (2011) ▸ Peel Region Health Background Study (2011) ▸ Peel Region Long Range Transportation Plan Update (2012) ▸ Peel Region Road Characterization Study (2013) ▸ Peel Region Strategic Goods Movement Network Study (2013) ▸ Peel Region Active Transportation Plan (2011) ▸ Peel Region Transportation Demand Management (TDM) Plan (2014-2018)	▸ Town of Caledon Official Plan (2015) ▸ Town of Caledon Secondary Plan for Mayfield West Phase II – Transportation Master Plan (2016) ▸ Town of Caledon Community Based Strategic Plan (2010) ▸ Caledon Transportation Needs Study Update (2009) ▸ Bolton Transportation Master Plan (2015) ▸ Caledon East Community Improvement Plan (2014) ▸ Caledon Trails Master Plan (2011) ▸ Caledon Development Charge Background Study (2014) ▸ Caledon Community Climate Change Action Plan (2010) ▸ Town of Caledon 2012 Community Greenhouse Gas Inventory Update (2012)

Existing and Future Conditions

The Town of Caledon provides a transportation network serving commuter, recreational and commercial goods movement travel demands. The network within the Town is primarily comprised of road rights-of-way (sidewalks, on-road cycling facilities, and general travel lanes), with some off-road active transportation routes (trails and pathways). This local system is supplemented by a broader transportation network of Regional Roads (under the jurisdiction of Peel Region), Provincial Highways and interregional transit (GO Bus) services.

Based on data from the 2011 Transportation Tomorrow Survey (TTS), approximately 223,000 total daily person trips were generated or destined to Caledon. Most trips by Caledon residents

are currently made by auto. Auto driver (74%) and auto passenger (15%) comprise 89% of all trips. Walking, transit, GO Transit and school bus make up the remaining portion of trips (11%). During the AM peak hours, most trips are destined to work (55%) followed by school (22%), while in the PM peak hour the majority of trips are destined to home (66%) or other (14%). Most trips to Caledon are travelling within the Town to Bolton and the Bolton employment lands. Individuals travelling from Caledon to destinations outside of the Town vary during the day, with AM peak period trips destined to Brampton, Mississauga, Toronto and York Region and PM peak period trips destined to a variety of locations including Orangeville and other areas including Simcoe, Dufferin and Wellington Counties.

Future demand on the transportation system is expected to increase as the Town and surrounding areas continue to grow. Between 2011 and 2031, the population of Caledon is expected to increase by 80% (approximately 48,000 additional people) per the COP, while employment is forecast to grow by 44%, adding 20,000 jobs over this period.

The impact of planned growth within Caledon and the surrounding areas was assessed using the Peel Region Travel Demand Forecasting Model. This computer-based modelling tool was used to predict how future travel demand could change due to this anticipated growth. Although traffic demands grow over time at every screenline, no location reaches over-capacity conditions. This is attributed to the planned Regional Road expansion program recommended in the LRTP, which has been formulated to serve anticipated growth. It is noted that traffic conditions will generally be worse in southcentral Caledon without the GTA West highway, as evidenced by higher v/c ratios.

Transportation Vision and Goals

The TMP defines the transportation vision for the Town, to focus on addressing the Town's mobility needs in an effective, responsible and sustainable manner:

By 2031, the Town of Caledon will have a transportation system that is safe, efficient, reliable, convenient, sustainable and multimodal. The system will balance demand with capacity allowing both intra- and inter-Town people and goods movement to support economic growth, respect the natural environment, reflect the urban and rural character of the town and preserve the high quality of life.

The transportation vision is supported by the following goals:

- Provide Choice in Services
- Facilitates Economically Sustainable Growth
- Respects and Protects the Environmental Integrity of the Town
- Develop a Safe, Reliable and Efficient System

Problems and Opportunities Statement and Alternative Solutions

The Town of Caledon faces several problems and opportunities related to the transportation network in the next 15 years:

- Rapidly Increasing Population and Employment
- Goods Movement
- Rural Roadway Deficiencies
- Evolving Land Development

Distinct transportation planning alternatives were derived and analyzed to address the problems and opportunities statement and achieve the transportation vision. Recognizing that Caledon falls within Peel Region and fits within the Regional transportation planning framework, the same four (4) alternative solutions identified for the Peel Region LRTP were assessed for the Caledon TMP to meet future needs, which are:

- **Alternative 1**: "Do Nothing"
- **Alternative 2**: "Transportation Demand Management (TDM) Only"
- **Alternative 3**: "Road and Highway Improvements Only"
- **Alternative 4**: "Combination of Alternatives 2 and 3"

Alternative 4 was further refined to fit within the context of Caledon, specifically considering the increased dependency on auto travel:

- **Alternative 4A**: "High Level of TDM Combined with Road and Highway Improvements"
- **Alternative 4B**: "Low Level of TDM Combined with Road and Highway Improvements"

The analysis of the alternatives based on a Multiple Account Evaluation (MAE) framework led to the selection of **Alternative 4B**: Low Level of TDM Combined with Road and Highway Improvements as the preferred alternative for the TMP. The combination of implementing road, transit, TDM and active transportation measures as part of the framework for Alternative 4B aids in reducing congestion and promotes transit and active transportation. The alternative

reflects the rural and urban characteristics of Caledon and will have the most promising effects on the transportation system.

Recommended Plan

The recommended plan features a range of road, transit, TDM, active transportation and policy initiatives to the year 2031 to implement the transportation network required to meet the future needs of the Town of Caledon. **Table E.1** summarizes the eight key objectives/trends and recommendations of the plan.

TABLE E.1: CALEDON TMP OBJECTIVES/TRENDS AND RECOMMENDATIONS

Objective/Trends	Recommendations
Through Trips	▸ Road Improvements ▸ Albion Vaughan Road Widening ▸ Traffic Calming Strategy ▸ Traffic Safety Strategy/Audit ▸ Redesign Roads
Single Occupant Vehicles	▸ TDM ▸ Transit Recommendations ▸ Cycling Commuter Trips

Major Destination	▸ Transit Provision
	▸ Connect to Brampton/Mississauga
	▸ Employment Lands
	▸ Internal Trips (Employment in Caledon)
	▸ Bolton Union Connection
	  ▸ GO Bus
	  ▸ Connect to Vaughan Metropolitan
	  ▸ Centre (New TTC Subway)
	▸ Negotiate with Province on:
	▸ Highway Improvements
	▸ 427 Extension to Major Mackenzie Drive and beyond to Highway 9

Bolton as a Major Community Hub	▸ Implement BTMP
Active Transportation	▸ Active Transportation
Aging Population	▸ Transit Target Audience

Objective/Trends	Recommendations
Trucks	▸ Traffic Safety Strategy/Audit ▸ Traffic Calming ▸ Partner with Peel on Goods Movement Aggregate Study
Growth	▸ Requirements of having TIS Guidelines

Recommended Actions

The recommended actions of the TMP are to:

- Incorporate the typical cross-sections into the Caledon Development Standard Manual
- Partner with Peel Region to work towards Vision Zero
- Continue to monitor and assess the need for improvements at key intersections in the Town
- Develop a Transit Implementation Plan
- Advocate for a GO Train Station to be constructed in the Bolton Residential Expansion Area (Bolton TMP)
- Introduce transit stop criteria and design policies into the Town of Caledon Official Plan
- Develop a TDM Plan, beginning with the following initiatives:
  - Increase local awareness of TDM with marketing and education programs;
  - Include TDM considerations in all municipal plans and studies;
  - Lead by example by implementing Town TDM measures and expanding the Town's role and participation in Smart Commute Brampton-Caledon; and
  - Support Peel Region's TDM initiatives.
- Implement the Long-Term Network Plans for Pedestrian and Cycling Routes
- Implement the Trails Master Plan
- Update the active transportation policies in the Official Plan
- Apply for the Share the Road Bicycle Friendly Community Award
- Continue to participate in the Active and Safe Routes to School Program
- Complete a Sidewalk Strategic Plan
- Participate in the Peel Region Goods Movement Strategic Plan
- Develop and implement a long-term Carpool Lot Strategy
- Introduce neighbourhood Traffic Management/Traffic Calming policies into the Town of Caledon Official Plan
- Update the Urban Traffic Calming Manual as required

- Participate in the discussion of Bill 65 Automatic Speed Enforcement at School Safety Zones and Community Safety Zones
- Investigate implementing a "Road Diet" on Queensgate Boulevard from Highway 50 to Albion-Vaughan Road
- Implement all-day parking on Queen Street in the Downtown Core (Bolton TMP)
- Engage in discussions with the Region of Peel and advocate for the transition of Queen Street into a "complete street" within Downtown Bolton.
- Implement the road network improvement program
- Implement active transportation improvements through planned capital works projects to the extent possible
- Amend the Town's Official Plan to incorporate the policies recommended in this plan
- Design and implement an ongoing transportation monitoring program
- Review the TMP every five years, ideally in conjunction with a review of the Town Official Plan

The recommended road network improvement program was derived principally from the recommendations of the Bolton TMP and Mayfield West Phase 2 Secondary Plan TMP, with regard for the long-term capital works program set out in the 2014 Town of Caledon Development Charge Background Study. The analyses completed through the TMP study confirmed the expansion projects identified through those prior studies were still necessary for implementation by the year 2031.

It is noted that the long-term capital roads program contained in the 2014 Development Charge Background Study includes other projects considered necessary to support planned growth in Caledon not identified in this document. The TMP has focused more on expansion (widening and new construction) projects in established development areas. The absence of a specific project identified in the 2014 Development Charge Background Study from the recommended improvement program in this TMP should not be construed as the project is not necessary to support future growth.

Phasing and Costs

The projects in the recommended improvement program have been classified in two phases:

- **Short term**, generally considered appropriate for implementation by the year 2021;
- **Long term**, considered to be needed for implementation by the year 2031.

Indicative costs for the projects were obtained from the 2014 Town of Caledon Development Charge Background Study, where available.

Projects recommended for implementation in the short-term horizon generally are considered needed to address existing conditions and to serve planned growth of population and employment to the year 2021. The total cost for the three short-term projects is estimated at approximately $$11.100 million.

Seven projects are considered necessary for implementation by the year 2031. The total cost for these projects is estimated at approximately $44.789 million.

Potential active transportation network improvements will be implemented primarily as opportunities are presented through the Town's ongoing road rehabilitation and reconstruction program. New multi-use routes will be constructed either through future development or as stand-alone projects, which will be identified in the Town's capital budget.

Implementation and Monitoring

The successful implementation of the TMP will require that concurrent efforts be undertaken to achieve key strategies, including supportive land uses, and managing transportation demand and constructing the transportation infrastructure identified in the plan. A regular review of the TMP is proposed every five years. The Town may amend the TMP in the intervening period to incorporate changes to the Official Plan review process or other major initiatives.

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Transportation Master Plan

Final Report

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1 Introduction

1.1 Context

This report provides the Transportation Master Plan (TMP) for the Town of Caledon. The TMP is a strategic planning document designed to identify and address the transportation needs of the Town to the year 2031 (and beyond). Building on the directions articulated in the Town of Caledon Official Plan (COP) and the Peel Region Long Range Transportation Plan (LRTP), the TMP establishes the goals, strategies and initiatives necessary to achieve the municipality's future transportation vision.

The Town of Caledon spans over approximately 700 square kilometres and is the northernmost municipality in Peel Region. With a population of approximately 60,000 people, the town is a mix of rural areas, hamlets, and three urbanized centres: Bolton, Caledon East and Mayfield West. Peel Region is one of the fastest growing regions in Ontario, with a population of over 1.3 million people that is expected to reach 1.77 million people by 2031. Anticipated population growth and development in Caledon, Peel Region and neighbouring municipalities, along with a planned extension of Highway 427 to Major Mackenzie Drive, a proposed new 400-series highway and transitway within the GTA West Transportation Corridor and Metrolinx regional transit upgrades, are expected to have significant impacts on future transportation demand and the facilities provided to serve this need in Caledon.

1.2 Study Background and Purpose

As noted above, the TMP sets a vision and priorities for transportation in the Town of Caledon over the next 20 years. It is a strategic tool that will guide the development of transportation infrastructure, policies and programs, with a view to maintaining the high quality of life that Caledon residents currently enjoy, safeguard the environment, and facilitate continued economic growth and prosperity.

The TMP Study followed the master planning provisions specified in the Municipal Class Environment Assessment (EA), which is an approved process under the Ontario *Environmental Assessment Act*. The process included a comprehensive evaluation of transportation deficiencies, opportunities and solutions consistent with municipal planning goals and EA planning principles. The community was engaged through the Study, with the input from stakeholders and residents helping to guide the outcomes of the TMP. **Section 1.5** below provides further information about the community engagement process.

The goals of the TMP are to:

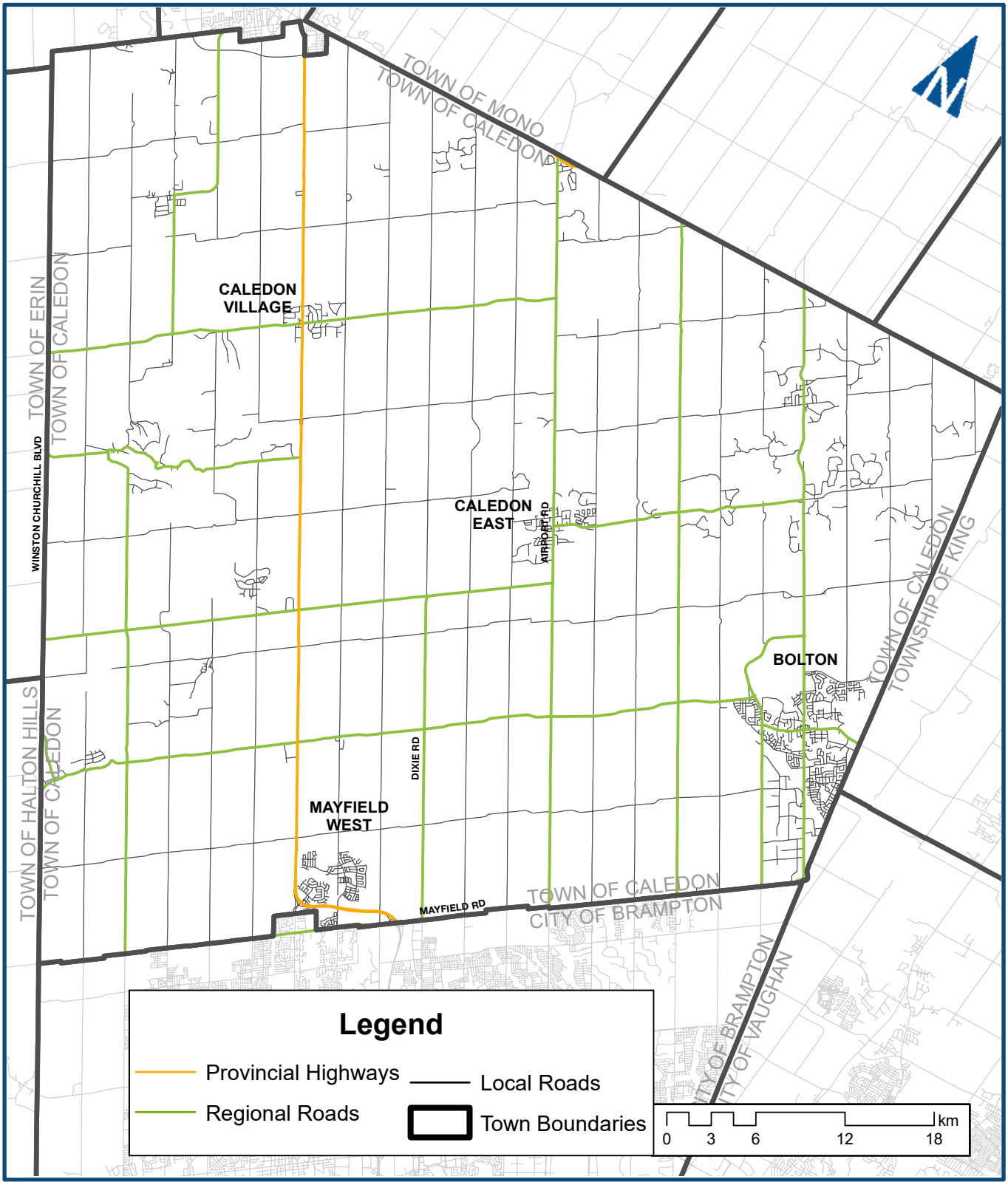
- Define a transportation vision that encompasses community values and identifies a direction to address the Town's mobility needs in an effective, responsible and sustainable manner.
- Provide a transportation framework that will support an economically sustainable and environmentally respectful growth management strategy consistent with local, regional and provincial policies.
- Identify opportunities for a multimodal approach to transportation service delivery that will maximize transportation capacity and foster the use of sustainable modes of transportation such as transit, cycling and walking, while also considering the needs of automobiles and safe and efficient goods movement.
- Reflect the rural and urban character of Caledon, the rich heritage of the community, and its high quality of life.

The TMP Study considered the entire Town of Caledon, as shown in **Figure 1.1**. The boundaries of the Town extend from:

- Winston Churchill Boulevard in the west;
- Orangeville-Caledon Townline/Highway 9 in the north;
- Caledon-King Townline/Albion Vaughan Road in the east; and
- Mayfield Road in the south.

The actions recommended in the TMP represent the stated intentions of Town Council to guide ongoing and future investment and policy decisions. The plan provides a "blueprint" for future action that will need to be implemented through several mechanisms, including:

- **Development Charge By-laws, Annual Operating and Capital Budgets, and Long-Term Capital Forecasts** – These documents will earmark the necessary financial resources to implement the recommended programs and infrastructure improvements identified in the TMP;
- **Amendments to the Town of Caledon Official Plan** – Elements of the TMP will be incorporated into the COP by amendment to ensure implementation through policy direction and the review and approval of development applications;
- **Implementation Strategies and Action Plans** – The scope, timeframe and resource requirements for the recommended major initiatives need to be further detailed;



TOWN OF CALEDON

Transportation Master Plan Study Area

Figure 1.1

- **Environmental Assessments** – The Town must undertake Municipal Class EA studies to complete the planning and design process initiated through the TMP prior to proceeding with the implementation of certain improvement projects identified in this plan. This is necessary to satisfy provincial and federal statutory requirements; and
- **Guideline Documents** – Guidelines, such as those setting design standards and recommended operating and maintenance procedures, are needed to provide further implementation detail, and may be developed to complement the TMP.

It is important recognize that certain assumptions underlying the TMP may prove imprecise over time due to changing conditions, and the plan will need to be periodically reviewed and updated. Ideally, this assessment would be linked to the five-year reviews required for the COP by the *Planning Act*. Ongoing updates are not contemplated.

Successful implementation of the TMP will ultimately depend on the cooperation and active participation of many stakeholders, including Peel Region, the provincial government, other public agencies, the business and development community, and local citizens. The plan provides a framework for co-operation between stakeholders, and will be relied upon to guide the Town's future transportation decisions and actions.

1.3 Planning Context

The TMP has been developed within the context of previous and ongoing land use and transportation planning initiatives undertaken by the Town of Caledon, Peel Region, and Provincial government ministries and agencies. The plans and policies that have informed the TMP include:

Provincial Policies and Plans:

- Provincial Policy Statement (2014)
- Places to Grow, Growth Plan for the Greater Golden Horseshoe (2013 & 2017)
- *Accessibility for Ontarians with Disabilities Act* (2005)
- Greenbelt Plan (2005 & 2017)
- Metrolinx Regional Transportation Plan: The Big Move (2009)
- GTA West Corridor Environmental Assessment (2012)
- Ontario Ministry of Transportation Transit Supportive Guidelines (2012)
- #CycleON Ontario Cycling Strategy (2013)
- Ontario Trails Strategy (2010)

Peel Region Policies and Plans:

- Peel Region Official Plan (2014)
- Peel Region Climate Change Strategy (2011)
- Peel Region Health Background Study (2011)
- Peel Region Long Range Transportation Plan Update (2012)
- Peel Region Road Characterization Study (2013)
- Peel Region Strategic Goods Movement Network Study (2013)
- Peel Region Active Transportation Plan (2011)
- Peel Region Transportation Demand Management (TDM) Plan (2014-2018)

Town of Caledon Policies and Plans:

- Town of Caledon Official Plan (2015)
- Town of Caledon Secondary Plan for Mayfield West Phase II – Transportation Master Plan (2016)
- Town of Caledon Community Based Strategic Plan (2010)
- Caledon Transportation Needs Study Update (2009)
- Bolton Transportation Master Plan (2015)
- Caledon East Community Improvement Plan (2014)
- Caledon Trails Master Plan (2011)
- Caledon Community Climate Change Action Plan (2010)
- Town of Caledon 2012 Community Greenhouse Gas Inventory Update (2012)

This broad list of overarching plans and policy documents can be classified into the following categories:

1.3.1 Land Use Plans and Policies

Provincial Policy Statement (2014)

All Ontario municipal Official Plans are required to be consistent with the Provincial Policy Statement (PPS). The PPS provides policy direction on land use planning and development issues that are of provincial interest, including transportation facilities. Transportation policies set out in the PPS focus on the movement of people and goods through a safe and energy efficient transportation system, and promotes a multimodal transportation system, which includes transit and active transportation. This direction is supported through compact, mixed land uses and transportation demand management initiatives that minimize the length and amount of required motor vehicle trips.

Places to Grow, Growth Plan for the Greater Golden Horseshoe (2013 & 2017)

The Growth Plan for the Greater Golden Horseshoe was developed to guide planning decisions in a way that will promote economic development and strong communities. The Plan's vision calls for the development of compact and complete communities where people can live, work, and access services nearby. The Plan requires municipalities to plan for a built form that supports walking, cycling and transit and envisions an integrated, multimodal transportation system to support mobility for people and goods. Performance indicators for the growth plan were released in 2015 and include measures that demonstrate the development of compact and efficient communities support walking, cycling and transit. The Growth Plan policies will guide the TMP recommendations to include measures to support alternatives to motor vehicle use. In July 2017, the province released an update to the Growth Plan. As the TMP was drafted prior to the release of the update, the previous version was considered in the preparation of the TMP.

Greenbelt Plan (2017)

The Greenbelt Plan, established under Section 3 of the *Greenbelt Act, 2005*, permanently protects agriculture uses and natural ecology of the Greenbelt area by preventing urbanization. It is viewed as the "cornerstone" of the provincial Growth Plan for the Greater Golden Horseshoe. Most land in the Town of Caledon lies within the Greenbelt, including the Oak Ridges Moraine Conservation Area. The TMP considers these protected areas and has developed recommendations that respect the sensitivity and importance of the Greenbelt. In July 2017, the province released an update to the Greenbelt Plan. As the TMP was drafted prior to the release of the update, the previous version was considered in the preparation of the TMP.

Peel Region Official Plan (2014)

The Peel Region Official Plan sets the long-term policy framework to support planning decisions across the Region. Plan objectives include developing and promoting an integrated, efficient and safe multimodal transportation system, and encouraging the increased use of sustainable modes of transportation.

Town of Caledon Official Plan (2015)

The Official Plan sets out the policy framework to provide an integrated, diverse transportation system for the movement of people and goods that is safe, convenient, affordable, efficient, sustainable, minimizes environmental impacts and is accessible to all including those with

disabilities. The Plan recognizes that the primary mode of travel in the town during the plan period will be the automobile however, policies aim to provide for a transportation system that accommodates all travel modes and looks to senior levels of government to expand transit into the Caledon area. Development of a system of bicycle and pedestrian facilities is encouraged to link to major public open spaces, activity centres and the transportation network.

The primary road network, road classifications and Transportation Study Areas are designated on Schedule J of the Plan. The Plan policies commit to working with the Province, Region, and neighbouring municipalities to support future provincial transportation corridors including the Highway 427 extension to Major Mackenzie Drive, an additional extension of Highway 427 north of Major Mackenzie Drive, the GTA West Transportation Corridor; and related roadway improvements and connections. Rural Service Centres (rural towns on full piped water and sewer services) are designated as the primary growth areas.

Caledon East Community Improvement Plan (2014)

The overall goal for the Caledon East Community Improvement Plan is "to improve the physical environment of the community improvement plan project area" to revitalize the Caledon East community, promote private investment, and improve the residents' quality of life. Plan objectives include encouraging property improvements that will provide for active modes of transportation, improve accessibility for all people, improving or expanding the trail network, and designing streetscape improvements to create accessible, pedestrian-oriented streets. Strategies aimed to assist the private sector include an incentive program for property upgrades to commercial, mixed-use, office, institutional or residential properties. Upgrades can include bicycle parking, wayfinding signage and improvements to the pedestrian environment. The consideration of transportation improvements to Caledon East's core area is supported by the Plan through a future feasibility study. The Plan provides proposed streetscape and public realm improvements.

Highway 427 Industrial Secondary Plan – Area 47 (2014)

The City of Brampton Highway 427 Industrial Secondary Plan (Area 47) provides a conceptual land use plan and a policy framework for a complete community bordering the Town of Caledon to the south. It also protects lands for a future GTA West corridor. The area is expected to accommodate 27,000 people and 20,500 jobs at full build out. In the future, intensification in this area will influence Caledon's transportation network to the north and therefore, was

considered in the development of the Bolton TMP. The Caledon TMP will also take this into consideration.

1.3.2 Transportation Plans and Policies

Metrolinx Regional Transportation Plan: The Big Move (2009)

The Big Move is a 25-year plan for an integrated, multimodal transportation system in the GTA that will support the sustainable growth policies of the Growth Plan for the Greater Golden Horseshoe and the Greenbelt Plan. With a view to reducing traffic congestion, improving air quality and supporting economic viability, The Big Move provides a framework for the development of the TMP that considers all modes of transportation, promotes integration of local and regional public transit, and promotes transit-oriented development. The Big Move includes improvements that will benefit mobility in Caledon including the GTA West Corridor, the Highway 427 Extension, GO service to the community of Bolton, and improvements to rail service across the Region. As of September 2017, Metrolinx is currently in the process of updating the RTP to 2041. These initiatives are discussed in further detail below.

Ontario Cycling Strategy #CycleON (2013)

The Ontario Ministry of Transportation (MTO) Cycling Strategy: #CycleON and its associated Action Plan promotes cycling across the province as a mode of transportation. It aims to develop a province-wide cycling network (plan currently under development) and to reduce collisions and injuries. Starting in 2015 the Province invested $10 million over two years through the Ontario Municipal Cycling Infrastructure Program (OMCIP) to support municipalities as they improve cycling infrastructure. The Town of Caledon was one of 37 municipalities approved for funding through this program.

Ontario Trails Strategy (2010)

The vision, goals and values of the Province's trail strategy recognizes trails as key economic and tourism assets for Ontario communities that, in addition to their economic benefits, bring important health benefits and contribute to a high quality of life. Coordination and strategic leadership is available to trail stakeholders through the Ontario Trails system framework that guides trail development, and provides opportunities for financial support.

Ontario Ministry of Transportation Transit Supportive Guidelines (2012)

The Province's Transit Supportive Guidelines promote transit-oriented planning and design throughout the province based on best practices and with the goal of encouraging increased

transit use in communities over time. As such, the guide compliments local planning and transportation policies and plans.

Peel Region Long Range Transportation Plan (LRTP) Update (2015)

The 2015 update to the 2005 Long Range Transportation Plan identifies the transportation challenges the Region anticipates over the next 20 years and focuses on investing in and sustaining a robust multimodal transportation system. Plan strategies address transportation demand management, goods movement and sustainability initiatives. The LRTP provides a road network improvement plan to address existing and future needs. Regional road improvements within the boundary of the Community of Bolton have been incorporated into the Bolton Transportation Master Plan and will also be incorporated into the Caledon TMP.

Peel Region Road Characterization Study (RCS) (2013)

The RCS was recommended in the 2012 Peel Region Long Range Transportation Plan as a process to examine the objectives, needs and intended functions of Regional arterial roads. The primary objective of the study was to evaluate and prioritize the multiple transportation demands on arterial road function, such as access to various land uses, goods movement, transit, pedestrian and bicycle facilities. The study characterized roads based on their desired function and adjacent land use while considering future development and intensification in the area. The Caledon TMP has taken this study into consideration in order to prevent a conflicting vision and recommendations.

Peel Region Strategic Goods Movement Network Study (2013)

The Peel Region Strategic Goods Movement Network Study is one of 23 Actions recommended in the Peel Region Goods Movement Strategic Plan 2012-2016. The Plan was developed by the Peel Region Goods Movement Task Force to support efficient goods movement in the Region. A hierarchical truck route network has been proposed through Peel Region based on stakeholder feedback and best practices.

Peel Region Transportation Demand Management (TDM) Plan (2014-2018)

Peel Region's Five-Year TDM Plan for 2014 to 2018 builds upon the success of previous TDM Plans and aims to continue to improve air quality by reducing single occupant vehicle travel demand. The plan aims to invest $3.64 million over five years. The key components of the plan include:

- Providing support to local Transportation Management Associations;
- Individualized TDM marketing, telework and social marketing;
- Establishment of TDM Guidelines and tools to influence the planning and development process;
- Development of improved measurement and benefit analysis tools; and
- Technical support to assist municipal partners with the advancement of TDM across the Region.

Peel Region's five-year TDM Plan strategies will form a critical framework for the TDM Measures included in the Caledon TMP.

Peel Region Active Transportation Plan (2011)

The Peel Region Active Transportation Plan was adopted in 2012 and provides a long-range vision and strategy to increase the travel mode share of active transportation for shorter distance trips in the Region; improve the built environment for cycling and walking; and improve the integration of active modes with public transit. The Plan configures its strategies with a view to maximizing the benefits of increased active transportation mode share, including benefits to mobility, health, the environment and the economy. In addition to infrastructure improvements, policies and programs are proposed to support and encourage the uptake of active modes. The Plan is intended to complement the existing and planned active transportation network in Caledon and the other local municipalities by improving facilities on Regional Roads.

Between 2012 and 2014, 4.2 km of sidewalks, 2.3 km of multi-use trails, and 21.4 km of paved shoulders were implemented in the Town of Caledon with an additional 2.0 km of sidewalk, 2.85 km of multi-use trail and 4.8 km of paved shoulders planned for 2015-2016. The Greenbelt Cycling Route has also been implemented with the addition of signage and resurfacing along the existing east-west Caledon Trailway.

Caledon Transportation Needs Study Update (2009)

The Caledon Transportation Needs Study Update was a joint project of the Town of Caledon and Peel Region. The study identified the transportation improvements required to serve existing and future growth and land use in Caledon. The study identified improvements to existing arterial roads, travel demand management measures, improved inter-regional public transit.

Caledon Trails Master Plan (2011)

The Master Plan identifies additional north-south trail linkages between Porterfield Road and Inglewood; Mono Mills and Airport Road; and Albion Hills Park and Bolton. On-road cycling routes are also identified in the Plan.

Bolton Transportation Master Plan (2015)

Transportation issues and opportunities identified for the Community of Bolton include population growth, accommodating truck traffic in and through the community, preserving heritage structures in the downtown, and a lack of multimodal transportation options. The preferred transportation alternative includes short term multimodal recommendations for active transportation, transit, transportation demand management and truck movements, and recommended road improvements for the year 2021 and 2031.

Active transportation (AT) is a major component of the Master Plan and a Bolton AT Strategy is proposed as a high-level planning document outlining proposed improvements, programs, and policies for further investigation. Elements of Peel Region's active transportation network that were identified on City roads have been incorporated into the AT Plan. The supporting policies include provisions for local transit integrated with regional and inter-regional transit, TDM measures and policies to support a vibrant downtown designed with Complete Streets. **Appendix A** provides the executive summary for the Bolton Transportation Master Plan.

Town of Caledon Secondary Plan for Mayfield West Phase II – Transportation Master Plan (2016)

The Mayfield West community secondary plan envisions a compact, pedestrian oriented, mixed-use community that provides residential, employment and commercial opportunities, community facilities and services. The planned population for the Secondary Plan is approximately 9,000 persons and approximately 2,845 dwelling units with 180 gross hectares (444 acres) of employment generating land uses, complementary commercial and community uses. The Transportation Master Plan provides a strategic transportation framework that supports a broad range of travel options that include walking, cycling, public transit, and a connected road network. Public transit service recommendations include a transit hub integrating local bus services with transit in adjacent urban areas (including GO Transit) and main activity centres in the City of Brampton. The Plan also includes the provision to connect and integrate pedestrian and bicycle networks with existing active transportation routes in Caledon and surrounding communities.

Peel-Highway 427 Extension Transportation Master Plan (2009)

This study was led by Peel Region in cooperation with the City of Brampton and the Town of Caledon to investigate strategies to connect municipal roadways with the proposed Highway 427 extension and to carry out a comprehensive review of transportation needs in Southeast Caledon and Northeast Brampton. The study recommendations include new arterial roads, improvements to existing roads and recommendations to support travel by modes other than automobile. The extension of Highway 427 will have an impact on transportation in the Town of Caledon and increase the transportation demand on existing roads. The highway expansion will be included in the Caledon TMP transportation analysis.

Highway 50 / 427 Extension Area: Arterial Road Network Study (2007)

This study investigated the feasibility of extending Highway 427 to a point south of the Green Belt and Oak Ridges Moraine. Connections to the Highway extension were investigated along with municipal road network solutions to accommodate increased transportation demands.

1.3.3 Major Transportation Initiatives

Greater Toronto Area (GTA) West Corridor Environmental Assessment (2012)

The Ministry of Transportation initiated the GTA West Transportation Corridor Planning and Environmental Assessment Study to address long term transportation needs in the GTA West area. Route alternatives for a new transportation corridor that is proposed to include a 400-series highway, a transitway, and potential priority for goods movement are being investigated. The Route Planning Study Area crosses east-west through the Town of Caledon. In December 2015, the province suspended its work on the EA project pending further review.

Due to the uncertainty of this project and the considerable impacts that it would have on transportation conditions in the Town of Caledon, the TMP will analyze two transportation modelling scenarios, one with the GTA West corridor in place and one without.

Highway 427 Extension, Ministry of Transportation (May 2016)

The province has released a request for proposals to extend Highway 427 by 6.6 km from Highway 7 to Major Mackenzie Drive. The highway will also be widened for about 4 km south of Albion Road to Highway 7. Construction is expected to begin in 2017 and the highway is expected to be open to traffic in 2020. Dedicated High Occupancy (HOT) lanes will be included in the new extension. In addition, 15.5 km of dedicated HOT lanes with electronic tolling in both

directions are planned for Highway 427, from south of Highway 409 to north of Rutherford Road in 2021.

1.3.4 Other Legislation, Plans and Policies

***Accessibility for Ontarians with Disabilities Act* (AODA, 2005)**

The AODA outlines mandatory standards for the private, public and non-profit sectors to remove barriers and ensure equitable access for all residents with disabilities. Built environment standards have been developed and must be applied when planning, designing and building transportation facilities. These standards will be applied in the development of the Caledon TMP.

Peel Region Climate Change Strategy (2011)

The Region's Climate Change Strategy sets out a framework and action plan over the short and medium term (up to 5 years) to address factors contributing to climate change at the local level in collaboration with partner municipalities, agencies, residents and the private sector. Net greenhouse gas emission reduction targets for all partners are set at 80% below 1990 levels by 2050. Actions include ongoing support for sustainable transportation initiatives across the Region.

Peel Region Health Background Study (2011)

This study undertaken by Peel Region Public Health and the Heart and Stroke Foundation helps to ensure new development promotes and supports healthy and active communities. The study provides a checklist-based tool for municipalities to use in the evaluation of development proposals against a set of criteria for healthy built form. The tool is organized under six core elements: density, service proximity, land use mix, street connectivity, streetscape characteristics, and parking. The tool was previously used to evaluate local plans such as the Mayfield West Phase II Secondary Plan and was considered in the development of the Bolton Transportation Master Plan.

Town of Caledon Community-Based Strategic Plan (2010)

The ten-year Community-Based Strategic Plan was developed with the input of area residents, businesses and institutions; and sets a vision and goals for the Town of Caledon to achieve continued economic, social, and environmental success. Strategic objectives that aim to facilitate connections between communities encompass transportation and call for provision of

transit and bicycle facilities (Strategic Objective 2F), and a universally accessible public realm (Strategic Objective 2A).

Caledon Community Climate Change Action Plan (2010)

The Community Climate Change Action Plan builds on a community greenhouse gas inventory that was developed in 2008 and 2009. Based on these findings, the Community Climate Change Action Plan contains a series of proposed greenhouse gas reduction actions, categorized as follows: transportation; green development; energy; schools; agriculture; community awareness; tree planting and naturalization; waste; local food; and longer term actions. Transportation actions include ongoing support for Transportation Demand Management, anti-idling, public transit services and alternative fuel types.

Town of Caledon 2012 Community Greenhouse Gas Inventory Update (2012)

The purpose of the 2012 GHG emissions inventory is to fulfill the requirements of Milestone 5 of the Partners for Climate Protection program and track the Town's progress towards it's GHG emissions reduction goals. This inventory also serves to help the Town to: prioritize and better target actions in its Action Plan through the identification of its largest emissions sectors and sources in 2012 compared to 2006; respond to and prepare for upcoming changes in regulations, fuel costs, and markets resulting from Ontario's Cap and Trade program and the recent release of its Climate Change Strategy and; strengthen local sustainability planning overall. The inventory also complements and updates the 2006 inventory, incorporating updated best practices in emissions calculation methodologies and newly available data.

1.4 Study Process

Preparation of the TMP followed the master planning process defined in the **Municipal Class EA**[1]**.** This process integrates the planning for infrastructure requirements for existing and future land use with the principles of environmental assessment planning, which include:

- Consulting with affected parties early and often;
- Considering a reasonable range of alternatives;
- Identifying and considering the effects of each alternative on all aspects of the environment;

[1] Ontario Municipal Engineers' Association, *Municipal Class Environmental Assessment*, October 2000, as amended in 2007, 2011 and 2015.

- Evaluating the alternatives systematically to determine their net environmental effects; and
- Providing clear, complete and traceable documentation of the planning process.

The work completed in preparing the plan is consistent with the first two phases of the Municipal Class EA planning and design process for the proposed infrastructure projects identified. However, the TMP was not prepared in a manner that would allow the document, on its own, to serve as the problem and opportunity statement (Phase 1), or the assessment of alternative solutions (Phase 2) for the identified projects. More detailed investigations and public involvement are still required to fulfil consultation and documentation requirements. The plan will be relied upon in completing this future work.

The TMP does not require approval under the *Environmental Assessment Act*, although the projects recommended by the plan must fulfil all appropriate EA requirements. Requests for an order to comply with Part II of the Act, the portion of the legislation regarding appeals, is possible only for those projects that are subject to the Municipal Class EA, and not the plan itself. All infrastructure improvements fall into this category.

1.5 Community and Stakeholder Engagement

1.5.1 Program Overview

Engaging residents and stakeholders is an important, essential component of the development of the Caledon TMP, as well as a key piece of the Class EA process. A successful TMP will consider and address the needs and wants of the transportation system users. To engage a wide range of community members, it is important to have an effective, accessible and efficient communication system. The existing Town communication channels including the Town website, social media, community boards and newspapers were utilized as well as in-person events and workshops. The major engagement activities included:

- A series of “pop-up” engagement events for the first round of public consultation to gather community input on the transportation system;
- A Public Information Centre to present the draft TMP to the public and solicit feedback; and
- A Stakeholder Workshop to present the draft TMP to stakeholders and receive their input and comments.

Opportunities to engage were promoted through the Town’s communication channels:

- Dedicated project webpage on the Town's website (www.caledon.ca/tmp);
- Notice posted on the Town's website;
- Advertisements posted in the Caledon Citizen and Caledon Enterprise newspapers;
- Your Caledon Twitter account, Facebook account, and newsletter; and
- Project posters on community boards in Town libraries.

Appendix B contains all community and stakeholder engagment documents including notices, letters, presentation materials, display boards, survey responses, comments and responses.



1.5.2 Consultation Round #1

To provide meaningful opportunities for community input into the TMP and to reach a broad audience, the Town of Caledon hosted six "pop-up" engagement events around the municipality and provided an online feedback form, available from January to September 2016.

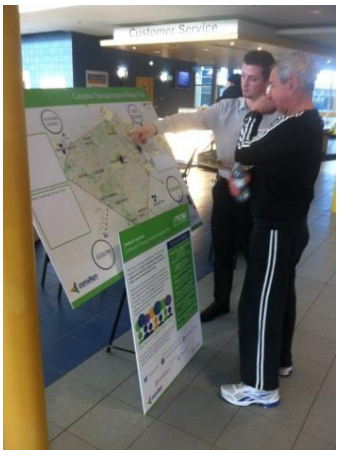
In total, 150 people were engaged in the conversation on Caledon's future transportation network. The following table provides a breakdown of the engagement activities and number of people that participated.

Date	Pop-Up Location	Number of Participants*	Engagement Input
Jan 29, 2016	Caledon Public Library (Caledon East Branch)	6	6
Jan 29, 2016	Caledon Centre for Recreation and Wellness	28	18
Jan 29, 2016	Caledon Community Complex	17	13
Jan 30, 2016	Mayfield Recreation Complex	32	18
Jan 30, 2016	Inglewood Community Centre and Library	8	6
Jan 30, 2016	Albion Bolton Community Centre	5	4
Jan 22 – Feb 15, 2016	Online Feedback	54	54
Total		**150**	**119**

*Number of participants is higher than input due to families and couples participating in joint conversations







During the engagement activities, participants were asked to share where they generally live and travel on a large map of the Town, as shown in **Figure 1.2.** During one-on-one conversations participants were also asked to share what elements of Caledon's transportation network they felt worked well, what issues or concerns they may have, and any improvements they would like to see explored.

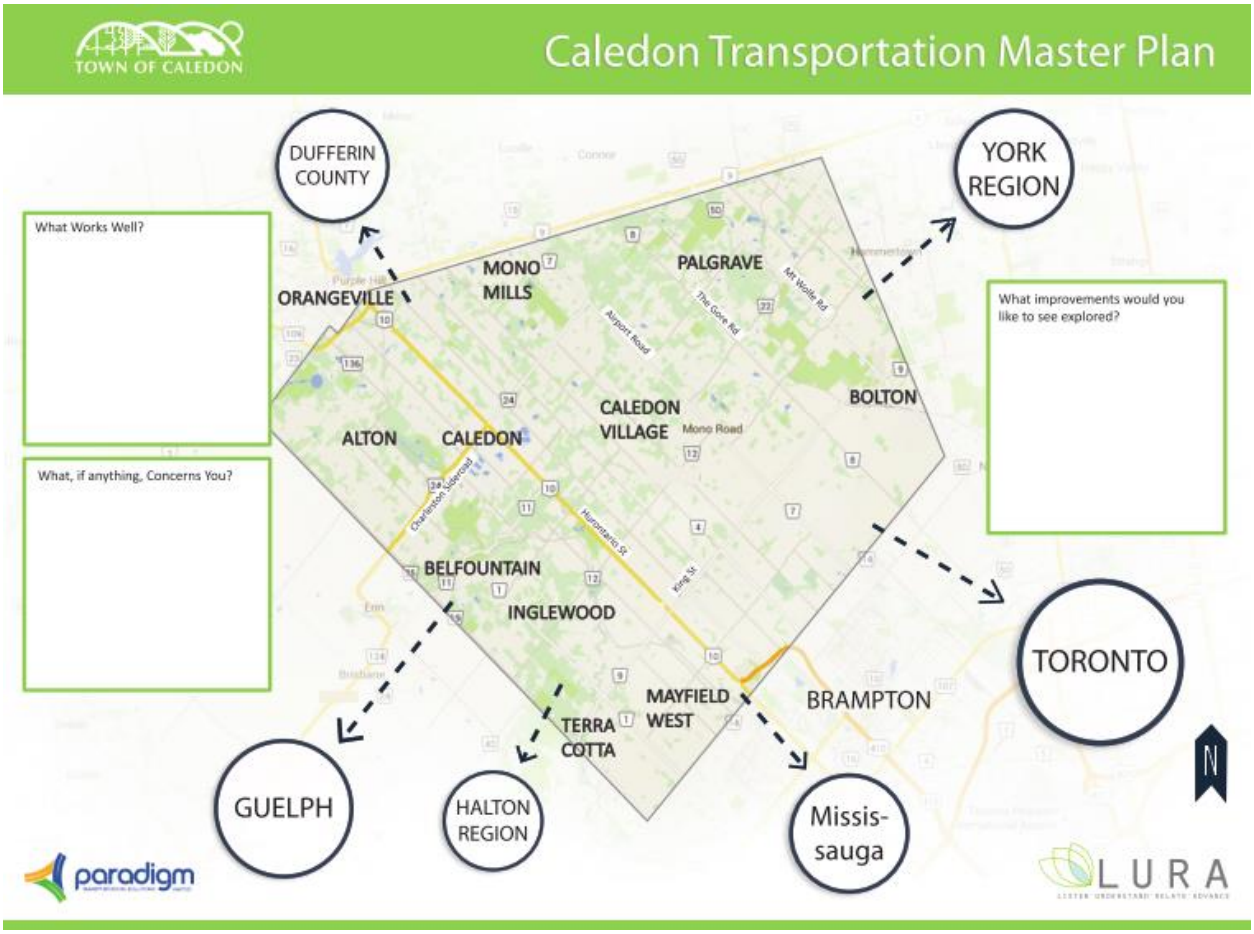


FIGURE 1.2: INTERACTIVE MAP OF THE TOWN OF CALEDON USED DURING COMMUNITY CONVERSATIONS

The following is a summary of the common responses provided by participants at the pop-up engagement events and through the online form. The results of the survey were used to guide the TMP and did not require a response from the project team. The full compilation of input is provided in the appendix.

Mode of Transportation Participants Used Most Often

- The overwhelming majority of participants drive alone
- Few residents carpool
- Some participants use GO Transit

Where Participants Live

- Bolton
- Caledon East

- Palgrave
- Inglewood

Where Participants Commute to Most Often

- Brampton
- Bolton
- Toronto
- Mississauga
- Vaughan
- Caledon East
- Orangeville
- Oakville

What Participants Believe Currently Works Well

- Walking and cycling trails
- GO Transit bus service
- Traffic circles/roundabouts
- Relatively close proximity to services; easy to get to
- Highways have good flow and are accessible/usable

Common Concerns Expressed

- Truck traffic
- Not enough GO Transit service/public transit
- Connectivity of trails/paths to get around as alternative to cars
- Safety concerns at some intersections
- The high speed of commuting traffic
- Traffic commuting through Caledon to get south or north (cottagers)
- The proposed GTA West 400 Series Highway
- Dangerous for commuters using active transportation (e.g. cycling)
- Lane closures causing traffic

Improvements Participants Would Like to See Explored

- Increased GO Transit service
- Better management of truck traffic, including usage of the by-pass
- Lower speed limits
- More cycling lanes on roads; better separation

- Better connectivity of paths and trails
- Municipal public transit service
- Better connectivity to neighbouring municipal and regional public transit services
- Better road maintenance
- Expansion of different modes of public transportation
- Offering lots for cars, promoting carpool options

1.5.3 Consultation Round #2

A Memorandum and Presentation were provided to the Council in the August 29th, 2017 to inform that the draft Caledon Transportation Master Plan Report has been prepared and is ready to be released as a draft for public consultation. The Council acknowledged the draft Transportation Master Plan to be presented to the Public for their input. Council offered their feedback on the importance of the Public Transit Feasibility Study, Active Transportation, incorporating the Bolton Transportation Master Plan recommendations in CTMP, bicycle parking, Old School and Healy Road as the major east-west arterial roadway and the extension of Highway 427 to Highway 9.

A Public Information Centre (PIC) was held on September 25, 2017 from 6:00 p.m. to 9:00 p.m. to present the draft version of the TMP to the public. The PIC was held as a drop-in format with 18 display boards highlighting the key components of the TMP. Both the consultant project team and Town staff were available to answer questions and provide further details. The PIC was held in conjunction with the first round of engagement for the Transit Feasibility Study.

Over the course of the evening, a number of residents, councilors and stakeholders attended the PIC with 30 participants signing the registrar. Residents had the opportunity to provide feedback through a comment form either in person on the project website until September 30, 2017. All comments were recorded and considered for inclusion in the TMP where appropriate. The full compilation of materials from the PIC and comments are provided in the appendix.

1.5.4 Agencies

Agencies were notified at key points in the study process and to fulfill the requirements of the Municipal Class EA process. The agencies were encouraged to provide any information they felt was necessary for the Project Team to consider during the study. A stakeholder workshop was held on September 25, 2017 from 9:00 a.m. to 12:00 p.m. to present the draft version of the TMP and answer questions. The appendix provides the stakeholder workshop presentation and meeting minutes.

Stakeholders and agencies were asked to provide comments on the draft report by September 30, 2017 to incorporate in the final version of the TMP. All comments received from agencies and stakeholders were recorded, considered and addressed. A table with all agency and stakeholder comments as well as the project team response is provided in the appendix.

The following details the agencies contacted during the study:

Town of Caledon:

- Corporate Services
- Council
- Engineering Services
- Finance and Infrastructure Services
- Fire and Emergency Services
- Heritage Resources
- Roads and Fleet

Provincial Agencies:

- Ministry of Aboriginal Affairs
- Ministry of Economic Development, Employment and Infrastructure
- Ministry of the Environment and Climate Change
- Ministry of Natural Resources and Forestry
- Ministry of Tourism, Culture and Sport
- Ministry of Transportation (Peel-Halton Area)
- Niagara Escarpment Commission
- Ontario Parks
- Ontario Provincial Police

Regional Agencies:

- County of Simcoe
- Metrolinx
- Peel Regional Police
- Regional Municipality of Peel
- Regional Municipality of York

Municipal Agencies

- City of Brampton

- City of Mississauga
- City of Vaughan
- City of Toronto
- Township of King

Conservation Authorities:

- Credit Valley Conservation Authority
- Grand River Conservation Authority
- Niagara Escarpment Commission
- Toronto and Region Conservation Authority

Local Agencies:

- Dufferin-Peel Catholic District School Board
- Peel Region District School Board
- Town of Caledon Fire Department

First Nations:

- Métis Nation of Ontario
- Mississaugas of the New Credit First Nation

Stakeholders:

- Bell Canada
- Canadian Pacific Railway (CPR)
- Canadian National Railway (CNR)
- Enbridge
- Hydro One
- MTS AllStream
- Rogers
- 407 ETR

Public Interest Groups:

- Elora Cataract Trailway Association
- Heritage Canada
- Trans Canada Trail

1.6 Report Organization

The remainder of the TMP is organized into the following chapters:

- **Chapter 2: Existing Conditions** provides an overview of current conditions in Caledon, including land use and demographics, the transportation system and recent trends in travel characteristics.
- **Chapter 3: Future Transportation Needs** describes future forecasted travel demand and the transportation vision and goals for the TMP. The problems and opportunities statement is developed along with the potential alternatives and evaluation criteria to select the preferred alternative.
- **Chapter 4: Recommended Plan** presents the preferred plan including the road, active transportation and transit networks, TDM plan and other policies in support of the plan.
- **Chapter 5: Plan Implementation** organizes the plan into short and long-term horizons and includes the financial implications and future EA requirements. The chapter also provides a monitoring framework to track the progress and performance of the recommended plan.

2 Existing Conditions

2.1 Land Use and Demographics

2.1.1 Population and Employment

With a population of over 59,000, Caledon is the smallest municipality in Peel Region and ranks 37th provincially and 87th nationally in terms of population according to the Census of Canada. **Table 2.1** details the existing 2006 and 2011 population, housing and employment for the Town of Caledon. Note, data does not adjust for the Census undercount.

Over the past 20 years, Caledon has grown by over 30%, from a population of approximately 40,000 in 1996. Between 2006 and 2011, the population of the Town increased by 4.2%, slightly below the national average of 5.9%. The number of households in Caledon has increased by about 880, indicating moderate development over this five-year period. Moving forward, more rapid growth is expected in the Town, which will require improved transportation facilities to maintain the quality of life for existing and new residents.

TABLE 2.1: POPULATION, HOUSING AND EMPLOYMENT GROWTH IN CALEDON, 2006 – 2011

	2006	2011	Growth
Population	57,050	59,460	+ 2,410 (+4.2%)
Housing	18,210	19,086	+ 876 (+4.8%)
Employment	18,555	21,242†	+ 2,687 (+14.5%)

*Source: 2006 and 2011 Census

†Source: 2011 Transportation Tomorrow Survey

2.1.2 Development Patterns

The present and planned structure of the Town of Caledon is based on a variety of historical, geographic and demographic factors. The long-term structure of the Town will also be fundamentally influenced by several Provincial policy documents including the Niagara Escarpment Plan, the Oak Ridges Moraine Conservation Plan, the Greenbelt Plan and the Growth Plan, several of which are noted in **Section 1.3** above.

The Peel Region and Town of Caledon Official Plans are the principal long-term plans used to guide the municipalities in managing growth and development. These plans affect the entire land base of the Town and denote where and how much growth should occur.

Most growth in the Town is planned to occur within established and evolving settlement areas. The COP designates a hierarchy of settlements, which are intended to foster and enhance the distinct community character in Caledon, and sets out population allocations and policies to guide their growth. The hierarchy, as shown in **Figure 2.1**, consists of:

- **Rural Service Centres** – Mayfield West, Bolton and Caledon East;
- **Villages** – Alton, Caledon Village, Cheltenham, Inglewood, Mono Mills and Palgrave;
- **Hamlets** – Albion, Belfountain, Campbell's Cross, Cataract, Claude, Melville, Mono Road, Terra Cotta, and Wildfield; and
- **Industrial/Commercial Service Centres** – Sandhill, Tullamore and Victoria.

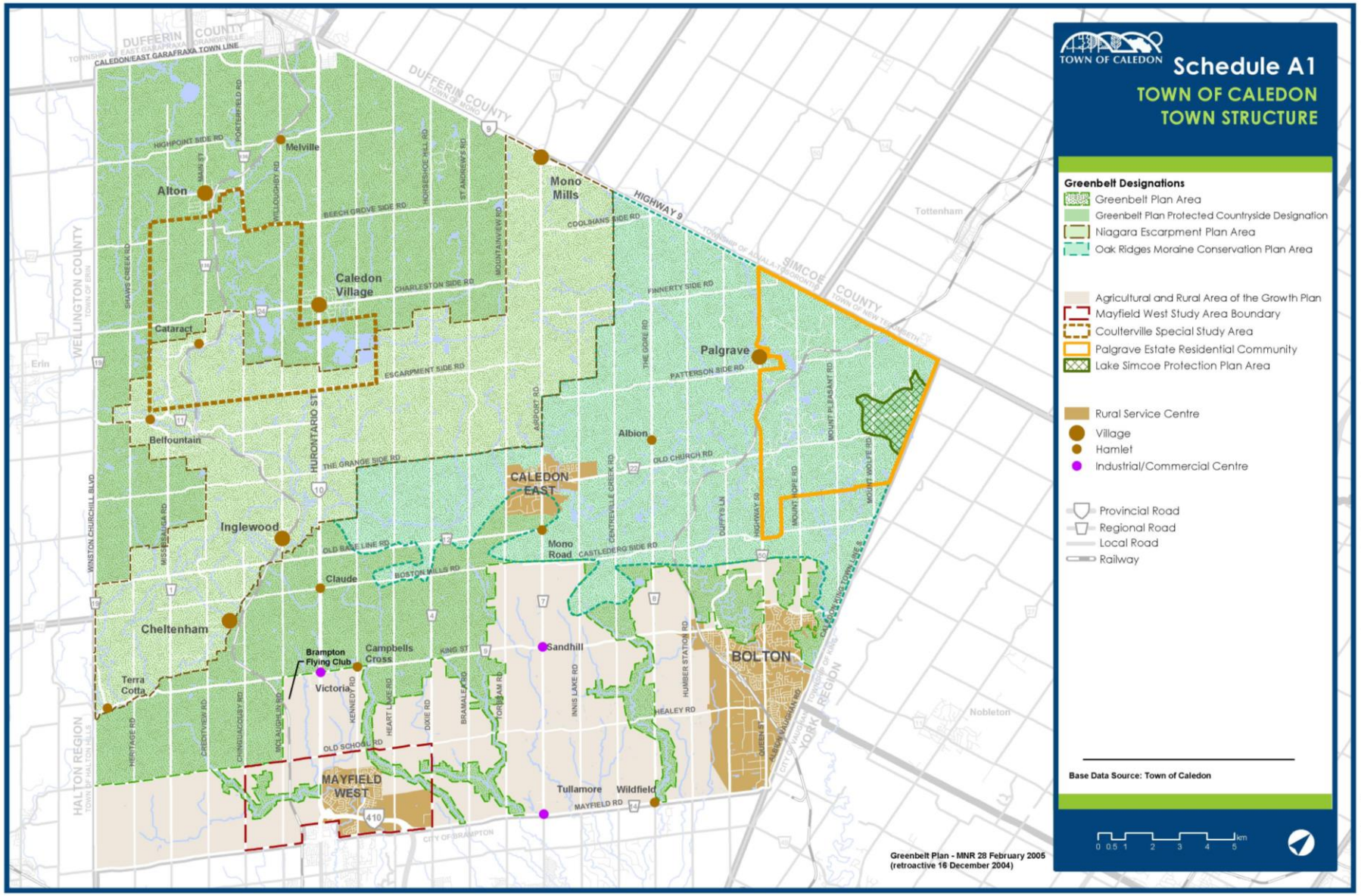
2.1.3 Natural, Social and Cultural Environment

The TMP has considered the natural, cultural and social environments in the development of transportation alternatives to avoid negative impacts, wherever possible. The following sections provide a brief description of each environment.

Natural Environment

Natural heritage areas are a key facet to any community. The quality of life of a community is influenced by the quality of the natural environment. The health of natural heritage features and areas directly reflects the social, environmental and economic health and well being of the whole community. It is the responsibility of the Region in partnership with the local municipalities, the Province, and the conservation authorities to provide a high quality natural environment for the community including a diverse and healthy natural heritage system. The Town of Caledon has a wide range of natural features, including wellhead protection areas, environmentally significant areas, woodlands, wetlands, valley and stream corridors, and wildlife habitats to be protected and enhanced.

The Peel Region Official Plan (2014) identifies Wellhead Protection Areas around wells where land uses must be carefully planned to protect the long-term quality of the water supply. Wellhead Protection Areas are based on migratory patterns of groundwater upstream from the well. In these areas, it may be necessary to restrict or even prohibit certain land uses due to their potential to impact groundwater. The Town of Caledon Official Plan further details restricted land uses and activities within Wellhead Protection Areas. Peel Region currently owns and operates 14 active municipal wells in the Town of Caledon, supplying water to Alton, Palgrave, Caledon East, Caledon Village, Cheltenham Village and Inglewood. **Figure 2.2** details the Wellhead Protection Areas in the Town of Caledon.

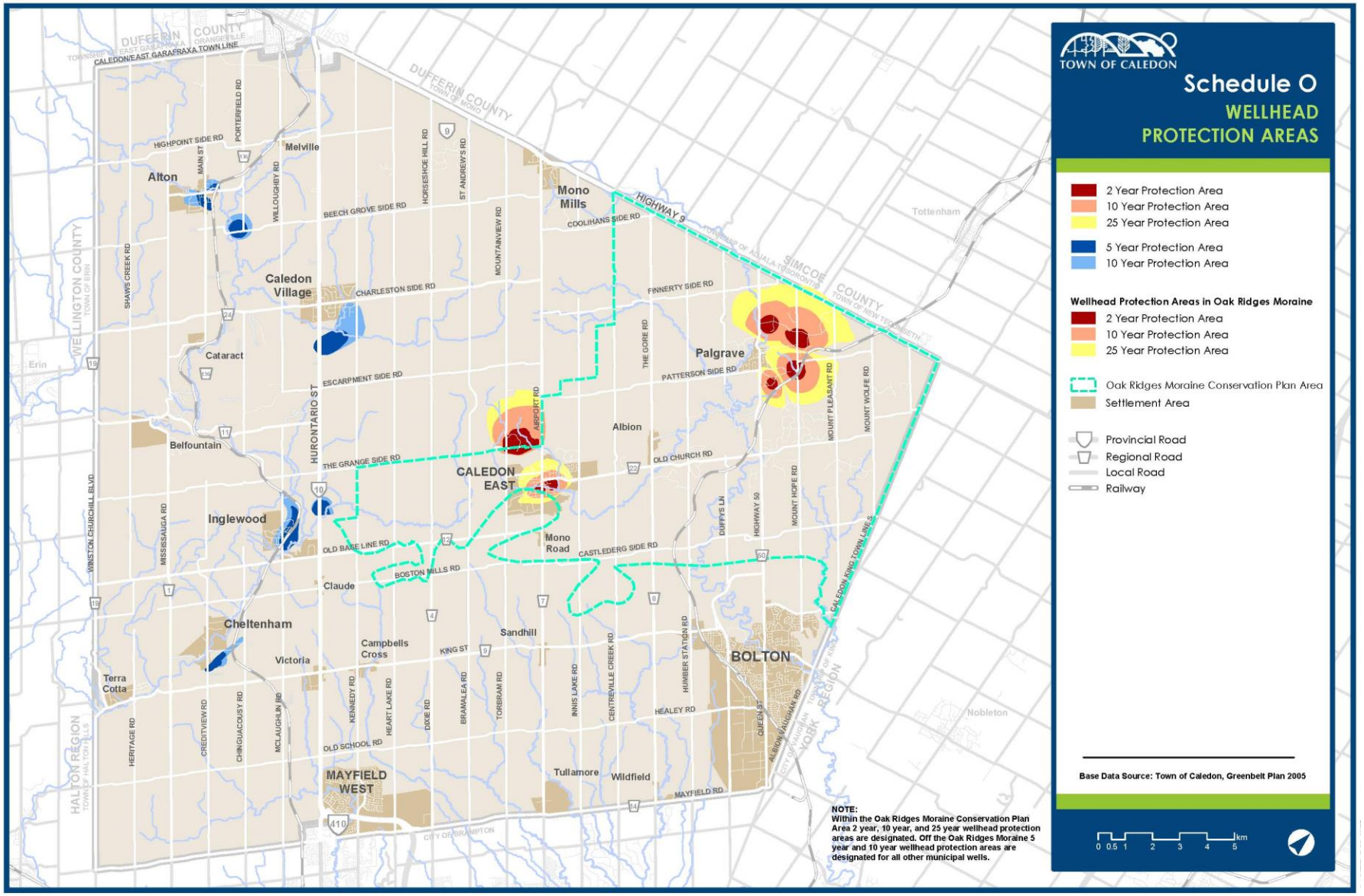


TOWN OF CALEDON

Caledon Transportation Master Plan

Structure of Caledon

Figure 2.1



TOWN OF CALEDON

Caledon Transportation Master Plan

Wellhead Protection Areas

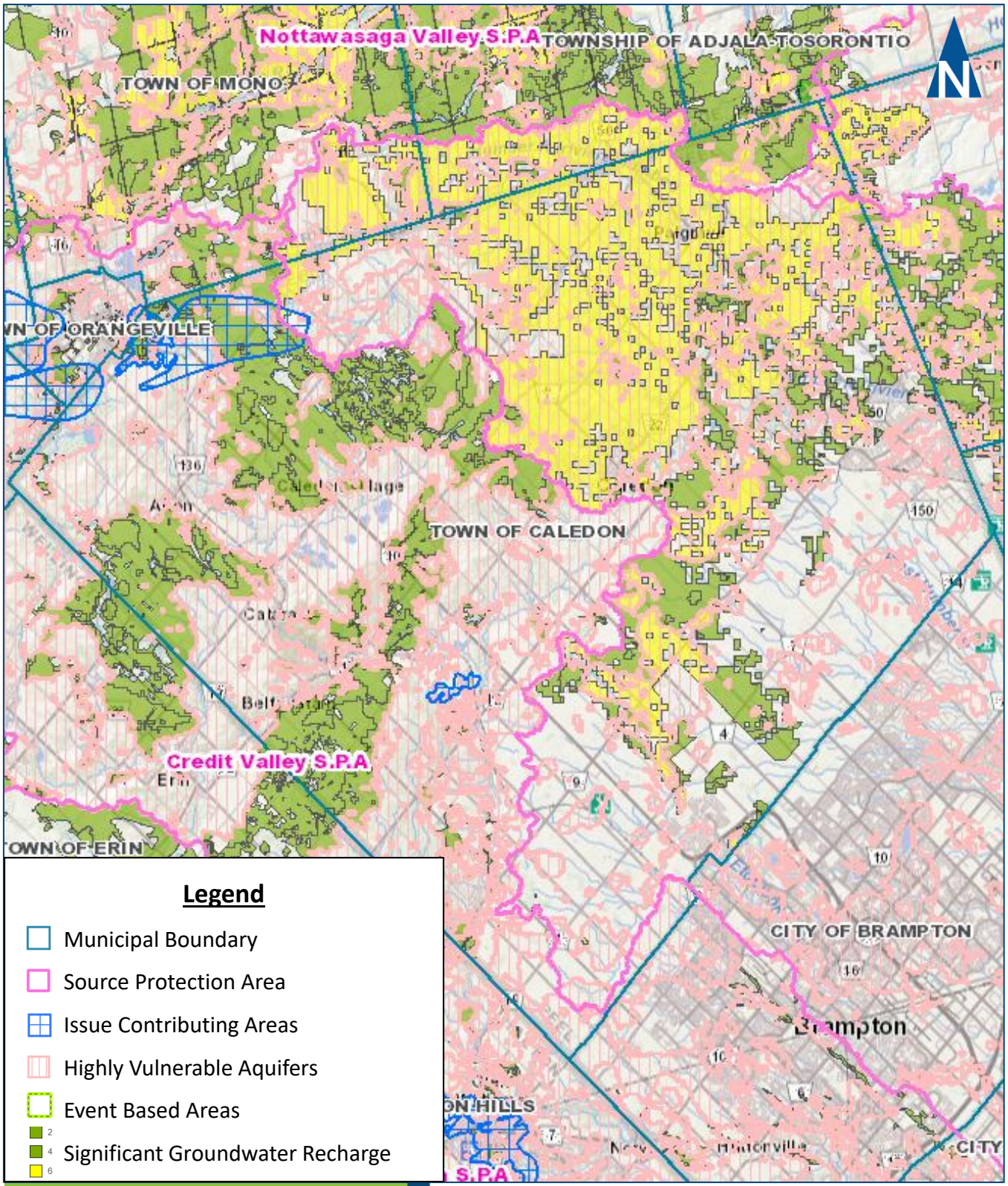
Figure 2.2

In addition to Wellhead Protection Areas, the *Clean Water Act, 2006* requires other vulnerable areas to be delineated including Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). **Figure 2.3** details the vulnerable areas, indication a large portion of the Town is lies on HVAs and SGRAs. This coincides with the Oak Ridge Moraine extending through the northeast and central areas of the Town.

There are several Environmentally Significant Areas in the Town of Caledon that have been identified as significant and worthy of protection based on ecology, hydrology and geology. Within the Town, the Oak Ridges Moraine, Niagara Escarpment and Greenbelt are identified as ESAs with provincial plans in place to provide permanent protection. **Figure 2.4** details the natural environmental in Caledon.

In 2009, the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study was completed which identifies significant woodlands and wildlife habitat within the Region of Peel and the Town of Caledon. Woodlands are complex ecosystems comprised of communities of trees, shrubs, ground vegetation and immediate environmental conditions on which they depend. Wildlife habitats are areas of the natural environment where plants, animals, fish and other organisms derive life support functions such as cover, protection, reproductive support, food and water.

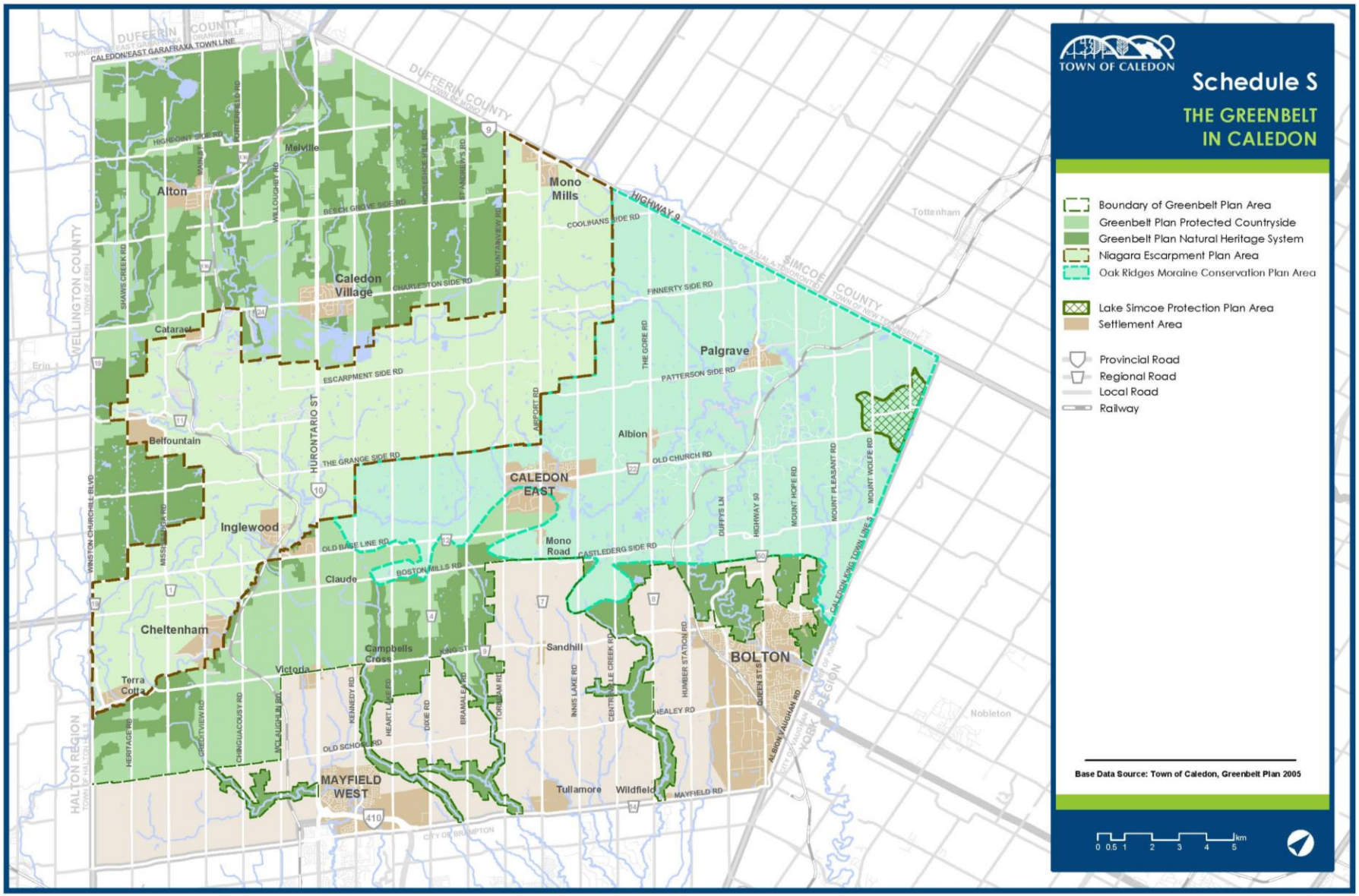
The projects identified in the TMP are subject to the applicable policies outlined in the Credit Valley, Toronto and Region, and Central Lake Ontario Source Protection Plan. For the project-specific environmental assessments that will be completed for any Schedule B and C projects identified in the TMP, the Project File reports/Environmental Study Reports will have to identify and describe the specific source protection policies that apply to those projects.



TOWN OF CALEDON

Clean Water Act, 2006
Vulnerable Areas

Figure 2.3



TOWN OF CALEDON

Caledon Transportation Master Plan

Natural Environment

Figure 2.4

Social Environment

The Ministry of Environment monitors air quality in Ontario via a network of 40 ambient (outside) air monitoring stations across the province. The data is analyzed in the annual *Air Quality in Ontario Report,* which summarizes the ambient air quality across the province and examines air pollution trends. The most recent report was published in 2014. Of the 40 air monitoring stations, the Brampton station located at 525 Main St. N., Peel Manor is situated the closest to Caledon. Air quality was reported in the good and very good categories 91.0% of the time at the Brampton air monitoring site. Across the province, the average air quality was reported in the good and very good categories 94.0% of the time. Air quality in Caledon varies based on a number of processes, including release and removal of pollutants into the atmosphere, sunlight, moisture, could cover and weather conditions.

Cultural Environment

The Town also seeks to identify and conserve its cultural heritage resources that are of historical, architectural and archaeological value. Section 3.3 of the Town of Caledon Official Plan establishes policies for cultural heritage organized around three key components: archaeology, built heritage and cultural heritage landscapes. The policies within the Official Plan recognize that cultural heritage landscapes and built heritage resources need to be identified, and that cultural heritage landscapes and significant built heritage resources need to be conserved. The Official Plan identifies the need to prepare a comprehensive Cultural Heritage Master Plan whereby the cultural heritage resources of the Town are surveyed, inventoried or otherwise examined or studied. The Town has completed separate Built Heritage (2008) and Cultural Heritage Landscapes Reports which identify properties and landscapes of historical significance to be subject to a Cultural Heritage Impact assessment at the discretion of the Heritage Resource Officer. **Appendix C** contains the Built Heritage Report and Cultural Heritage Landscapes Report. The Town is currently preparing an archaeological report.

2.2 Transportation System

2.2.1 Roads

The road network serving Caledon is comprised of provincial highways and arterial, collector and local roadways. The Town has jurisdiction for all collector and local roadways. Peel Region is responsible for most arterial roads, while the Province has jurisdiction for the 400-series and provincial highways. **Figure 2.1** displays the existing hierarchical road network serving the Town of Caledon. The arterial and collector roads generally form block grids and function as main thoroughfares.

The Provincial highways in Caledon include:

- Highway 410 with the northern terminus located at Hurontario Street, just north of Mayfield Road;
- Hurontario Street (Highway 10) running north-south; and
- Highway 9 running east-west, forming the boundary between Caledon and Dufferin and Simcoe Counties.

The regional east-west arterials include Charleston Side Road, Bush Street/Forks of the Credit Road, Old Base Line Road, King Street, and Mayfield Road. North-south regional arterials include Winston Churchill Boulevard, Mississauga Road, Porterfield Road, Dixie Road, Airport Road, The Gore Road, and Highway 50. Albion Vaughan Road is the only arterial road under the jurisdiction of the Town.

The Town's collector road system generally forms smaller block grids between the arterial road system. These roads are generally continuous and carry moderate traffic volumes. Within the rural service centers, villages, and hamlets, the collector roads provide access to the local road system. Some of Caledon's more significant collector roads include Heritage Road, Chinguacousy Road, Kennedy Road, Heart Lake Road, Bramalea Road, Old School Road/Healey Road, The Grange Side Road, Patterson Side Road, Beech Grove Side Road and Highpoint Side Road.

The local roads connect to the collector roads and provide access to individual properties in residential and commercial areas.

2.2.2 Transit

Currently, the Town of Caledon does not operate a local public transit system. Inter-regional transit is provided by GO Transit, who currently operates three bus routes in Caledon:

- **Route 37 Orangeville/Brampton** travels along Hurontario Street, with six (6) southbound buses from Orangeville between 5:30 AM and 7:30 PM (4 morning and 2 evening) and six (6) northbound buses from Brampton between 1:45 PM and 9:15 PM. Connecting GO Rail and bus routes service Union Station in Toronto.
- **Route 38 Bolton/Malton/North York** travels along Highway 50, with six (6) southbound buses from Bolton between 6:00 AM and 1:30 PM, and seven (7) northbound buses from Malton GO Station from 10:40 AM to 8:00 PM. Connecting GO Rail and bus routes service Union Station in Toronto.

- **Route 38A Bolton/Malton/North York** travels along Highway 50, with two (2) southbound buses from Caledon in the morning and two (2) northbound buses from York Mills in the afternoon. There are connecting services to and from downtown Toronto by train at Etobicoke North GO Station and subway at Yorkdale.

In addition to the GO Transit service, Brampton Transit recently extended Route 30 Airport Road to the Tullamore Industrial Area. The route travels along Airport Road, with six (6) northbound and six (6) southbound buses a day.

2.2.3 Active Transportation

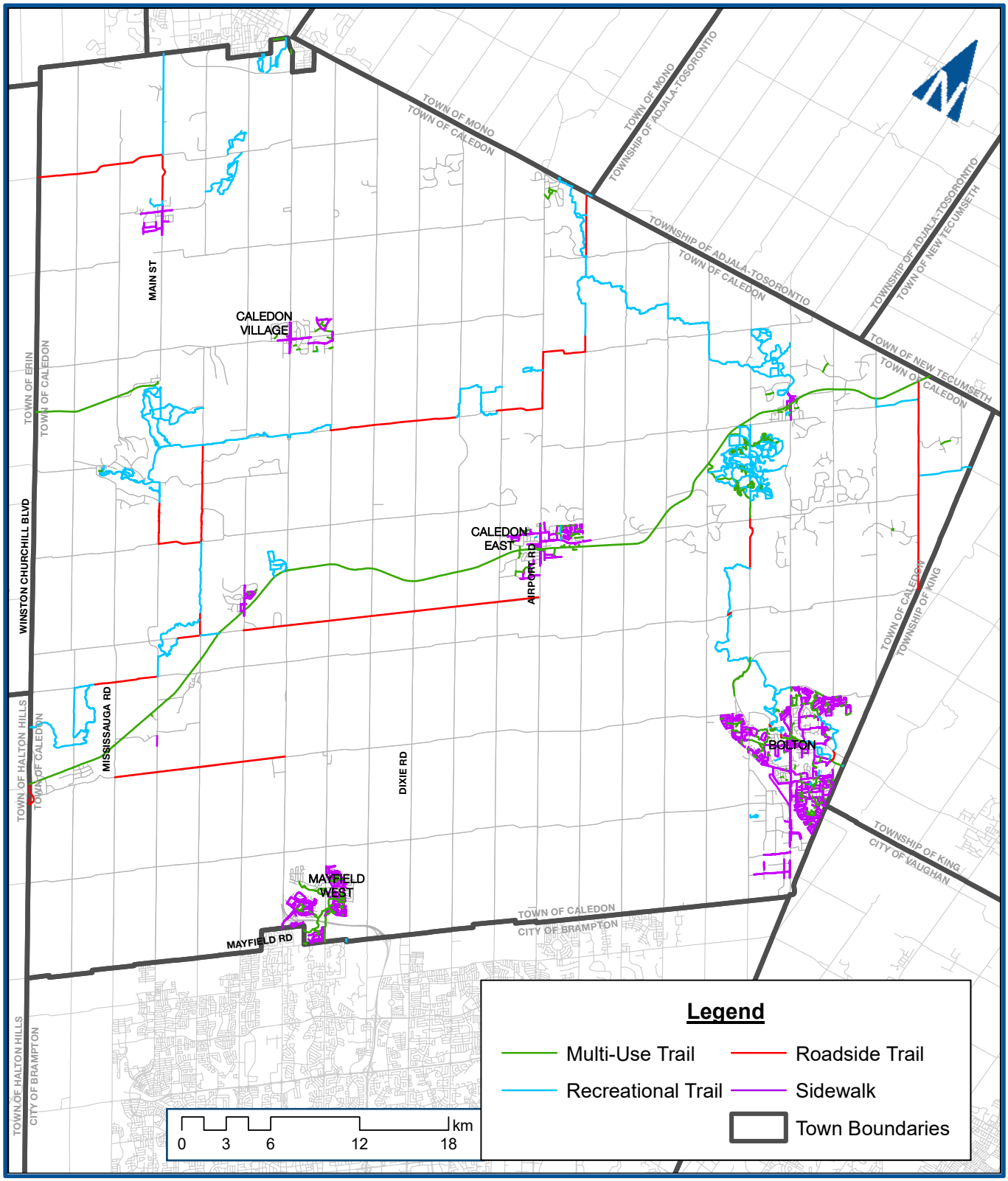
Active transportation facilities in Caledon consist of on and off-road facilities that are managed by the Town of Caledon, Peel Region, adjacent municipalities (Brampton, Halton Hills, etc.) or other entities. **Figure 2.5** and **Figure 2.6** display the existing pedestrian and cycling facilities in the Town, respectively. This integration amongst several organizations allows for an active transportation network that provides connectivity within, to and from Caledon.

Primary walking routes include pathways and sidewalks. A network of recreational trails provides connectivity in the Town among the Rural Service Centres, Villages and Hamlets. The most prominent trail is the Caledon Trailway, a 35km long multi-use path intended for pedestrians, horseback riders, cyclists and cross-country skiers. Other notable trails through Caledon include the Bruce Trail, the Humber Valley Heritage Trail, Oak Ridges Moraine Trail, Elora-Cataract Trail and the Trans Canada Trail. Total length of trails in Caledon is 182km.

Sidewalks are provided on all major roads in Bolton, and are also provided in major Rural Service Centres. Limited sidewalk coverage is provided in Villages and Hamlets.

Select roads in the Town are designated cycling routes as indicated by “share the road” signage and/or wide shoulders. There are a total of 82 km of shared on-road cycling facilities. There is also 4.2km of designated bike lanes primarily located in Bolton and the south end of King Street. Most these routes connect to Rural Service Centers, as well as major destinations and points of scenic interest.

Section 4.3.4 provides further detail regarding the difference pedestrian and cycling route types.

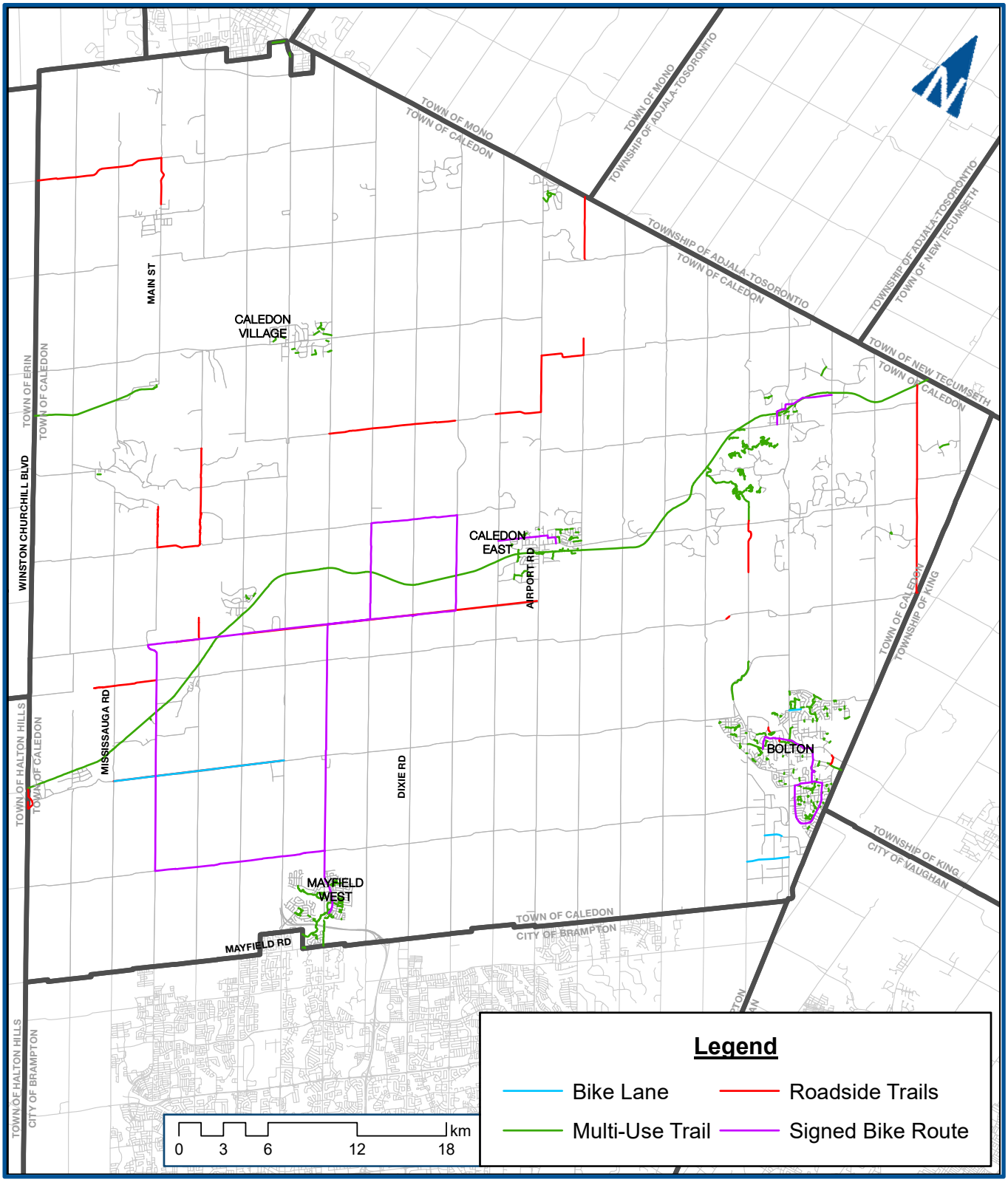


TOWN OF CALEDON

Existing Pedestrian Facilities

Figure 2.5

Caledon Transportation Master Plan



TOWN OF CALEDON

Existing Cycling Facilities

Figure 2.6

2.2.4 Transportation Demand Management

Transportation demand management (TDM) is the term for a group of strategies to more efficiently use transportation resources. Rather than widening roads, communities introduce measures to increase walking, cycling and transit use while creating disincentives to driving along. TDM aims to reduce auto trips and influence when and where the demand occurs while maximizing the use of existing transportation infrastructure. The goal of TDM is to change the behavior of the end user to encourage greater use of more sustainable modes of transportation and trip decision making that reduces, combines or shortens vehicle trips.

The growth in population and employment in the Town highlight the important role TDM strategies will play in the coming years. The Town of Caledon and Peel Region already have several existing TDM initiatives in place, including:

- **Smart Commute Brampton/Caledon** – The Smart Commute Initiative is a Greater Toronto and Hamilton (GTHA)-wide transportation demand management program with the mission to reduce traffic congestion, greenhouse gas emissions and their related cost to the environment, economy and the community. Smart Commute provides several services to help drivers change their travel behavior, including workplace-based support, such as site assessment, promotion of travel options, carpool-matching, employee vanpool programs and emergency rides home; promotion of the benefits of transit-supportive development and smart-growth strategies; and tips for travelling via walking, cycling and transit. Smart Commute Brampton-Caledon was launched in June 2006 and has 17 participating workplaces.
- **Mayfield and Highway 50 Carpool Lot** – The Mayfield and Highway 50 Carpool Lot is located on the southwest corner of the Mayfield Road and Highway 50 intersection. The carpool lot provides free 24/7 parking for drivers, a passenger pick-up/drop-off area, and bike racks. The lot is serviced by the Bolton GO Transit bus route, providing service to and from the Malton GO Station, with connections to Union Station, Brampton's ZUM network, and York Region Transit.
- **Let Your Green Show** – A program based around an online social media campaign promoting green living and encouraging residents throughout Peel Region to give their car a break and try more sustainable modes.
- **Peel Employer Individualized Marketing** – The Employer Individualized Marking campaign is based on proven social marketing techniques to change travel behavior using advanced survey tools, incentives and processes. The members of the population are segmented into groups based on their willingness to use sustainable modes of

transportation, which allows marketing messages to be tailored to the specific needs of individual travellers. This results in more effective travel behavior change shifts than traditional mass-marketing TDM strategies. The lessons and techniques that are learned can be applied to encourage more people to use sustainable modes of transportation.

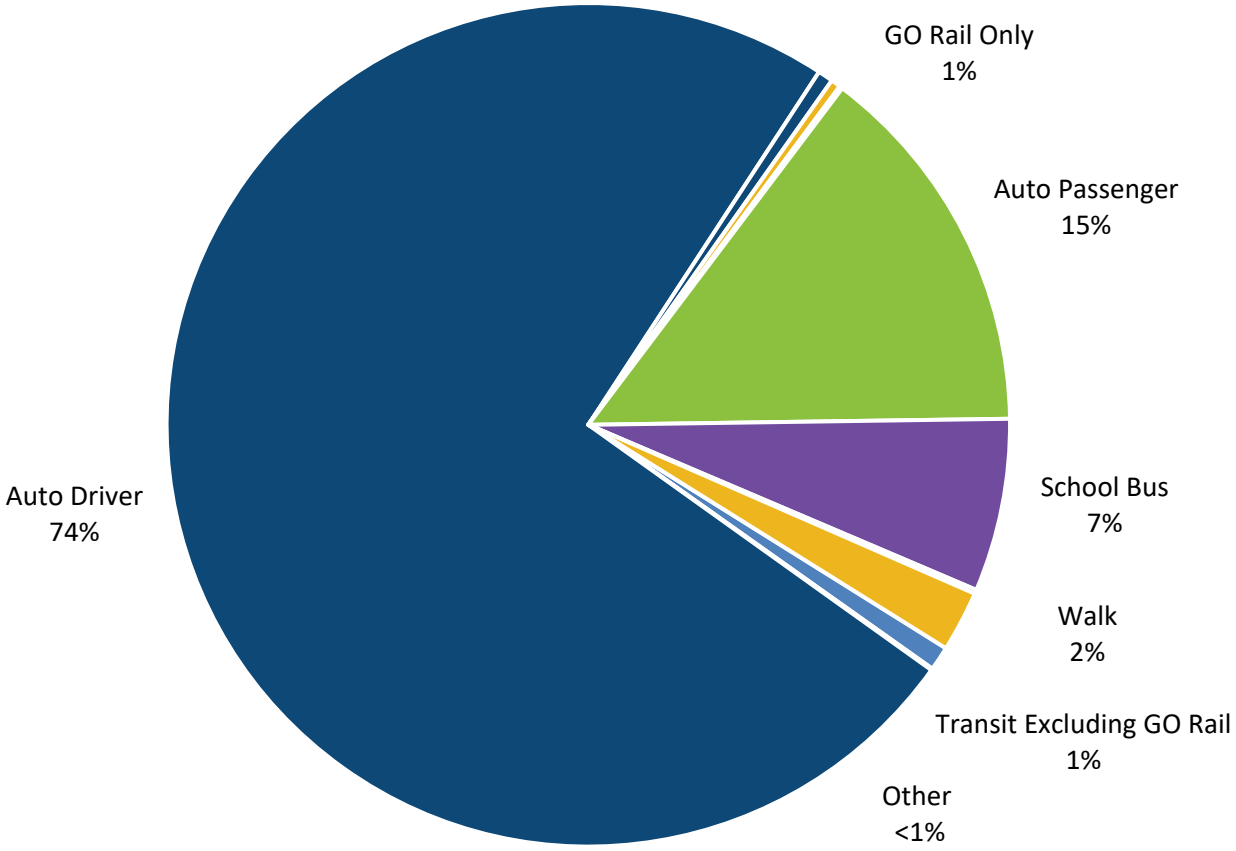
- **Caledon Individualized Marketing Pilot** – Town is currently developing an Individualized Marketing Pilot for Sustainable Transportation which aims to improve awareness of sustainable modes of transportation. This includes public transportation, carpooling and cycling. The pilot project will facilitate change in travel behaviours through public surveys and an evaluation phases to assess impacts of the project. The expected outcomes include a project identity and bran, newsletters, surveys and post cards, a transportation asset map of the community in and around Southfields Village, a Town devoted subpage on the Caledon.ca website, an online sustainable transportation store and community outreach and educational events.

2.3 Recent Travel Patterns

Based on data from the 2011 Transportation Tomorrow Survey (TTS), approximately 223,000 total daily person trips were generated or destined to Caledon. Most trips by Caledon residents are by auto. In total, auto driver (74%) and auto passenger (15%) encompass 89% of all trips, with only 11% of trips made by other modes. Walking, transit, GO Transit and school bus make up the remaining portion of trips (11%). **Figure 2.7** displays the travel modes for 2011. Comparison of the survey results to 2006 indicates there has been very small shifts in travel mode splits over time.

Figure 2.8 shows the distribution of trip purpose internal to Caledon during the AM and PM peak periods. Most trips during the AM peak hours are destined to work (55%) followed by school (22%) while during the PM peak hour the majority of trips are destined to home (66%) or other (14%). **Figure 2.9** and **Figure 2.10** display the trip purpose for trips destined to and from Caledon during the AM and PM peak hours, respectively. Similar to trips internal to Caledon, the main trip purpose is work during the AM and home during the PM peak periods.

Figure 2.11 and **Figure 2.12** show the distribution of trip destination for the AM and PM peak periods to and from Caledon, respectively. Most trips to Caledon are travelling to Bolton and the Bolton employment lands. Trips travelling from Caledon to destinations outside of the Town vary during the day with AM peak period trips destined to Brampton, Mississauga, Toronto and York Region and PM peak period trips destined to a variety of locations including Orangeville and other areas including Simcoe, Dufferin and Wellington Counties.

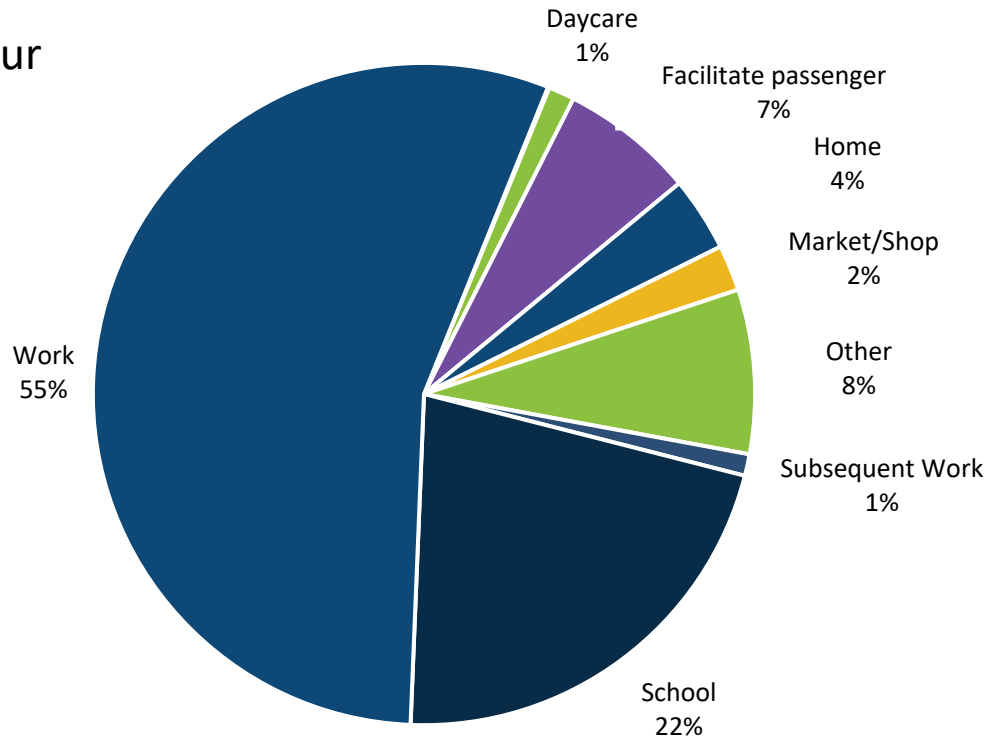


TOWN OF CALEDON

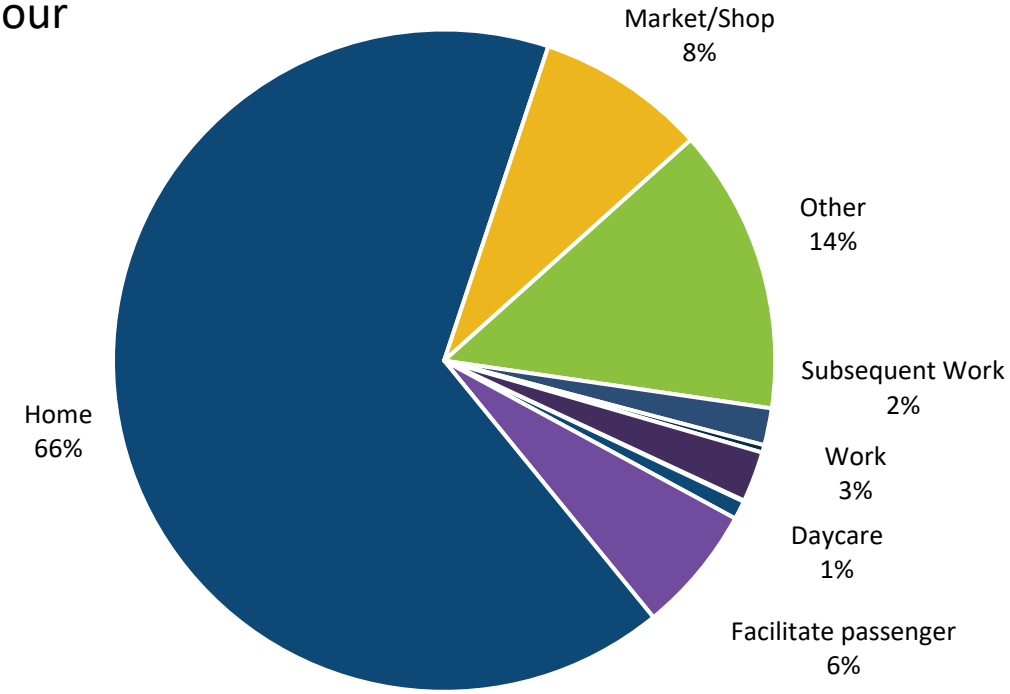
Caledon Residents Primary Mode of Travel

Figure 2.7

AM Peak Hour



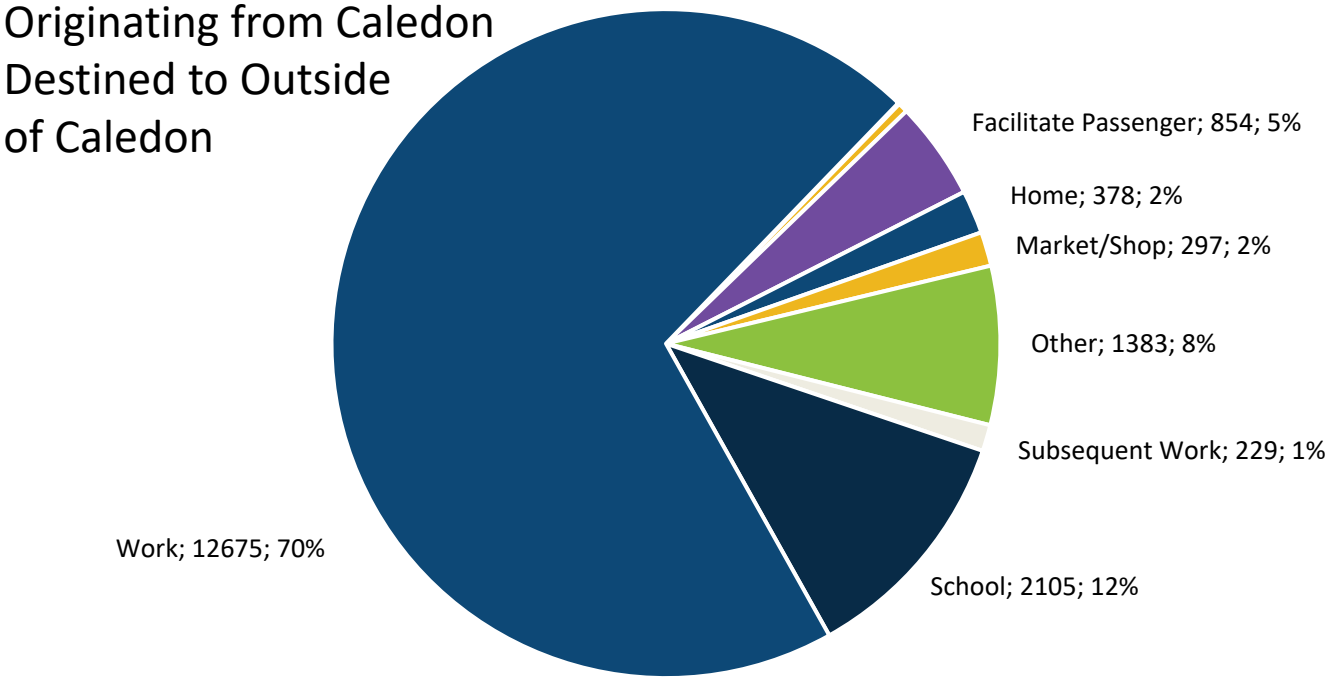
PM Peak Hour

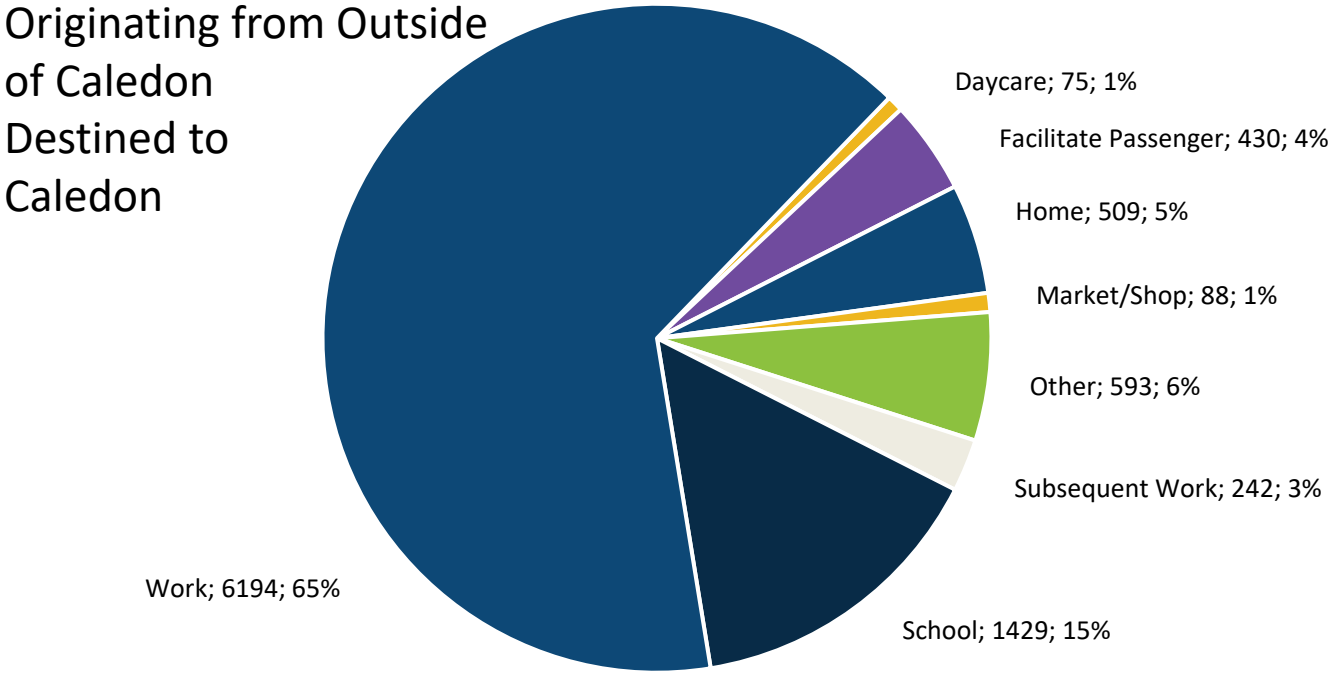


TOWN OF CALEDON

Distribution of Trip Purpose Originating and Destined within Caledon

Figure 2.8

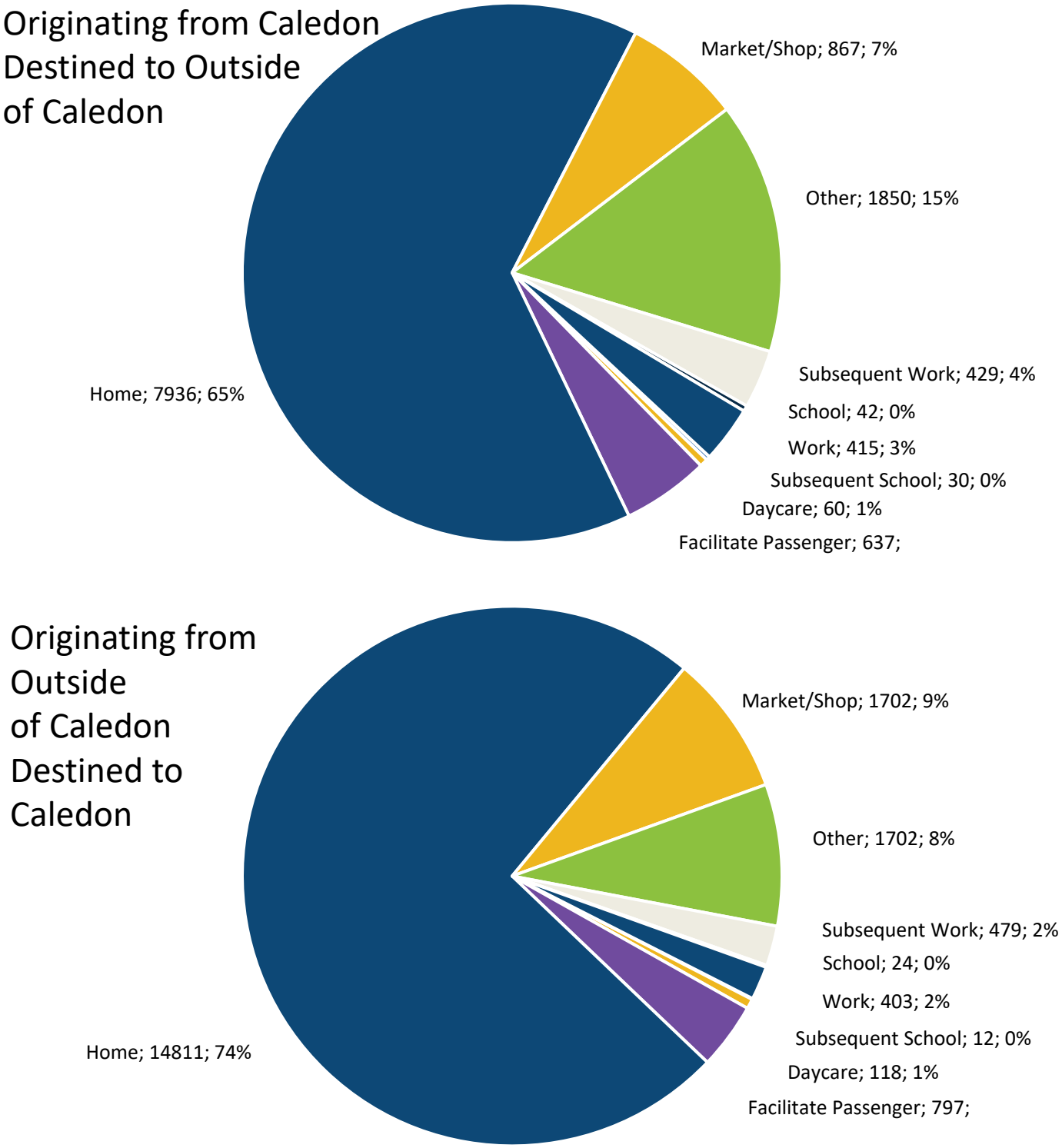




TOWN OF CALEDON

AM Distribution of Trip Purpose

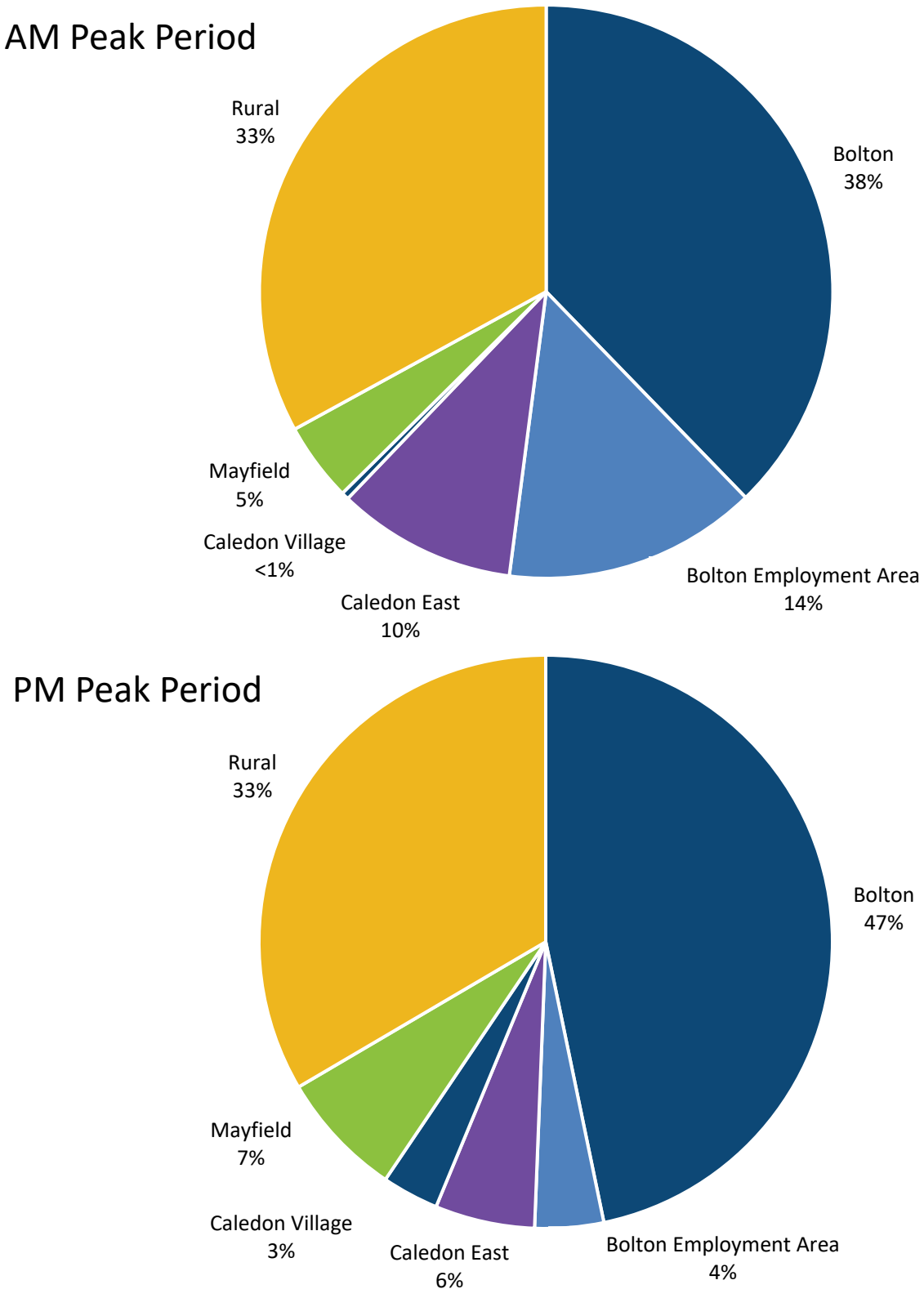
Figure 2.9



TOWN OF CALEDON

PM Distribution of Trip Purpose

Figure 2.10

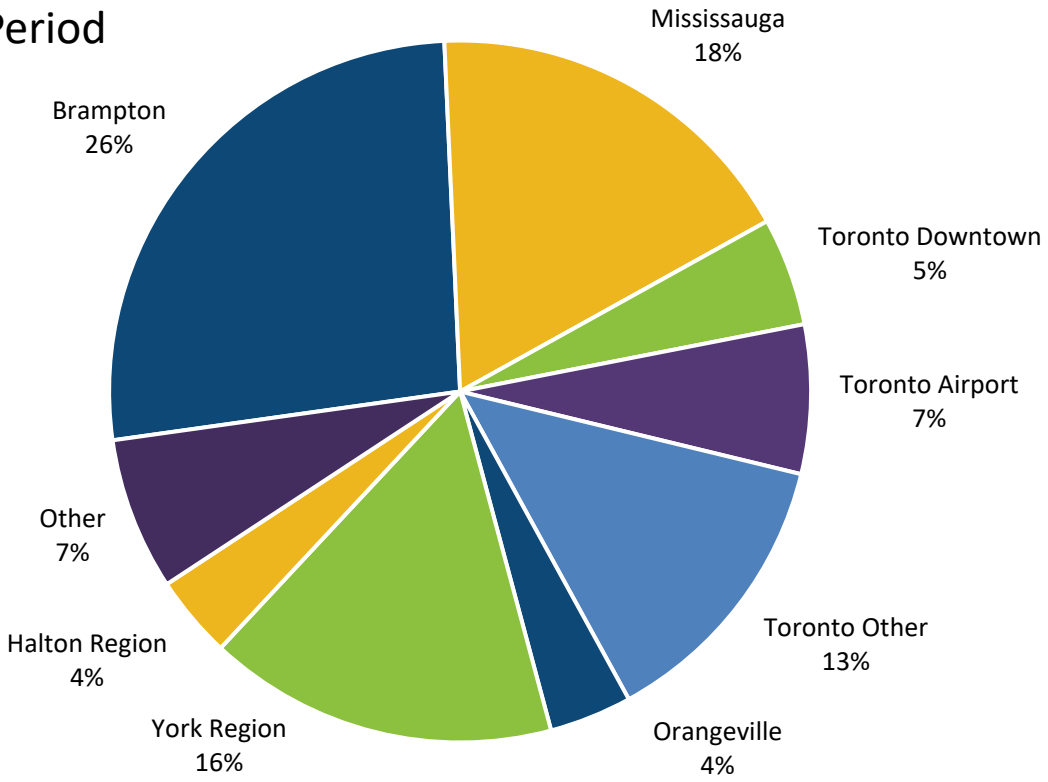


TOWN OF CALEDON

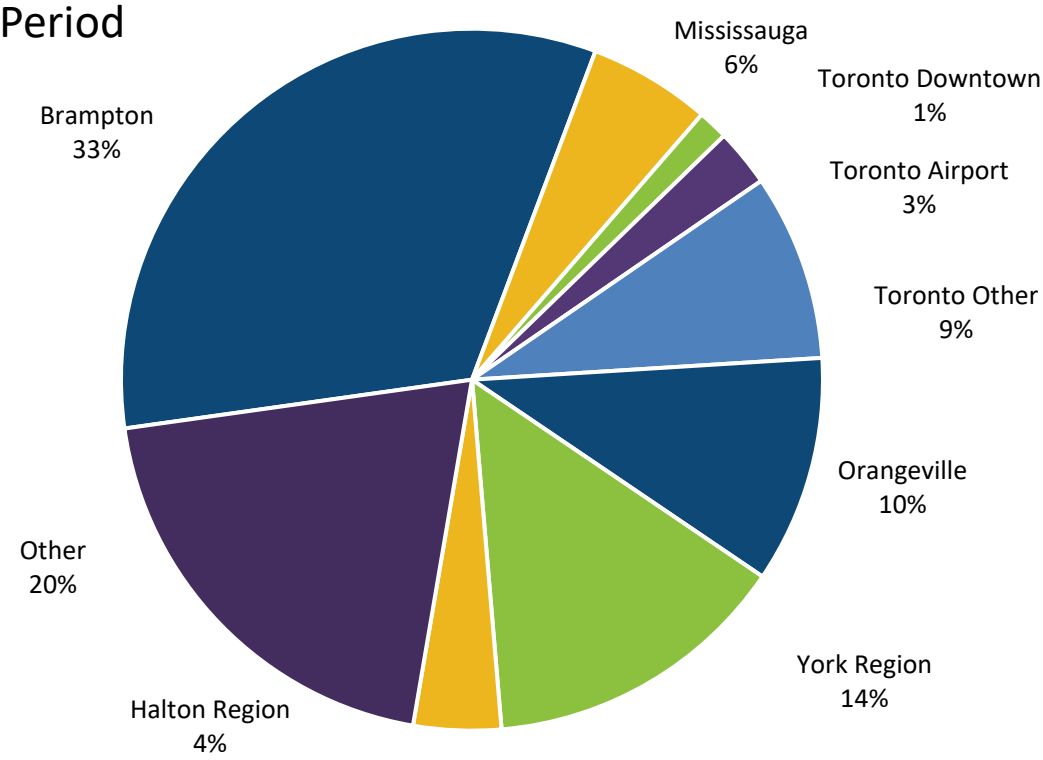
Distribution of Trips Destined to Caledon

Figure 2.11

AM Peak Period



PM Peak Period



TOWN OF CALEDON

Distribution of Trips Destined Outside of Caledon

Figure 2.12

2.4 Current Transportation Trends in the Town of Caledon

A review of the existing conditions in the Town of Caledon highlights several trends which will shape the transportation system in the coming years. It is important to recognize and plan for the following trends to develop a transportation network that serves all users:

Half of all vehicle trips on Caledon roads travel through the Town

Majority of trips are made in single occupant vehicles (SOV)

- SOVs accounted for 74% of trips in 2011 (2011 TTS)

Pearson Airport employment lands in Brampton and Mississauga are the main destination for Caledon labour force

- In 2011, 31% of the Caledon labour force travelled to the Brampton (12%) or Mississauga (19%) employment lands (SURCS, 2016)

Bolton accounts for nearly half of total Caledon population

- In 2011, Bolton comprised 46% of the Town's population (2011 Census)

Caledon has a variety of cycling and pedestrian trail systems

- With 182 km of trails and 86 km of cycling routes, there are facilities available for users of all abilities

Aging population in Caledon is on the rise

- Between 2006 and 2011 the number of residents over age 65 increased by 2.6% and continues to rise as the population ages and older citizens move to the Town (2006 and 2011 Census)

Through truck and aggregate truck trips in Caledon are increasing

- Between 2006 and 2011 the number of trucks entering and exiting the Town increased by 16% (2006 and 2011 Cordon Count)

High growth in Caledon projected over the next 15 years

- Population grew by 4.2% between 2006 and 2011 and is expected to increase over the next 15 years with development in the Town (2006 and 2011 Census)

3 Future Transportation Needs

3.1 Forecasting Future Travel Demand

3.1.1 Growth Forecasts

The Town of Caledon is expected to experience considerable growth between 2011 and 2031. **Table 3.1** summarizes the population and employment forecasts to 2031 from the COP. Population is expected to increase by 80% (approximately 48,000 additional people), while employment is forecast to grow by 44%, adding 20,000 jobs by the year 2031. The forecasts used were detailed in the Caledon Official Plan as it exists in the November 2016 Consolidation.

TABLE 3.1: POPULATION AND EMPLOYMENT GROWTH FORECASTS FOR CALEDON

Year	Population	Employment
2021	87,000	40,000
2031	108,000	46,000

Note: Population figures include a Census undercount of 4.2%.
**Source: Town of Caledon Official Plan, Table 4.1*

Table 3.2 provides the allocation of the Town-wide population forecast contained in **Table 3.1** to the different settlement categories, specific settlements and land areas generally based on the Official Plan principles, strategic direction and goals.

TABLE 3.2: POPULATION ALLOCATIONS BY SETTLEMENT CATEGORY OR LAND USE AREA

Settlement Category or Land Use Area	2021 Population	2031 Population
Rural Service Centres	54,825	75,054
Villages	7,428	7,428
Hamlets	1,343	1,343
Industrial/Commercial Centres	175	175
Palgrave Estate Residential Community	4,865	5,371
Rural Lands and Prime Agricultural Area and General Agricultural Area	18,365	18,629
Total (rounded)	**87,000**	**108,000**

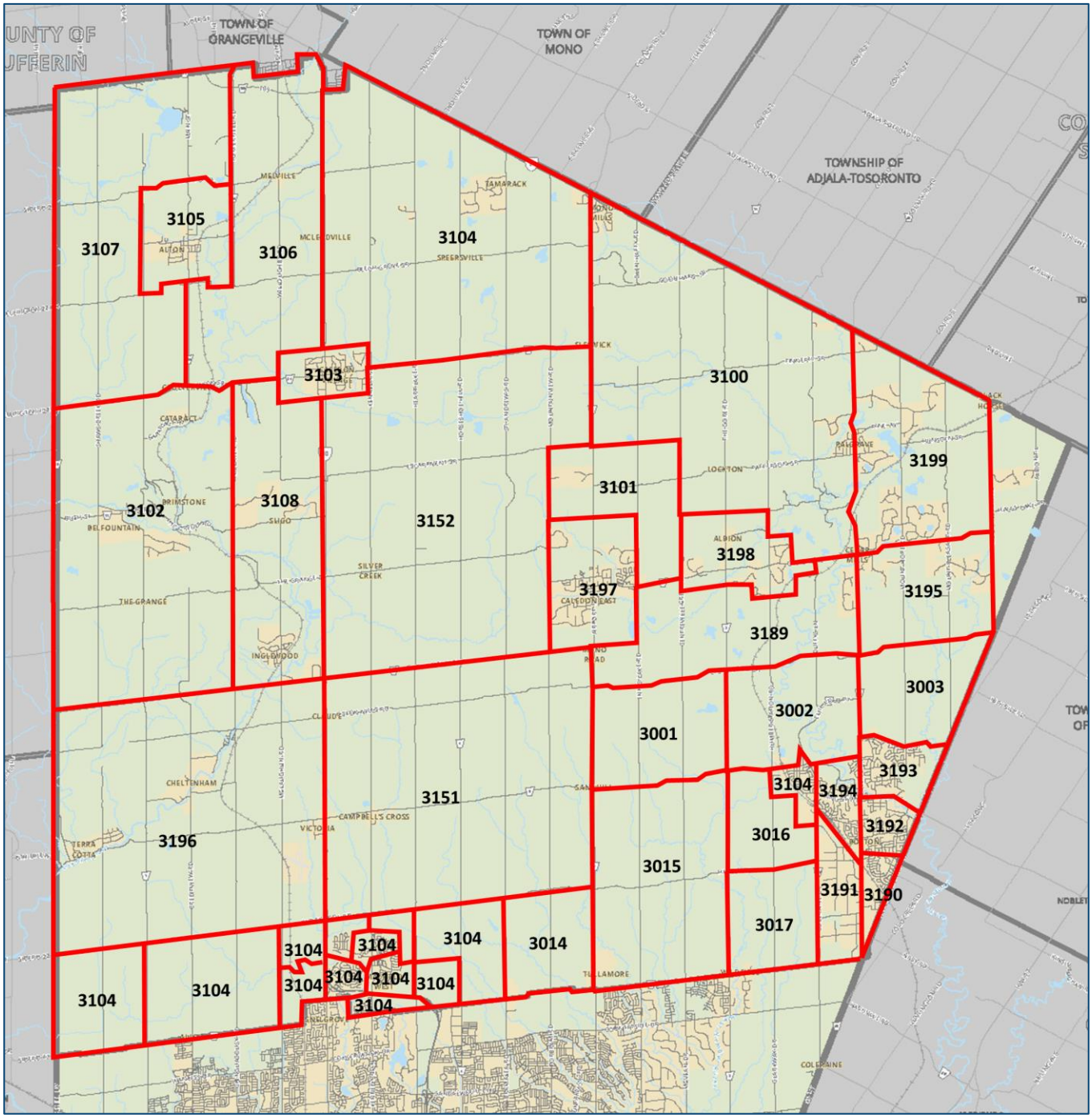
**Source: Town of Caledon Official Plan, Table 4.2*

3.1.2 Travel Demand Forecasting Model

The impact of planned growth within Caledon and the surrounding areas on the area transportation system was assessed using the Peel Region Travel Demand Forecasting Model (the Model). This computer-based modelling tool, built on the Emme 4 platform with elements from the broader Greater Golden Horseshoe (GGH) model, was used to predict how future travel demand could change due to anticipated population and employment growth.

The Model relies on a series of zones (that capture the spatial distribution of land uses in terms of population and employment) and networks (roads and transit primarily) to simulate travel behaviour. The Town of Caledon is divided into 42 zones in the Model, as shown in **Figure 3.1**. Calibrated to 2011 TTS data, the Model provides travel forecasts for the 2031 horizon year based on population and employment projections from the Peel Region Official Plan and the transportation network recommended in the 2012 LRTP. All Regional Roads and Provincial Highways, as well as some municipal roads where larger gaps exist between the Regional Roads, are captured in the road network. Given the uncertainty regarding the timing of the proposed GTA West highway along the south portion of Caledon, scenarios with and without the facility were examined to test sensitivity.

Table 3.3 summarizes the population and employment forecasts at the horizon years 2011 and 2031 captured in the Model. The table notes that the Model assumes the population of Caledon will grow by 50,439 between 2011 and 2031, whereas the COP projects growth of 48,000 additional people. Similarly, the Model assumes employment growth of 20,380 jobs over this period, while the COP projects an additional 20,000 jobs. These discrepancies are modest and inconsequential in the context of a forecasting exercise like this, as the Model is insufficiently precise to be adversely impacted.



TOWN OF CALEDON

Emme 4 Model Zones in Caledon

Figure 3.1

Caledon Transportation Master Plan

TABLE 3.3: POPULATION AND EMPLOYMENT IN MODEL

Zone	2011 Model		2031 Model	
	Population	Employment	Population	Employment
3001	325	498	406	236
3002	479	618	10475	2547
3003	334	98	599	283
3004	327	144	10709	1053
3005	32	17	68	15
3006	31	35	5206	3065
3007	3300	289	3356	1182
3008	28	47	5159	251
3009	51	50	25	1080
3010	1016	240	4535	1524
3011	32	17	1311	14
3012	175	101	182	1359
3013	72	233	0	2820
3014	139	126	208	1688
3015	707	1524	988	1116
3016	225	479	282	1514
3017	453	98	339	3219
3100	2514	349	2623	338
3101	342	201	1505	352
3102	1643	224	1557	215
3103	1573	292	1713	316
3104	1625	327	1518	308
3105	1338	254	2574	245
3106	544	129	474	102
3107	761	96	734	69
3108	1413	311	1543	292
3146	30	34	1952	135
3151	1990	471	1841	446
3152	1344	356	1286	258
3153	3747	474	3904	437
3188	186	91	224	305
3189	740	285	903	150
3190	4702	853	5534	1049

TABLE 3.3: POPULATION AND EMPLOYMENT IN MODEL

Zone	2011 Model		2031 Model	
	Population	Employment	Population	Employment
3191	268	11491	21	13129
3192	6337	1604	6351	1420
3193	7050	846	8626	927
3194	5655	2265	6383	2086
3195	1037	119	1548	125
3196	2715	654	2527	246
3197	3469	1260	8645	2130
3198	726	139	646	129
3199	3166	302	4600	246
Total	**62641**	**28041**	**113080**	**48421**

3.1.3 Horizon Year Forecasts

The traffic volume forecasts for both the 2011 and 2031 horizons were summarized by a series of screenlines[2]. **Figure 3.2** shows the screenlines, which are the same locations used in the Caledon Transportation Needs Study Update (March 2009).

The volumes crossing each screenline were summed for each horizon and scenario and a yearly growth rate was determined. **Table 3.4** shows the screenline volumes and growth rates.

The three screenlines forecast to experience the most growth under the scenario with GTA West are:

- Screenline 5A – North of Mayfield Road from Winston Churchill Boulevard to Highway 10 (9.3% per year)
- Screenline 8A – West of Highway 10 from Mayfield Road to Olde Base Line Road (8.8% per year)
- Screenline 9A – West of Airport Road from Mayfield Road to Olde Base Line Road (8.3% per year)

2 A screenline is an imaginary or actual physical barrier used as a control location to examine major traffic flows.

The three screenlines forecast to experience the most growth under the scenario without GTA West are:

- Screenline 8A – West of Highway 10 from Mayfield Road to Olde Base Line Road (6.6% per year)
- Screenline 7A – East of Winston Churchill Boulevard from Mayfield Road to Olde Base Line Road (5.5% per year)
- Screenline 5A – North of Mayfield Road from Winston Churchill Boulevard to Highway 10 (4.8% per year)

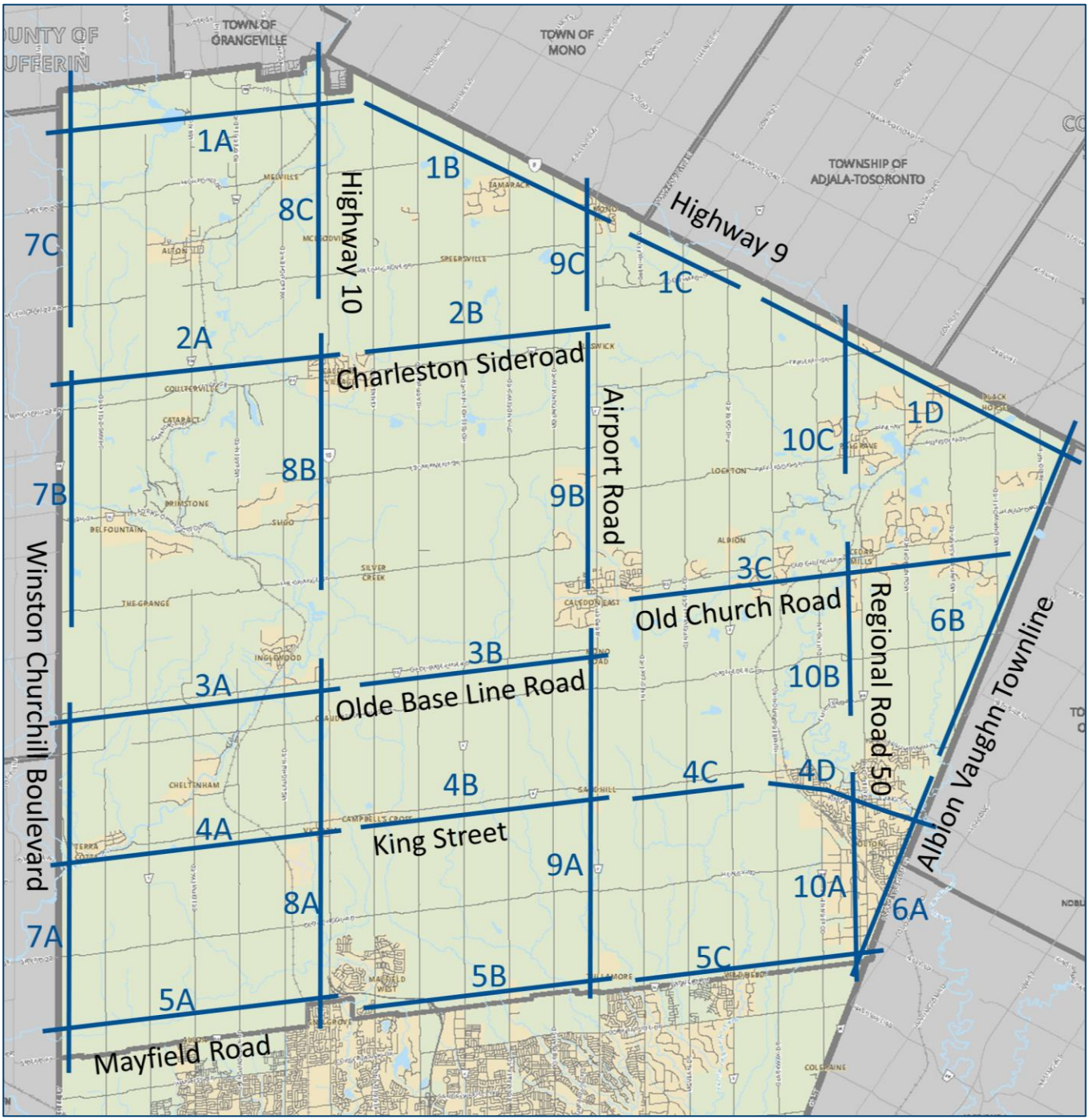
The analysis of the model forecasts shows that the largest growth is generally seen in the southcentral area of Caledon.

3.1.4 Screenline Capacity Analysis

A detailed analysis was carried out to determine the implications of future traffic demands on the road system. Demand forecasting results were compared to traffic capacities at all screenlines to identify locations where road capacities (with planned Regional Road improvements) would not be sufficient in the year 2031 to provide an acceptable level of service. Scenarios with and without the proposed GTA West highway were examined. The traffic forecasts represent typical morning (A.M.) peak hour conditions.

The TMP establishes the acceptable level of service for a screenline to be 90% of its vehicular capacity, or a volume to capacity (v/c) ratio of 0.9. Traffic flows on roads exceeding this v/c ratio, commonly referred to as Level of Service “E”, tends to be unstable, with longer periods of congestion and reduced travel speeds during peak travel conditions. Planning for a v/c ratio of 0.9 also acknowledges that road expansion is not limitless, and that some congestion may occur during peak periods.

Table 3.5 summarizes the screenline analysis results for the two scenarios. Although traffic demands grow over time at every screenline, no location reaches over-capacity conditions. This is attributed to the planned Regional Road expansion program recommended in the LRTP, which has been formulated to serve anticipated growth. It is noted that traffic conditions will generally be worse in southcentral Caledon without the GTA West highway, as evidenced by higher v/c ratios.



TOWN OF CALEDON

Caledon Forecast Screenlines

Figure 3.2

TABLE 3.4: SCREENLINE VOLUMES AND GROWTH RATES

Screenline	2011	2031 With GTA West		2031 Without GTA West	
	Total	Total	Growth Rate	Total	Growth Rate
1A	989	1446	2.0%	1385	1.8%
1B	483	1012	4.0%	960	3.7%
1C	328	250	-1.4%	380	0.8%
1D	393	726	3.3%	854	4.2%
2A	1061	1693	2.5%	1608	2.2%
2B	546	1153	4.0%	960	3.0%
3A	1230	1966	2.5%	1681	1.7%
3B	649	1850	5.7%	1525	4.6%
3C	1441	2234	2.3%	2463	2.9%
4A	1566	2528	2.6%	2264	2.0%
4B	675	2250	6.5%	1542	4.4%
4C	632	977	2.3%	1406	4.3%
4D	2512	3746	2.1%	4148	2.7%
5A	972	5264	9.3%	2348	4.8%
5B	2705	4979	3.3%	5740	4.0%
5C	2517	8328	6.5%	5377	4.1%
6A	1157	1699	2.0%	1388	1.0%
6B	602	715	0.9%	928	2.3%
7A	559	1638	5.8%	1548	5.5%
7B	101	132	1.4%	166	2.6%
7C	186	183	-0.1%	336	3.2%
8A	1314	6531	8.8%	4453	6.6%
8B	186	172	-0.4%	280	2.2%
8C	953	1434	2.2%	1322	1.7%
9A	1207	5495	8.3%	3181	5.2%
9B	125	172	1.7%	230	3.3%
9C	568	540	-0.3%	692	1.0%
10A	709	608	-0.8%	747	0.3%
10B	661	1007	2.2%	1087	2.7%
10C	264	208	-1.2%	240	-0.5%

TABLE 3.5: SCREENLINE VOLUME TO CAPACITY RATIOS

Screen line	Peak Direction	Screenline Capacity		AM Peak Hour Traffic Volumes					
				2011		2031 With GTA West		2031 Without GTA West	
		With GTA West	Without GTA West	Volume	v/c	Volume	v/c	Volume	v/c
1A	SB	4000	4000	989	0.25	1446	0.36	1385	0.35
1B	SB	1900	1900	483	0.25	1012	0.53	960	0.51
1C	SB	1000	1000	328	0.33	250	0.25	380	0.38
1D	SB	3000	3000	393	0.13	726	0.24	854	0.28
2A	SB	4100	4100	1061	0.26	1693	0.41	1608	0.39
2B	SB	1900	1900	546	0.29	1153	0.61	960	0.51
3A	SB	7100	7100	1230	0.17	1966	0.28	1681	0.24
3B	SB	7000	7000	649	0.09	1850	0.26	1525	0.22
3C	SB	5900	5900	1441	0.24	2234	0.38	2463	0.42
4A	SB	8100	8100	1566	0.19	2528	0.31	2264	0.28
4B	SB	7000	7000	675	0.10	2250	0.32	1542	0.22
4C	SB	3000	3000	632	0.21	977	0.33	1406	0.47
4D	SB	5400	5400	2512	0.47	3746	0.69	4148	0.77
5A	NB	12400	7000	972	0.08	5264	0.42	2348	0.34
5B	SB	11400	11400	2705	0.24	4979	0.44	5740	0.50
5C	SB	12300	6900	2517	0.20	8328	0.68	5377	0.78
6A	EB	10400	10400	1157	0.11	1699	0.16	1388	0.13
6B	EB	4000	4000	602	0.15	715	0.18	928	0.23
7A	EB	5000	5000	559	0.11	1638	0.33	1548	0.31
7B	WB	2000	2000	101	0.05	132	0.07	166	0.08
7C	WB	2000	2000	186	0.09	183	0.09	336	0.17
8A	EB	12400	7000	1314	0.11	6531	0.53	4453	0.64
8B	EB	2000	2000	186	0.09	172	0.09	280	0.14
8C	EB	3200	3200	953	0.30	1434	0.45	1322	0.41
9A	EB	11400	6000	1207	0.11	5495	0.48	3181	0.53
9B	WB	1000	1000	125	0.13	172	0.17	230	0.23
9C	EB	1000	1000	568	0.57	540	0.54	692	0.69
10A	WB	2400	2400	709	0.30	608	0.25	747	0.31
10B	WB	1900	1900	661	0.35	1007	0.53	1087	0.57
10C	EB	2000	2000	264	0.13	208	0.10	240	0.12

3.2 Transportation Vision and Goals

A high-level vision for the Town of Caledon is documented in the Town Official Plan, setting goals for all aspects of Town planning. The TMP furthers defines the transportation vision for the Town, to focus on addressing the Town's mobility needs in an effective, responsible and sustainable manner:

By 2031, the Town of Caledon will have a transportation system that is safe, efficient, reliable, convenient, sustainable and multimodal. The system will balance demand with capacity allowing both intra- and inter-Town people and goods movement to support economic growth, respect the natural environment, reflect the urban and rural character of the town and preserve the high quality of life.

The Town Official Plan describes sustainability, in its broadest sense, as the wise use of available resources to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The transportation vision is supported by the following goals:

- **Provide Choice in Services** - A transportation system that offers multimodal choices for travel and goods movement to maximize capacity and promote transit, cycling and walking. While the auto will still be a dominant mode, the community recognizes the shift towards a multimodal system, focusing on providing transit, walking and cycling facilities within the Rural Service Centres.
- **Facilitates Economically Sustainable Growth** – A transportation system that aids in the retention of the existing industries while attracting new diverse investments and expanding the employment base.
- **Respects and Protects the Environmental Integrity of the Town** – A transportation system that provides for sustainable growth while protecting and respecting the natural, social and cultural environment detailed in local, regional and provincial plans.
- **Develop a Safe, Reliable and Efficient System** – A transportation system that preserves and maximizes the existing network and underutilized links prior to adding new infrastructure while ensuring the safety and reliability for all road users.

3.3 Problems and Opportunities Statement

The Town of Caledon faces several problems and opportunities regarding the transportation network in the next 15 years:

- **Rapidly Increasing Population and Employment** – As detailed above, the population of Caledon is expected to rapidly increase by 80% in the next 15 years, with employment increasing by 44%. This growth places pressure on the transportation network to provide fast and reliable routes for people and goods movement.
- **Goods Movement** – The Town of Caledon is part of the Peel Region major Canadian goods movement hub. The numerous mineral aggregate resources within Caledon and major warehouses and distribution centres located immediately south in Brampton emphasize the need for goods movement in Caledon. With employment expected to rapidly expand in the next 15 years, traffic volumes for goods movement will continue to growth adding traffic to the Town road network as well as the Regional and Provincial networks.
- **Rural Roadway Deficiencies** – As the Town population increases, there is a greater demand for use of the rural road network. However, the network was not designed to accommodate the level of demand projected. The existing roadway corridors provide opportunity for transportation enhancements, including transit and active transportation facilities.
- **Evolving Land Development** – Caledon is planned to intensify and expand in the Rural Service Centres, placing greater pressures on the transportation network and providing the opportunity for sustainable transportation. Within the Rural Service Centres, new development allows for the enhancement of the road network to include other modes such as transit, walking and cycling.

3.4 Potential Alternative Solutions

In the next 15 years, population and employment growth in Caledon will place great pressures on the transportation system. The Town must respond to these pressures to meet the vision of creating a *safe, efficient, reliable, convenient, sustainable and multimodal transportation network*.

Distinct transportation planning alternatives were derived and analyzed to address the problems and opportunities statement and achieve the transportation vision. Recognizing that Caledon falls within Peel Region and fits within the Regional transportation planning

framework, the same four (4) alternative solutions identified for the Peel Region LRTP were assessed for the Caledon TMP to meet future needs, which are:

- **Alternative 1: "Do Nothing"** – This alternative reflects the current condition of the roadway and transit networks to the 2031 horizon year, without further investment to increase capacity
- **Alternative 2: "Transportation Demand Management (TDM) Only"** – This alternative assumes the current roadway network remains unchanged and is complemented with aggressive TDM investments and transit improvements. These improvements include carpooling, providing incentives to ride transit, encouraging walking and cycling and promoting flexible working hours.
- **Alternative 3: "Road and Highway Improvements Only"** – This alternative builds on the road and highway widening/expansion as recommended in the Caledon Road Improvement Capital Plan as well as the Capital and Master Plans for Peel, and the Province.
- **Alternative 4: "Combination of Alternatives 2 and 3"** – This alternative combines Alternatives 2 and 3 to provide both roadway capacity required for vehicular and transit travel, supplemented by additional investments in TDM and active transportation.

Alternative 4 was further refined to fit within the context of Caledon, specifically considering the increased dependency on auto travel in comparison to the southern municipalities in Peel Region:

- **Alternative 4A: "High Level of TDM Combined with Road and Highway Improvements"** – This alternative combines Alternatives 2 and 3 to provide aggressive TDM investments and transit improvements throughout the Town, coupled with road and highway widening/expansion improvements.
- **Alternative 4B**: "**Low Level of TDM Combined with Road and Highway Improvements"** – This alternative combines Alternatives 2 and 3 to provide concentrated TDM investments and transit improvements in the Rural Service Centres, coupled with road and highway widening/expansion in the rural areas of the Town.

3.5 Analysis and Assessment of Alternative Solutions

In evaluating the potential alternative solutions, it is necessary to not just consider auto drivers, but all modes of transportation. The future road network improvements to aid mobility and reduce congestion must not impede the use of other modes and should strive to meet policy

objectives. To select the preferred alternative, a wide range of evaluation criteria were considered to determine how the alternatives would affect transportation in Caledon.

3.5.1 Evaluation Criteria and Process

A multiple account evaluation (MAE) framework was developed to compare the five alternatives. As the Caledon TMP utilizes the Peel Region model, the evaluation criteria and MAE matrix are derived from the Peel Region LRTP. The evaluation criteria were further refined to apply directly to the Town of Caledon, with the addition of a Customer Service criteria. **Table 3.6** presents the seven (7) evaluation criteria and their applicable measures.

TABLE 3.6: EVALUATION CRITERIA AND MEASURES

Evaluation Criteria	Measures
Transportation	▸ Volume to capacity ratios ▸ Congested vehicle kilometer travelled ▸ Network connectivity and continuity ▸ Goods movement ▸ Support for transit ▸ Support for active transportation
Environment	▸ Greenhouse gas emissions ▸ Potential impacts/encroachments on any environmentally sensitive areas such as wetlands, woodlands, Oak Ridges Moraine, Greenbelt, Niagara Escarpment, etc.
Social	▸ Health issues related to air quality ▸ Appropriateness for the changing demography ▸ Support for a healthier commute ▸ Potential impacts, such as noise exposure, intensification corridor, and urban system
Cultural Heritage	▸ Potential impacts to major structures, places of worship, cemeteries, existing and historical settlement areas and hamlets
Economic	▸ Cost of congestion ▸ Network connectivity and continuity, including access to employment lands and regional and provincial network
Other – costs or impact on utility corridors	▸ Qualitative discussion about the potential costs and/or impact to utility corridors
Customer Service	▸ Vehicle operating costs ▸ Travel time for users ▸ Safety of travel modes ▸ Convenience and accessibility for users

*Source: Peel Region Refinement and Confirmation of Preferred Alternative

The Peel LRTP details the procedure to evaluate the criteria for each of the four alternatives detailed above (Alternative 4B was not included in the Peel LRTP). **Appendix D** provides the detailed assessment from the Peel LRTP used to develop the MAE matrix. The following summarizes the analysis:

- **Transportation:** A scenario evaluation was completed to determine the effects of implementing transportation strategies during the critical period, which occurs during the morning peak commute hour between 7:30 AM and 8:30 AM according to the TTS. A screenline analysis was conducted to examine the overall level of congestion for each alternative.
- **Environmental Impacts:** Greenhouse gas emissions were estimated based on simulated traffic volume derived from the Peel travel demand forecasting model. Assessments were made to examine how each alternative would have potential impacts or encroachments on any natural environment features and environmentally sensitive areas.
- **Social Impacts:** Assessments were performed to evaluate the social impacts for each alternative considering factors such as the aging population, persons with disabilities, health issues related to air quality and transportation, and support for sustainable transportation. Residential and employment areas, aircraft noise exposure, regional intensification corridors and urban systems were also considered.
- **Cultural Heritage Impacts:** Direct or indirect cultural impacts from a transportation perspective were evaluated for each alternative. Elements such as existing and historical settlement areas, hamlets, places of worship and cemetery locations were reviewed.
- **Economic Impacts:** There is a direct proportional relationship between the level of congestion and the cost of congestion due to lack of productivity and delays. Areas such as employment lands, prime agricultural lands and high-potential mineral aggregate resources were reviewed.
- **Other Impacts:** Other impacts such as capital and maintenance costs, major transportation highway and road corridors, hydro structures, water and wastewater facilities, and waste management sites were reviewed to assess the impact to each alternative.

Customer service was assessed based on vehicle operating costs, travel time for users, safety for users and convenience and accessibility. **Table 3.7** summarizes the analysis of all five

alternatives for the customer service account. The alternatives were scored on a scale from 1 to 4, with 1 being least preferred and 4 being most preferred.

TABLE 3.7: ANALYSIS OF CUSTOMER SERVICE ACCOUNT

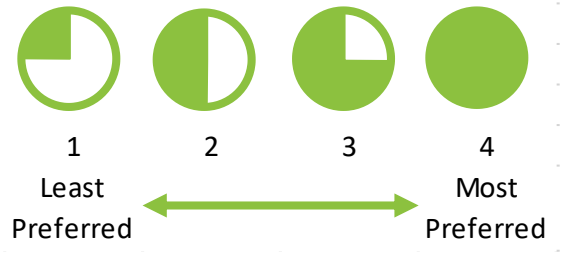
	Score for Customer Service
Alternative 1	1
Alternative 2	2
Alternative 3	2
Alternative 4A	3
Alternative 4B	4

Alternative 1 scores the lowest in this account due to the lack of transportation infrastructure and/or program improvements. Alternatives 2 and 3 provide moderate transportation program and infrastructure improvements, respectively, however the improvements do not target all users and modes of the transportation system. Alternatives 4A and 4B provide both infrastructure updates and program improvements within Caledon. As Caledon is an auto dependent municipality with many rural areas, it is unlikely an aggressive TDM program would have a meaningful increase in customer service versus a low level of TDM.

For each alternative, the evaluation criteria were given a score from 1 to 4 based on the scale provided below the MAE matrix. The alternatives were then ranked in terms of overall score. The scores for Alternative 4B combined the results of Alternative 3 (Road Widening) and Alternative 4B (High TDM and Road Improvements). **Table 3.8** displays the MAE matrix for the selection of the preferred alternative.

TABLE 3.8: MAE MATRIX EVALUATION OF THE TMP ALTERNATIVES

	Transportation	Environmental	Social	Cultural Heritage	Economic	Costs	Customer Service	Overall Rank
Alternative 1								5
Alternative 2								4
Alternative 3								3
Alternative 4A								2
Alternative 4B								1



3.6 Refinement and Confirmation of Preferred Alternative

The scores for each alternative were calculated and ranked based on overall score as shown in **Table 3.8**. The weights of the evaluation criteria were all set to one and sensitivity testing performed to determine if the weight of criteria would affect the ranking. Multiple tests were performed and indicated the preferred alternative remained the same regardless of the criteria weights.

The analysis of the alternatives based on the MAE framework led to the selection of Alternative 4B: Low Level of TDM Combined with Road and Highway Improvements as the preferred alternative for the TMP. The combination of implementing road, transit, TDM and active transportation measures as part of the framework for Alternative 4B aids in reducing congestion and promotes transit and active transportation. The alternative reflects the rural and urban characteristics of Caledon and will have the most promising effects on the transportation system.

4 Recommended Plan

Section 2.4 introduces eight key trends to recognize as major influencers on the transportation system in the coming years. **Chapter 3** provides forecasts for the future transportation needs of the Town and the preferred alternative solution. The following chapter details the road, transit, TDM, active transportation and other policies required implement the transportation network required to meet the future needs of the Town of Caledon. **Table 4.1** summarizes the eight key objectives/trends and recommendations of the plan.

TABLE 4.1: CALEDON TMP OBJECTIVES/TRENDS AND RECOMMENDATIONS

Objective/Trends	Recommendations
Through Trips	▸ Road Improvements ▸ Albion Vaughan Road Widening ▸ Traffic Calming Strategy ▸ Traffic Safety Strategy/Audit ▸ Redesign Roads
Single Occupant Vehicles	▸ TDM ▸ Transit Recommendations ▸ Cycling Commuter Trips

Major Destination	▸ Transit Provision
	▸ Connect to Brampton/Mississauga
	▸ Employment Lands
	▸ Internal Trips (Employment in Caledon)
	▸ Bolton Union Connection
	  ▸ GO Bus
	  ▸ Connect to Vaughan Metropolitan
	  ▸ Centre (New TTC Subway)
	▸ Negotiate with Province on:
	▸ Highway Improvements
	▸ 427 Extension to Major Mackenzie Drive and beyond to Highway 9

Bolton as a Major Community Hub	▸ Implement BTMP
Active Transportation	▸ Active Transportation
Aging Population	▸ Transit Target Audience

TABLE 4.1: CALEDON TMP OBJECTIVES/TRENDS AND RECOMMENDATIONS

Objective/Trends	Recommendations
Trucks	▸ Traffic Safety Strategy/Audit ▸ Traffic Calming ▸ Partner with Peel on Goods Movement Aggregate Study
Growth	▸ Requirements of having TIS Guidelines

4.1 Roads

4.1.1 Road Network

The road network illustrated in the Town of Caledon Official Plan was determined to be satisfactory to serve future transportation demands based on the travel forecasting outlined in **Chapter 3** with the addition of the following road network improvements identified in the Bolton TMP and Mayfield West Phase 2 Secondary Plan TMP. **Table 4.2** and **Table 4.3** display the road network improvements required by 2021 and 2031, respectively, consistent with these plans.

TABLE 4.2: ROAD NETWORK IMPROVEMENTS BY THE YEAR 2021

Road	From	To	Type of Improvement
Simpson Road	Mayfield Road	George Bolton Parkway	Extension (0-2 lanes)

TABLE 4.3: ROAD NETWORK IMPROVEMENTS BY THE YEAR 2031

Road	From	To	Type of Improvement
Albion Vaughan Road	Mayfield Road	King Street	Widening (2-4 lanes)
George Bolton Parkway Extension	Highway 50	Industrial Road	Extension (0-2 lanes)
Spine Road	Hurontario Street	Chinguacousy Road	New Road Construction
McLaughlin Road	Mayfield Road	Old School Road	Road Improvements and Widening
Chinguacousy Road	Mayfield Road	North Limits	Road Improvements and Widening

The recommended road network improvement program summarized in **Table 4.2** and **Table 4.3** was derived principally from the recommendations of the Bolton TMP and Mayfield West Phase 2 Secondary Plan TMP, with regard for the long-term capital works program set out in the 2014 Town of Caledon Development Charge Background Study. The analyses completed through the TMP study confirmed the expansion projects identified through those prior studies were still necessary for implementation by the year 2031.

It is noted that the long-term capital roads program contained in the 2014 Development Charge Background Study includes other projects considered necessary to support planned growth in Caledon not identified in this document. The TMP has focused more on expansion (widening and new construction) projects in established development areas. Additional projects identified in the 2014 Development Charge Background Study pertain to urbanization of rural roads that would not typically be identified through a TMP. The absence of a specific project identified in the 2014 Development Charge Background Study from the recommended improvement program in this TMP should not be construed as the project is not necessary to support future growth.

4.1.2 Rights-of-Way and Functional Classification

Road systems are typically classified according to a hierarchy that recognizes different types of roads serve different purposes. A roadway hierarchy will reflect variations in design standards, flow characteristics, traffic volumes, traffic control, access control, vehicle type and land use considerations.

The roadway classification system within the Town of Caledon is outlined in the Town of Caledon Official Plan. The classification criteria have been used to categorize the various types of roadways by their function in terms of providing mobility and land access. The general design guidelines for the different roadway facilities as provided in the Official Plan include:

Provincial Freeways

- Are roadways under Provincial jurisdiction.
- Are roadways intended to serve large volumes of interregional and long distance traffic at high speeds.
- Are roadways of high speed design with uninterrupted flow, with access only achieved through grade separated interchanges, designated by the Ministry of Transportation as Controlled Access Highways.

- Developments located adjacent to a Provincial Highway will also require approval from the Ministry of Transportation.

High Capacity Arterials

- Are roadways under Provincial or Regional jurisdiction.
- Serve high volumes of medium to long distance inter and intra-regional traffic at moderate speeds and will provide access to major attraction centres.
- Will generally have a 30 to 50 metre road allowance width with 2 to 6 lane capability and limited property access.
- On-street parking will be discouraged

Medium Capacity Arterials

- Are roadways under Regional or Town jurisdiction.
- Serve moderate volumes of medium distance traffic at moderate speeds with limited property access.
- Will have a 20 to 36 metre road allowance with 2 to 4 lane capability.
- On-street parking will be discouraged.

Low Capacity Arterials

- Are roadways under Regional jurisdiction.
- Serve low to moderate volumes of short distance traffic at relatively low speeds and are sections of medium capacity arterial roadways where physical or environmental barriers restrict right-of-way width or design speed.
- Will have a 20 metre road allowance with 2 lane capability.
- On-street parking will be discouraged.

Collectors

- Are roadways under the Town's jurisdiction.
- Serve low to moderate volumes of short distance traffic between local and arterial roads.
- Provide individual property access with some limitations
- Will generally have a 20 to 26 metre road allowance with 2 to 4 lane capability.
- On-street parking may be permitted.

Local Roads

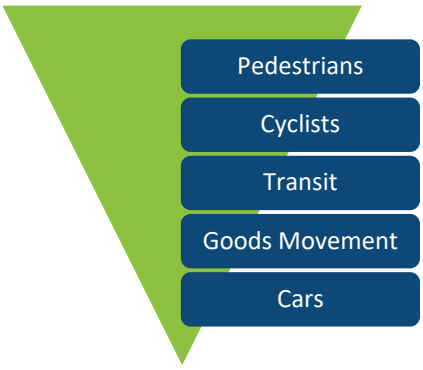
- Are roadways under the Town's jurisdiction.

- Serve local traffic only and provide connections to collector roadways.
- Provide direct property access.
- Will have a 17 to 20 metre road allowance with 2 lane capability.
- On-street parking may be permitted.

In reviewing the existing road designations in the Town's Official Plan, there were no facilities requiring a change in classification to meet future travel demands. Although different roads with the same classification will serve slightly different purposes, the varying cross-sections discussed below can address these requirements without the need to redesignate any facilities in the Town's Official Plan.

4.1.3 Typical Cross-Sections

The Road Characterization Matrix provided in **Table 4.4** summarizes the recommended roadway cross-section elements and dimensions for seven different street types within the Town, based on the Peel Region Roadway Characterization Study. **Figures 4.1 to 4.5** illustrate the typical cross-sections developed for each roadway category. **Figure 4.4B** displays the typical cross-section for commercial and residential collector roadways with cycle tracks. The design standards for cycle tracks are detailed further in **Section 4.2.3.**



When making decisions regarding moving people and goods within the Town, it is important to understand the hierarchy of transportation modes and strive to assign priority as indicated. The needs and safety of each group of road users should be all be considered in priority order. From highest priority to lowest priority, pedestrians are followed by cyclists, then transit, goods movement and finally cars. It is important to note that is approach does not always mean users at the top of the list will receive the most beneficial treatment. The roadway location and context must be considered in the facility design.

Policy:

The Town should consider all modes of transportation in terms of the hierarchy of modes when making decisions regarding the transportation network and strive improve conditions for vulnerable road users. Policy and design changes should not make conditions worse for the most vulnerable road users. When modes further down the hierarchy are prioritized, reasoning should be detailed and explained.

Within Hamlet and Village areas, the Town should incorporate complete streets objectives and prioritize active transportation modes followed by utilities and lastly vehicles.

Actions:

Incorporate the typical cross-sections into the Caledon Development Standard Manual

The existing design standards for the Town should be updated to reflect the cross-sections illustrated in **Figures 4.1 to 4.5**, thereby better reflecting the objectives to provide more complete streets and improve accommodation of active transportation modes. Where possible the Town should explore opportunities to incorporate innovation through storm water management and accommodating evolving technologies for transportation in the roadway cross-section.

Partner with Peel Region to work towards Vision Zero

The Town should partner and actively participate in the Region's Traffic Safety Strategy, Access Management and Roadway Classification and Operational Plan as part of working towards Vision Zero and ensuring the needs of the Town are identified and considered.

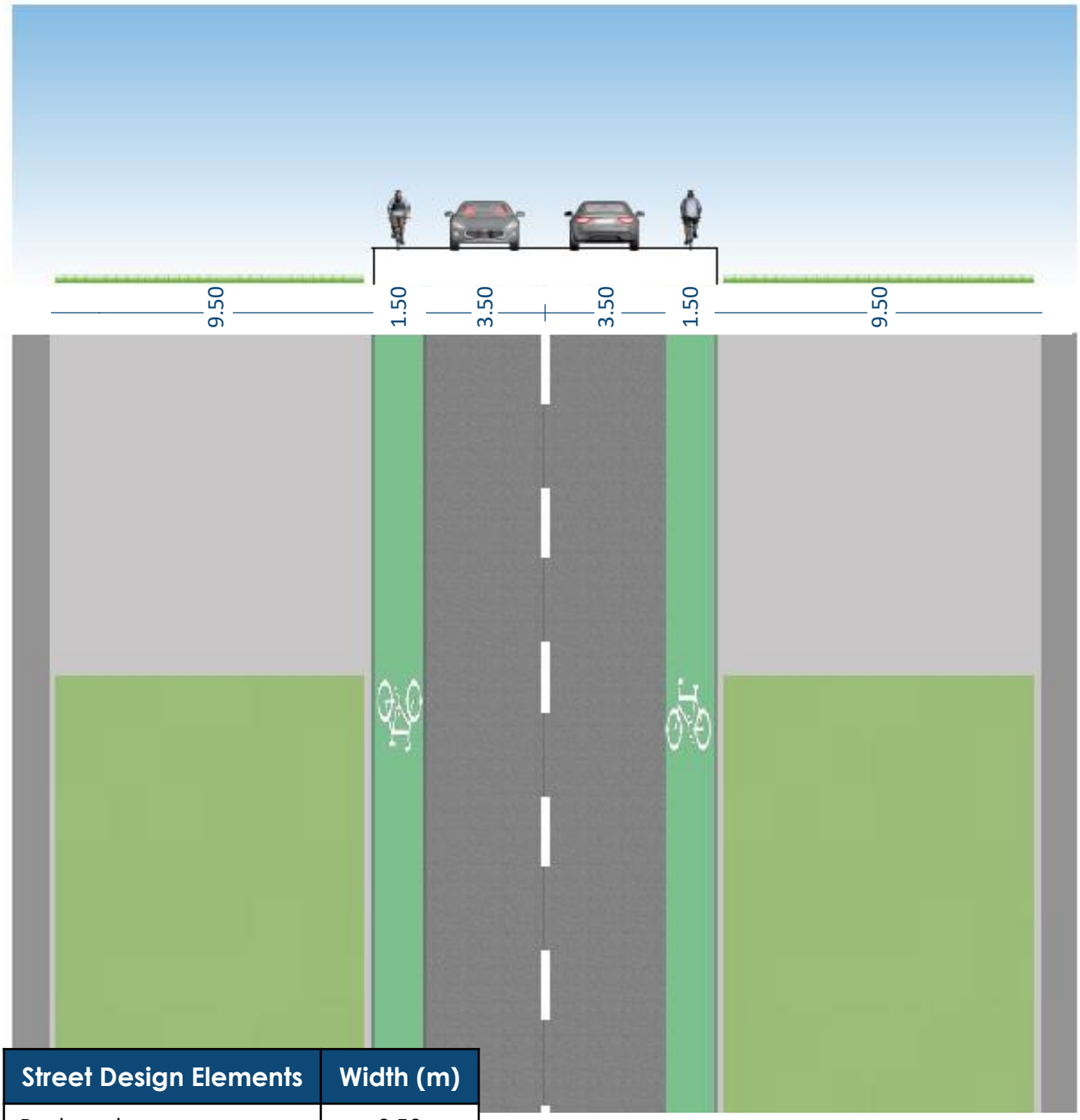
TABLE 4.4: ROAD CHARACTERIZATION MATRIX

Street Type	Land Use Designation	Through Lanes	Right of Way [m]	Desired Operating Speed [km/h]	Transit Role	Area for Pedestrians and Other Facilities[1]	Bicycle Facilities	Drainage Conditions	Freight Role
Rural Road	Prime Agricultural Area, Rural Lands	2 to 4	26 m	40 to 80 km/h	Very Limited and Site Specific	Shoulder	Shoulder	Rural Swale	Agricultural Material Transport and Local Deliveries Only
Rural Main Street	Rural Service Centre	2 to 4	20 to 26 m	40 to 60 km/h	Limited to Designated Stops or Stations	Village Specific - 1.5 m Minimum Sidewalk + Furnishing/Planting Zone + Splash Strip + Utility Zone	Behind the Curb where Design Speeds Exceed 50 km/h Otherwise On-Street	Curb and Gutter	Local Deliveries
Urban Main Street	Village or Hamlet	2 to 4	20 to 26 m	40 to 60 km/h	Major	Desired 1.5 m Minimum Sidewalk + Furnishing/Planting Zone + Splash Strip + Utility Zone	Behind the Curb	Curb and Gutter	Local Deliveries
Industrial Collector	General, Dry, Prestige Industrial	2 to 4	26 m	40 to 60 km/h	Moderate to Major	Location Specific - Desired 1.5 m Minimum Sidewalk + Planting Zone + Splash Strip + Utility Zone	Recommend the Use of Professional Judgement in High Volume Traffic Areas Where Access Points to Adjacent Uses or Intersections are <300m Apart	Curb and Gutter or Rural Swale Depending on Adjacent Uses	Local Deliveries

TABLE 4.4: ROAD CHARACTERIZATION MATRIX

Street Type	Land Use Designation	Through Lanes	Right of Way [m]	Desired Operating Speed [km/h]	Transit Role	Area for Pedestrians and Other Facilities[1]	Bicycle Facilities	Drainage Conditions	Freight Role
Commercial Collector	Commercial	2 to 4	26 m	40 to 60 km/h	Moderate to Major	Location Specific - Desired 1.5 m Minimum Sidewalk + Planting Zone + Splash Strip + Utility Zone	Behind the Curb where Design Speeds Exceed 50 km/h Otherwise On-Street	Curb and Gutter	Local Deliveries
Residential Collector	Low, Medium, High Density and Special Residential, Institutional	2 to 4	20 to 30 m	40 to 60 km/h	Moderate to Major	Desired 1.5 m Minimum Sidewalk + Furnishing/Planting Zone + Splash Strip + Utility Zone	1) For New Construction or Reconstruction accommodated in a 3 m Off-Street Multi-Use Trail 2) In Transitional Situations provide 1.5 m Striped On-Street Bicycle Lanes	Curb and Gutter	Local Deliveries
Local	Any Designation	2	17 to 20 m	30 to 40 km/h	Limited to Designated Stops	Desired 1.5 m Minimum Sidewalk	Sharing the Road	Curb and Gutter or Rural Swale Depending on Adjacent Uses	Local Deliveries

[1] In the case of new construction or reconstruction, where multiuse paths are proposed, the multiuse path will take the place of the sidewalk.

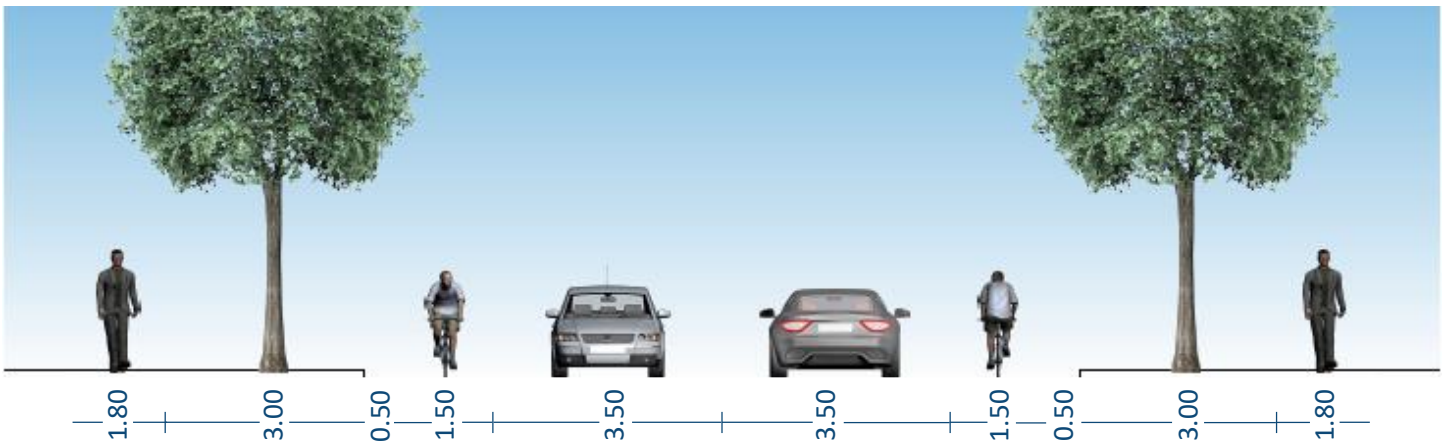


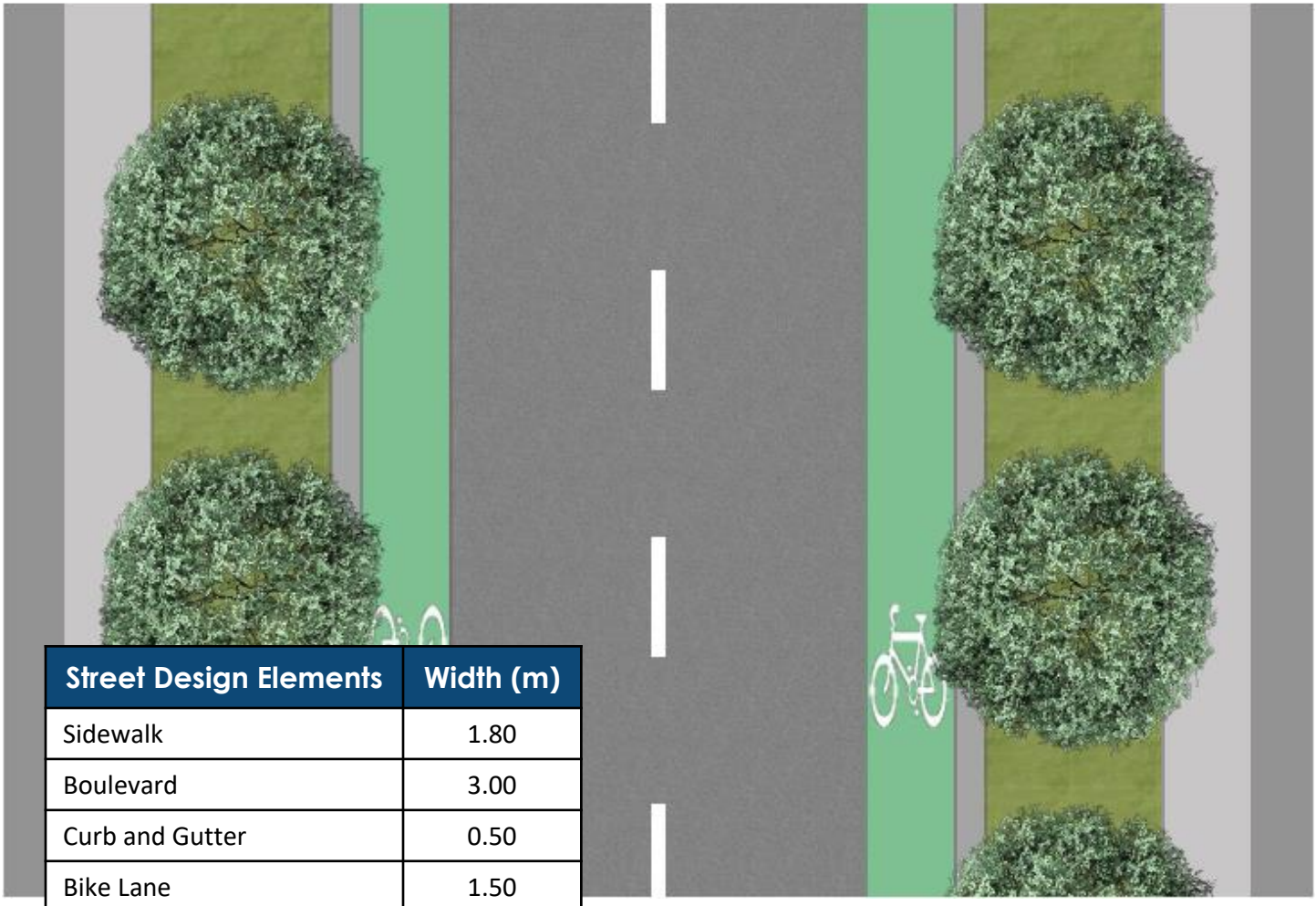
Street Design Elements	Width (m)
Boulevard	9.50
Paved Shoulder/Bike Lane	1.50
General Purpose Lane	3.50

TOWN OF CALEDON

Rural Road
Typical Cross-Section

Figure 4.1



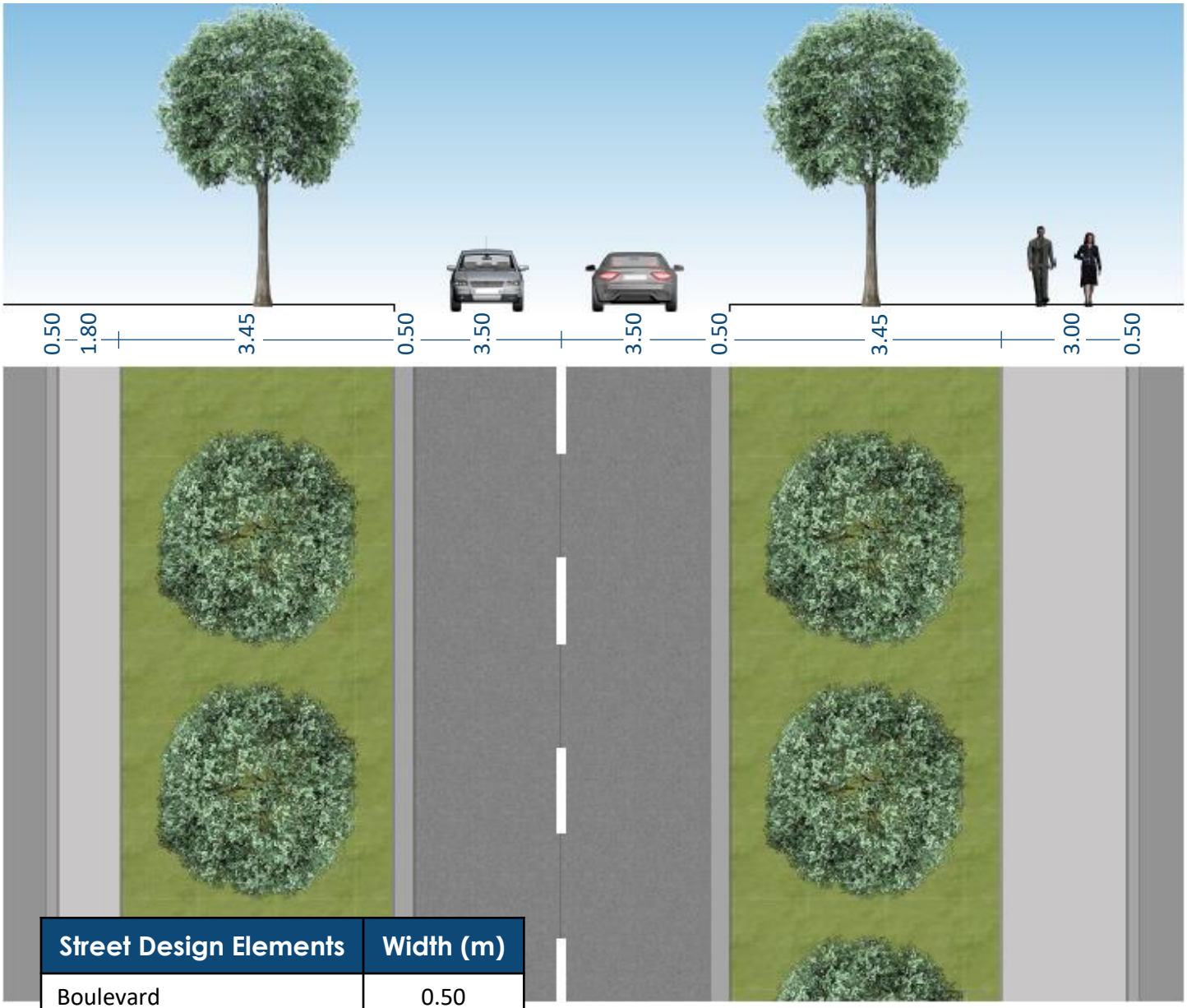


Street Design Elements	Width (m)
Sidewalk	1.80
Boulevard	3.00
Curb and Gutter	0.50
Bike Lane	1.50
General Purpose Lane	3.50

TOWN OF CALEDON

Rural and Urban Main Street Typical Cross-Section

Figure 4.2

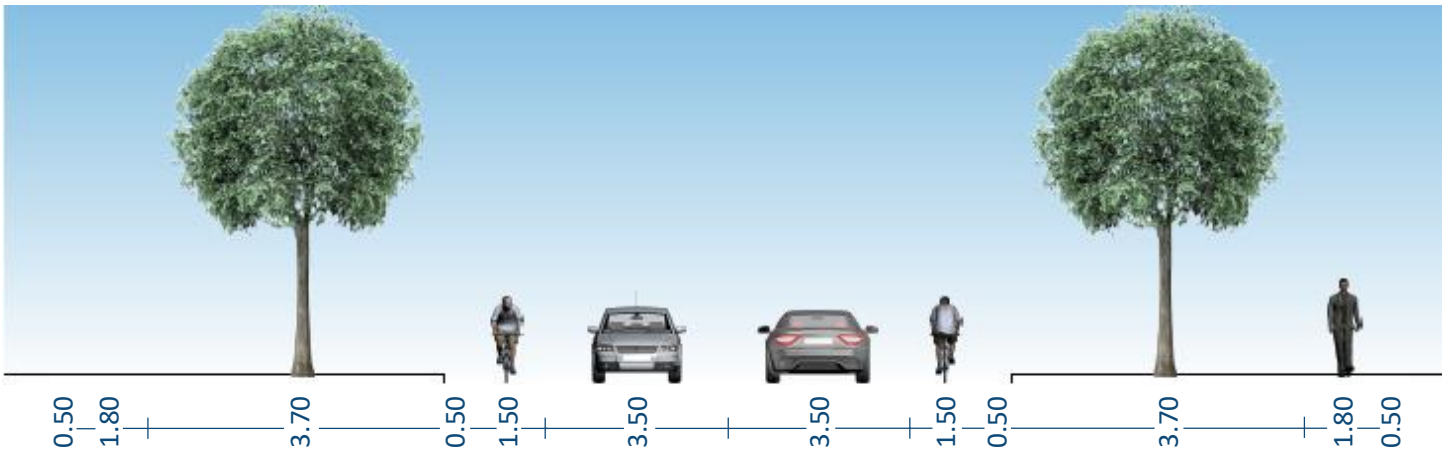


Street Design Elements	Width (m)
Boulevard	0.50
Sidewalk OR Multi-Use Path	1.80 3.00
Boulevard	3.45
Curb and Gutter	0.50
General Purpose Lane	3.50

TOWN OF CALEDON

Industrial Collector Typical Cross-Section

Figure 4.3

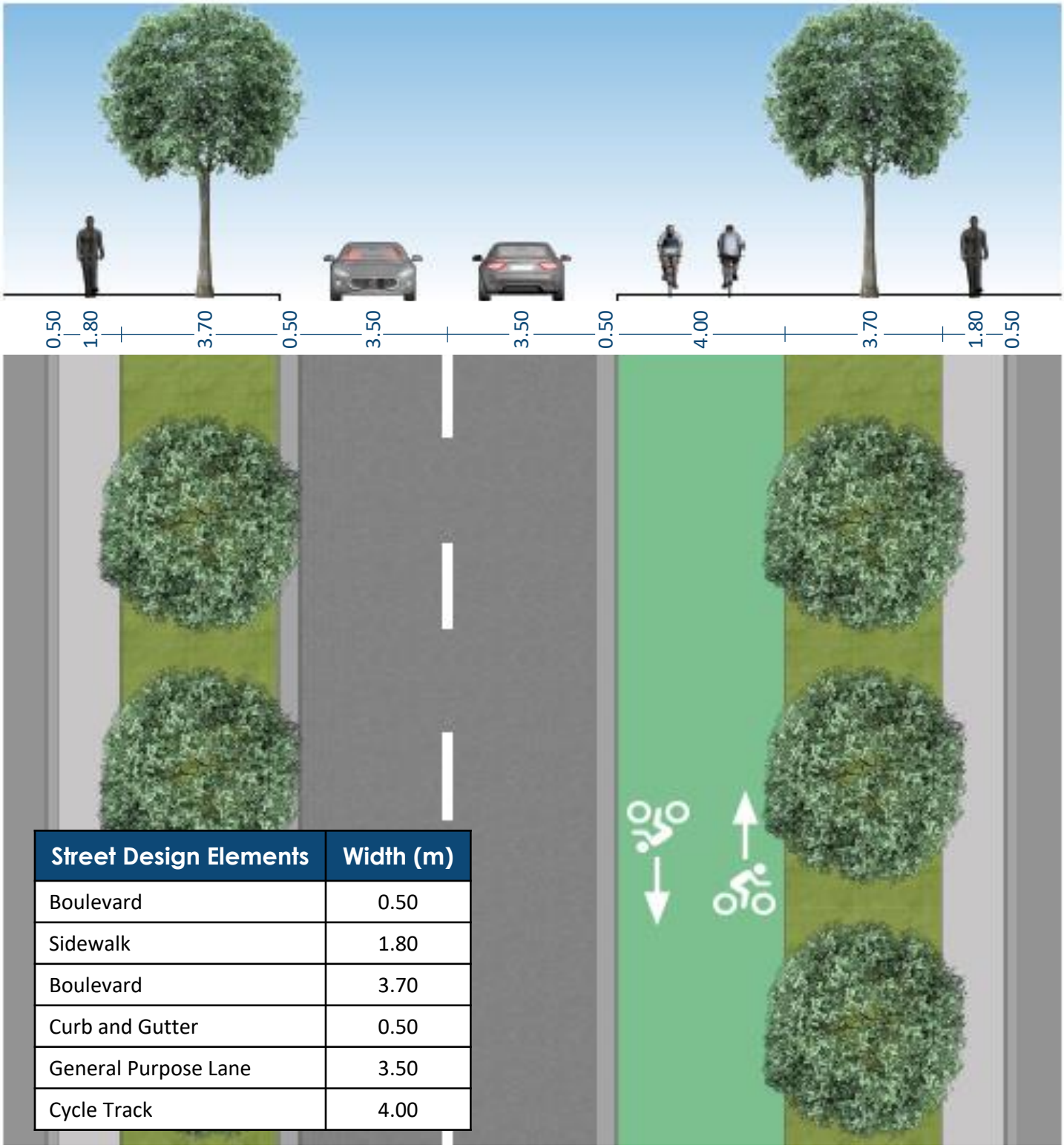


Street Design Elements	Width (m)
Boulevard	0.50
Sidewalk	1.80
Boulevard	3.70
Curb and Gutter	0.50
Bike Lane	1.50
General Purpose Lane	3.50

TOWN OF CALEDON

Commercial and Residential Collector Typical Cross-Section

Figure 4.4A

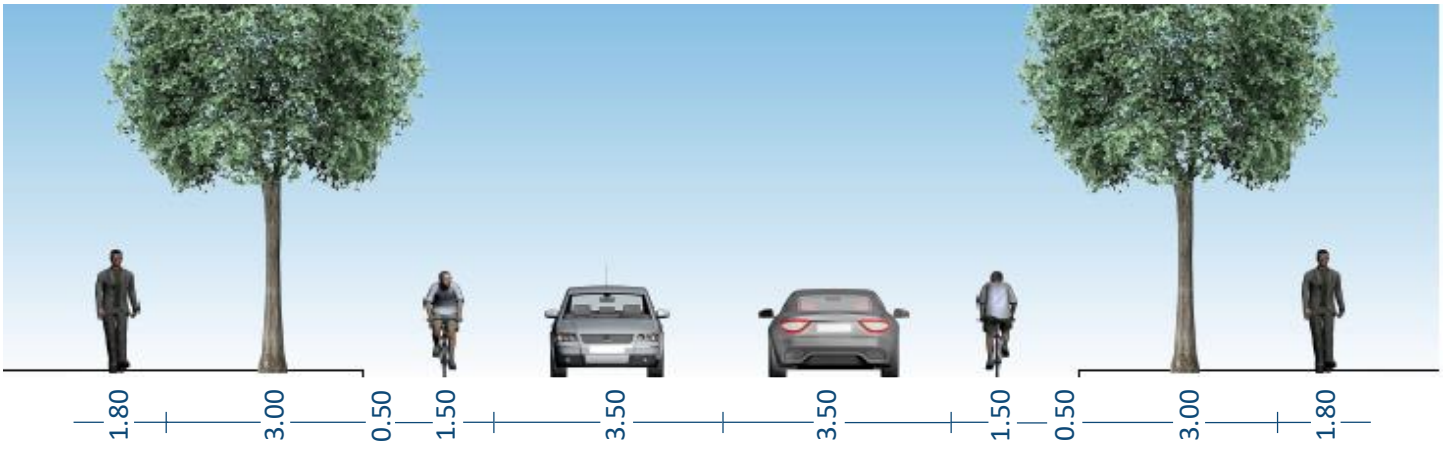


Street Design Elements	Width (m)
Boulevard	0.50
Sidewalk	1.80
Boulevard	3.70
Curb and Gutter	0.50
General Purpose Lane	3.50
Cycle Track	4.00

TOWN OF CALEDON

Commercial and Residential Collector Typical Cross-Section with Cycle Track

Figure 4.4B



Street Design Elements	Width (m)
Sidewalk	1.80
Boulevard	3.00
Curb and Gutter	0.50
Bike Lane	1.50
General Purpose Lane	3.50

TOWN OF CALEDON

Local Typical Cross-Section

Figure 4.5

4.1.4 Intersection Improvements

An analysis was completed to identify intersections within the Town that may require signalization and/or the addition of turning lanes by the 2031 horizon year. The following requirements were taken into consideration for the prioritization of candidate locations:

- The prioritization must be based on:
  - Current traffic operations conditions; and
  - Current traffic safety conditions;
- The prioritization must include all intersections under Town jurisdiction (intersection of two (2) Town roadways); and
- The current signalized intersections (4) under Town jurisdiction are to be included in the analysis.

Intersections were evaluated based on the following criteria:

- Meeting warrant for signalization;
- Meeting warrant for dedicated left- and/or right- turn lanes;
- Potential for safety improvement (PSI) index.

The evaluation of each criteria served as the basis for prioritizing the town intersections to investigate operational and safety concerns. **Appendix E** provides the results of the prioritization process, both for existing (2016) and future (2031) traffic conditions.

The top 10 intersections were then analyzed to identify operational and safety issues, and suggest potential improvements for the town to consider. **Appendix F** includes the detailed analyses for each intersection.

As noted in **Appendix E**, the methodology applied to prioritize the locations for intersection improvement considered both traffic operations and safety factors to derive a list of intersections that may require signalization and/or the addition of turning lanes by the 2016 and 2031 horizon years, respectively. Given the many simplifying assumptions made to complete the analyses, the resulting prioritized list should not be taken as an absolute ranking or imperative to mitigate, but rather a tool to be used by Town staff to identify the most likely intersections requiring additional attention.

Based on the prioritization completed, the following four intersections are recommended for improvement within the TMP (by year):

2016:

- Healey Road and Simpson Road
- Abbotside Way and Kennedy Road

These two intersections were the only locations that met the traffic signal warrant by the 2016 horizon year. Although other locations met turn lane warrants, the degree of improvement offered by the road works was not sufficient to justify the expenditure in the near term.

2031:

- Nixon Road and McEwan Road
- Humber Station Road and Healey Road

These two intersections were the only locations that met all three warrants (traffic signal, left-turn lane and right-turn lane) by the 2031 horizon year. Although other locations met turn lane warrants (in some cases for both left and right-turn lanes), the degree of improvement offered by the road works was not sufficient to justify the expenditure in the longer term, especially given the rather conservative (high) traffic growth rate assumed (2.6% compounded per annum). It is noted that no additional locations met the traffic signal warrant by 2031.

Actions:

Continue to monitor and assess the need for improvements at key intersections in the Town

> The detailed safety and operations analysis completed at the Town road intersections identified several locations where improvements may be required in the future. The Town should continue to monitor and assess the need for implementation of improvements at these locations. There may also be the opportunity to implement some of these intersection improvements through road reconstruction initiatives, particularly for those location identified along Albion Vaughan Road.

4.2 Transit

4.2.1 Transit Network

An efficient and effective public transit system is a key future component of the Town's transportation system, as provincial policy directions work towards creating more compact and complete communities. Section 5.9.5.4 of the Town's Official Plan details the policies intended to support the enhanced use and accessibility of public transit in the Town. Specifically, the OP identifies the opportunity to examine the need for a public transit service, as warranted by economic feasibility and service demand. The OP further details a number of transit functions to incorporate in the planning and development process to preserve future opportunities for public transit, as well as specific policies for transit including:

- Collaborating with the Region, Metrolinx and Province, neighbouring municipalities and other appropriate jurisdictions to:
- Expedite provision of GO Rail service to Bolton;
- Protect corridors for the future GO Rail service identified by Metrolinx and the Province;
- Enhance existing GO Bus service passing through Bolton; and
- Explore opportunities for a future extension of the Hurontario Transit Corridor north of Mayfield Road into the Mayfield West Community.
- Initiate discussions with the City of Brampton for the extension of Brampton transit services to serve Bolton and future services to the Mayfield West Community.
- Engage in discussions with YRT/Viva to explore the possibility of extending future bus services into the Town from York Region.
- Undertake discussions to investigate the feasibility of developing the Orangeville Railway Line corridor to service future demand in the Town.
- Encourage the Ministry of Transportation to accommodate higher order transit services on the extension of Highway 427 to cater to peak commuter travel between Bolton and the GTA activity centres.
- Continue to work with Peel Region for the provision of transportation services such as Peel "Trans Help" door to door accessibility service and other related programs/services which accommodate transportation needs for members of the Town community with disabilities.

The Town is currently undertaking a Transit Implementation Strategy which will further investigate and document the plan for future public transit and the necessary planning initiatives in the Town.

Policy:

The Town should examine the need for a public transit service, as warranted by economic feasibility and service demand, and incorporate the transit function in the planning and development process. The study should include a review of how existing GO bus services in Caledon would be integrated in order to establish appropriate transit service levels and to avoid potential duplication of service.

The Town should encourage and collaborate with the Region, Province, Metrolinx and neighbouring municipalities to improve inter-municipal and inter-regional transit services.

The Town should encourage transit supportive land uses in secondary plans, settlement expansions and future developments.

Actions:

Develop a Transit Implementation Plan

The transit implementation plan will review the need for a local transit service, provide relevant background documentation and develop the level of use, service delivery concepts, expected timeline and broad cost figures for Town Council to review to determine if a public transit service is feasible.

Advocate for a GO Train Station to be constructed in the Bolton Residential Expansion Area (Bolton TMP)

The Bolton Commuter Rail Feasibility Study advocated for GO Rail service to Bolton and the Bolton Residential Expansion Study frames a location for the future GO Train Station. A GO Train Station at this location would help foster an environment for transit-oriented development in this new development expansion area. It also has the potential to significantly increase the proportion of trips to and from Bolton taken by transit.

4.2.2 Transit Stop Criteria and Design

A critical component of transit infrastructure design is the transit stop, as it provides the interface between passengers and buses. Safety of both passengers and the transit operator and accessibility to accommodate patrons of all ages and abilities are paramount for the

implementation of any bus stop. The following three aspects should be considered when planning a transit stop:

- **Location** of the transit stop, based on spacing, ridership and safety;
- **Transit Stop Placement** on the roadway (far-side, near-side or mid-block); and
- **Physical Considerations** of the stop which allows passengers to board, alight, make transfers in a safe and efficient manner, and minimize conflicts with other traffic.

The location of a transit stop determines the accessibility, and therefore the effectiveness and to a certain extent, the physical design of the stop. A balance in the spacing of stops is required to minimize excessive stopping and also to minimize long walking distances. Transit stop spacing should be governed by overall network spacing, proximity to activity centres and traffic considerations.

Transit stop placement on the roadway falls into three categories – far-side, near-side and mid-block. At any stop placement, it is important to provide the minimum dimension for the transit vehicle, appropriate clearance distances from crosswalks and ensure the door is not obstructed. In general, far-side stops are preferred as they require the minimum sight distance, and prevent capacity problems at the intersection. When far-side stops are infeasible, near-side stops may be used. Near-side stops may also be used in locations where transfer with a cross-street route is required. Mid-block locations are used when intersection stops are not feasible, large block lengths or at a high transit ridership generator.

The physical considerations of the bus stop detail the type of stop for the bus, i.e. a bay, bulge, street stop, and location next to bike lanes and parking. In high traffic areas, it is important to provide adequate space for the bus to prevent traffic congestion issues. It is also important to consider the range of amenities at the stop, including passenger landing pads, wheelchair landing pads, curb letdown, bus stop sign, bus shelter, seating, bicycle storage, lighting and real-time schedule information. At minimum, a bus stop sign should be provided.

Policy:

The Town should endeavor to provide a local transit stop within easy walking distance (400 metres) of all urban land uses.

The Town should, where feasible, encourage the incorporation or transit shelters and waiting areas into the entry design of buildings that are located abutting existing or future transit stops and are accessible to all users including persons with disabilities.

Actions:

Introduce transit stop criteria and design policies into the Town of Caledon Official Plan

> At present, the Town's Official Plan does not include policy direction regarding transit stop criteria and design. The policy statement above will be added to provide a basis for transit stop criteria and design initiatives.

4.3 Active Transportation

An active transportation network and supporting infrastructure design guidelines are presented in the following section to direct the Town toward creating connected and well-designed pedestrian and cycling networks. The overall intent is to enable Caledon residents and visitors to walk, bicycle and utilize other non-vehicular travel modes safely and efficiently regardless of age and physical or mental ability.

4.3.1 Long-Term Network Plans

The long-term network plans have been developed in consideration of relevant plans and policy documents, as follows:

- Town of Caledon Official Plan, 2015
- Town of Caledon Trails Master Plan, 2011
- The Bolton Transportation Master Plan Study, 2015
- Peel Region Active Transportation Plan, 2011
- Peel Long Range Transportation Plan, 2012

The long-term network plans have been developed in consideration of the Town's identified Settlement Nodes (Rural Service Centres, Villages, Hamlets) and key destinations both within and outside Caledon.

Appendix G provides a detailed discussion of reference documents and origins-destinations.

4.3.2 Pedestrian Network

The pedestrian network provides for opportunities for personal travel and recreation via a series of sidewalks, walkways and trails, as shown in **Figure 4.6.** The network was developed to

address existing network gaps to create continuous walking routes and consistent with established plans / policies. Facilities are generally focused on areas of high potential pedestrian demand.

4.3.3 Cycling Network

The Cycling Network is comprised of on-road and off-road cycling and multi-use routes intended to facilitate commute, personal and recreational bicycle travel, as shown in **Figure 4.7.** The network was developed to provide good east-west and north-south route coverage within Caledon, including opportunities for bicycle travel between the Rural Service Centres (Bolton, Mayfield West, Caledon East), as well as connections with adjacent communities (Brampton, Orangeville, Vaughan). Caledon staff, Mayor/Council, and the local cycling community also provided insight into desirable cycling routes. As the Town works towards becoming a cycling friendly community, all future rural cycling routes will provide dedicated facilities where applicable. Existing share the road facilities will be upgraded to dedicated facilities with road improvements. Cycling routes within the Rural Town Centres will be a combination of both shared and separated facilities.

Appendix H provides a detailed summary of the recommended Town cycling routes and evaluation process to select the network.

Scenic Cycling Route

A "Scenic Cycling Route" was identified through conversations with community stakeholders that provides a long-distance touring cycling route showcasing Caledon's natural and scenic highlights, as shown in **Figure 4.8.** The identified route is a loop that utilizes low-volume roads that are primary paved surface. The loop is bisected by northwest-southeast and southwest-northeast (Caledon Trailway Path) routes for shorter loops and/or access to other destinations in Caledon.

The identified route connects the following key destinations:

- Rural Service Centres (Bolton, Mayfield West, Caledon East)
- Conservation Areas
- Scenic Areas / Viewpoints

- Nearby communities (Orangeville, Brampton, Tottenham/New Tecumseth)

The Town should work with local cycling stakeholders to develop unique, themed route signs to be installed as **directional and confirmation signs** along the Scenic Route. Examples from other communities are provided in **Figure 4.9**.

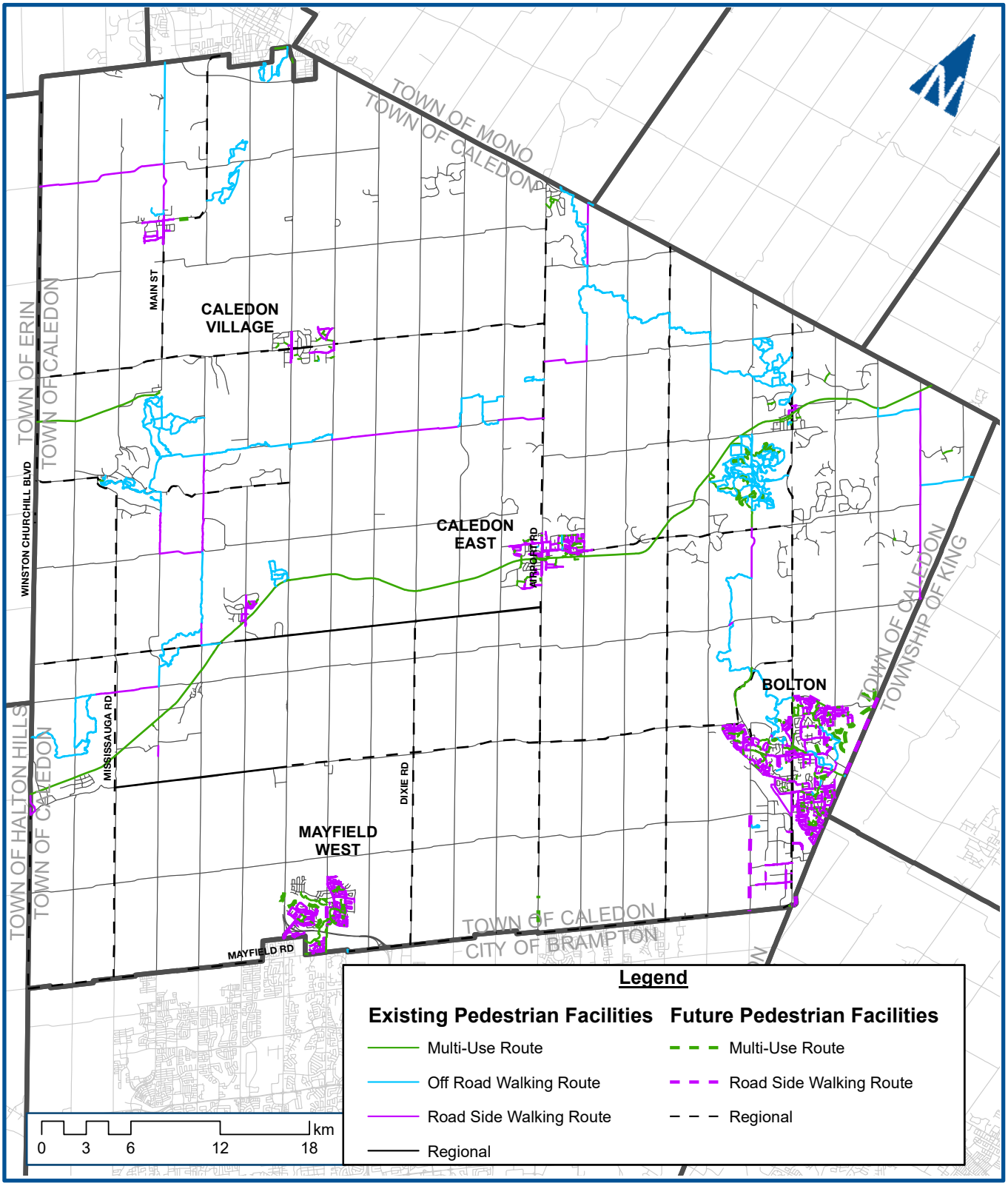
A map should be developed that identifies the scenic route and key destinations, as well as travel distances between key destinations, bike shops and bike repair locations, and parking areas.

WAYFINDING SIGN TYPES

Directional Signs indicate where a change in direction is required to continue on the intended route or to access a destination.

Confirmation Signs are placed along the route to confirm that a cyclist is on the intended route.

Further, the identified route should be revisited in the future as there are several planned cycling network improvements (both Town of Caledon and Peel Region) that would improve the Scenic Route once completed.

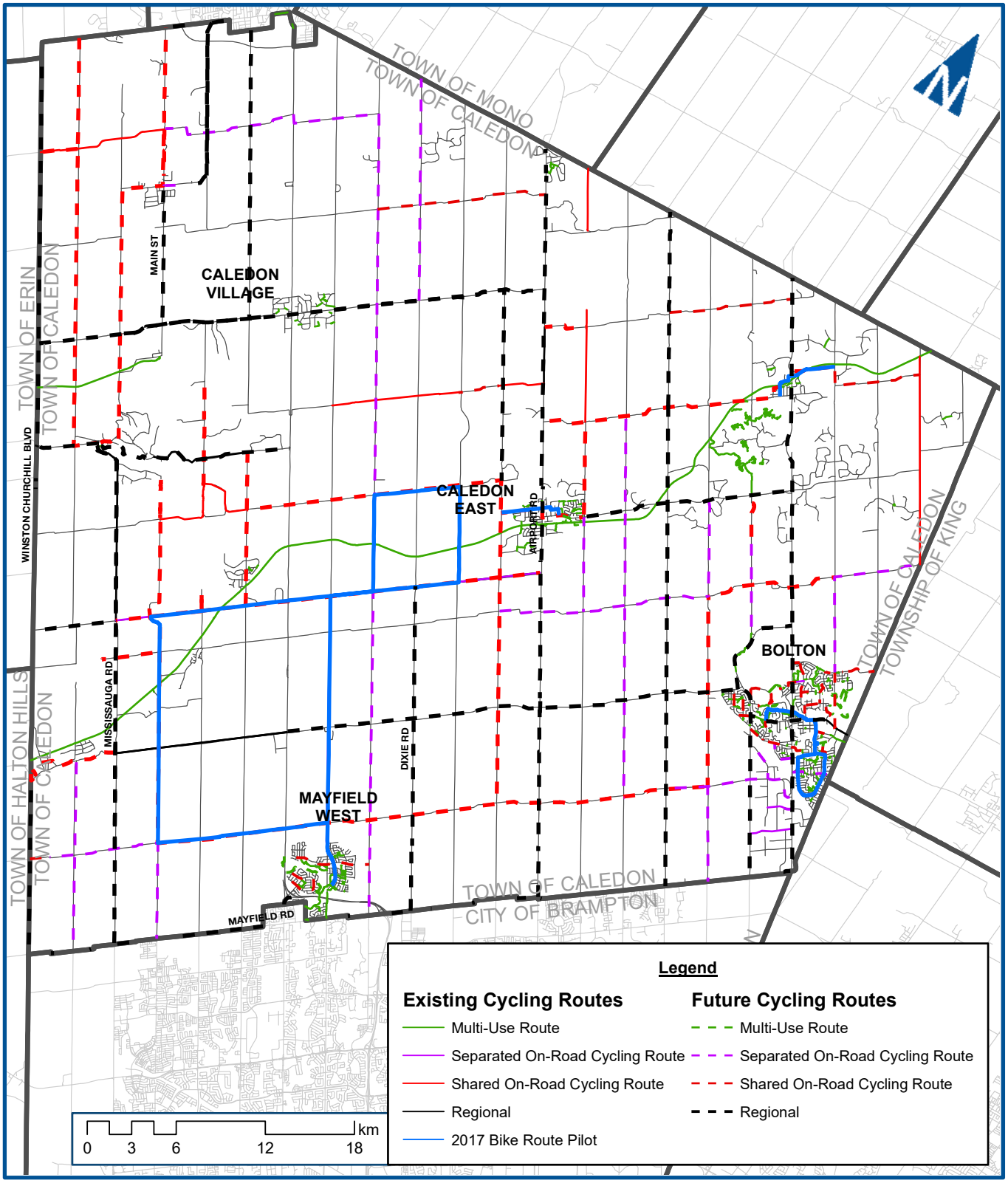


TOWN OF CALEDON

Recommended Pedestrian Network

Figure 4.6

Caledon Transportation Master Plan

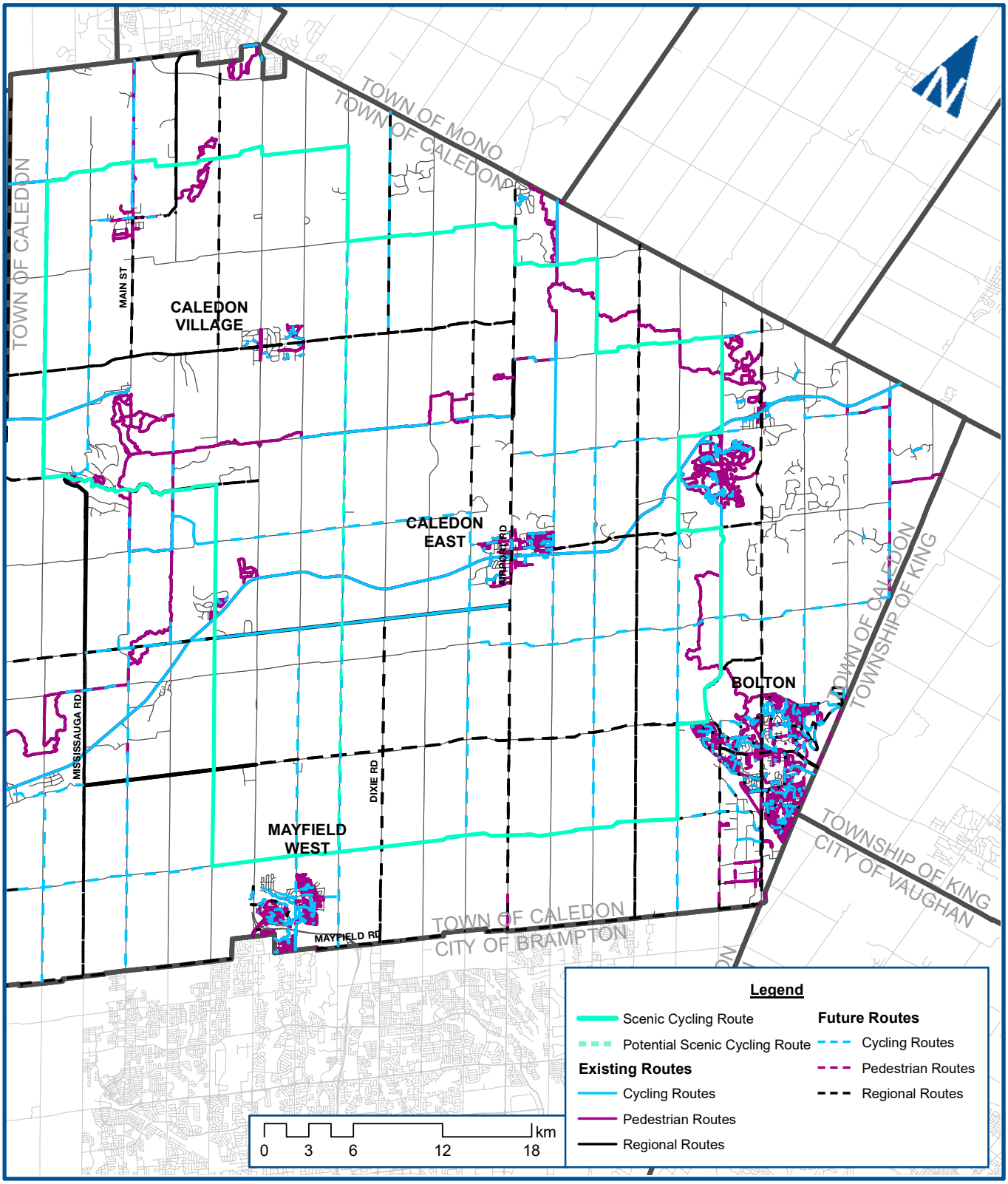


TOWN OF CALEDON

Recommended Cycling Network

Figure 4.7

Caledon Transportation Master Plan



TOWN OF CALEDON

Recommended Scenic Cycling Route

Figure 4.8

Caledon Transportation Master Plan



"Oregon Coast Bike Route", Oregon (top-left); "West Don Recreational Trail", Toronto ON (top-right); "Green Route", Quebec (bottom-left); "Seaside Touring Route", Victoria BC (bottom-middle); "BC Parkway Urban Trail", Vancouver BC (bottom-right)

FIGURE 4.9: EXAMPLES OF BICYCLE TOURING ROUTE SIGNS

4.3.4 Route Types

The pedestrian and cycling networks identify a series of route types intended to accommodate pedestrians or cyclists (or both). Each route type is identified below with icons indicating which user group each route type is intended to accommodate and a series of facility types that may be applied on each route, depending on the context and intended function.



Cycling Route (refers to Proposed Cycling Network map)

Walking Route (refers to Proposed Pedestrian Network map)



A. Multi-Use Route



A1. Multi-Use Trail

An off-road trail designed and regulated to accommodate walking, cycling and other non-vehicular travel modes.



A2. Separated Bicycle + Pedestrian Pathway

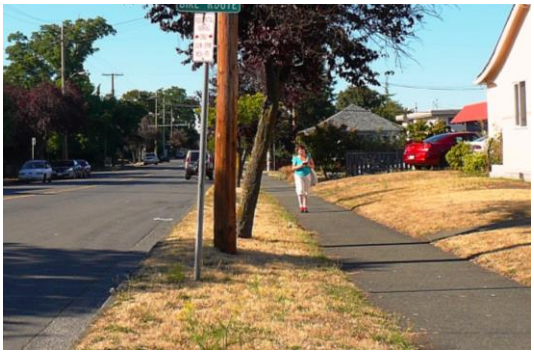
Off road trails that provide distinct operating areas for both pedestrians and cyclists.

B. Roadside Walking Route



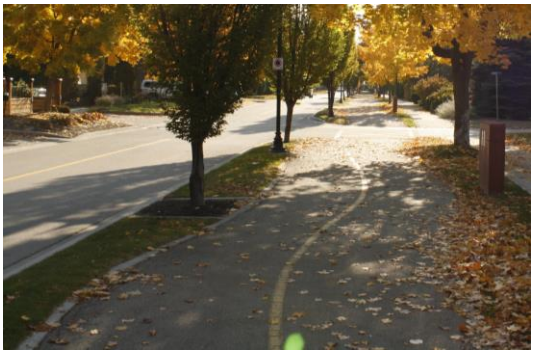
B1. Sidewalk

Paved pathways that are located on the side of the road that are separated from the travel lane by a curb. Sidewalks may be on one or both sides of the road and are designated space for pedestrians only.



B2. Sidewalk + Boulevard

A sidewalk facility that includes a boulevard (or other space) between the sidewalk and roadway to increase pedestrian comfort.



B3. Roadside Trail

A route contained within a maintained road right-of-way either with a separated pathway or widened road shoulders.



B4. Wide Shoulder

A wide shoulder provides larger width to better accommodate roadside walking. Shoulder may be paved or unpaved.

C. Off-Road Walking Route



C1. Pedestrian Pathway

A paved pathway located at the roadside (but not within the right-of-way) or provided between private properties to connect sidewalks or walking trails.



C2. Recreational Trail

Off-road facilities, typically set in wilderness, intended for recreational purposes. Routing is often circuitous (as opposed to direct routing for purpose-driven travel) and typically intended for pedestrians only.

D. Separated On-Road Cycling Route



D1. Conventional Bike Lane

A conventional bicycle lane is at the roadside, marked with a linear white line and bicycle and diamond stencil.



D2. Buffered Bike Lane

On-street travel lanes designated for bicycles with a painted buffer between cyclists and moving vehicles or parked vehicles.



D3. Cycletrack

On-street cycling facilities that are physically separated from vehicle traffic. Separation may be provided by basic bollards, more extensive landscape and/or trees, or may be achieved by locating on-street parking between the vehicle and bicycle travel areas. Cycletracks may be one- or two-directional, although bi-directional facilities require specific consideration at intersections.



D4. Paved Shoulder

Located on streets without curb and gutter but with paved shoulders wide enough for bicycle travel. Should include signage indicating it is a bike route to alert motorists to the presence of cyclists.

E. Shared On-Road Cycling Route



E1. Shared Use

Bicycles and vehicles share the lane in a side-by-side manner. Roadside signs identify the routes as shared and "sharrow" paint markings at the side of the lane indicate the intended path of bicycle travel.



E2. Bicycle Boulevard (or "Neighbourhood Bikeway")

Located on streets with limited vehicle traffic that are continuous and provide good connectivity with other cycling routes. These routes may be enhanced by traffic calming to limit traffic volumes.



E3. Signed Bikeway

Located on streets without curb and gutter. Should include signage indicating it is a bike route to alert motorists to the presence of cyclists.



E4. Urban Shoulder

Located on streets with curb and gutter. Can include signs indicating it is a bike route to alert motorists to the presence of cyclists. Often used where on-street parking permitted.

4.3.5 Pedestrian and Cycling Route Design Guidelines

Table 4.5 provides design specifications for all identified pedestrian and cycling route types. The following provides further information regarding the specifications:

Design Resources

The following local, provincial or national documents were used in developing design specifications for pedestrian and cycling facilities. These documents should be consulted for detailed design guidance.

a. Town of Caledon, Trails Master Plan, March 2011
b. Peel Region, Active Transportation Plan (Final Report), November 2011
c. Ministry of Transportation of Ontario (MTO), Ontario Traffic Manual, Book 18: Cycling Facilities, December 2013
d. Transportation Association of Canada, Bikeway Traffic Control Guidelines for Canada – 2nd Edition, February 2012

Context

Urban areas are defined as the settlement areas: Rural Service Centres, Villages, and Hamlets. All other areas are considered Rural.

TABLE 4.5: PEDESTRIAN AND CYCLING ROUTE DESIGN GUIDELINES AND SPECIFICATIONS

Facility Type (Source)		Context		Width		Signs + Markings
		Urban	Rural	Desired	Minimum	
A. Multi-Use Route						
A1. Multi-Use Trail[b,c]				4.0m	3.0m	S1
A2. Separated Bicycle + Pedestrian Pathway[c]				4.0m (2.0m x 2)	3.0m (1.5m x 2)	S2
B. Roadside Walking Route						
B1. Sidewalk[a]				1.8m – 2.0m[1]	1.8m	--
B2. Sidewalk + Boulevard				Same as B1 + 2.5m boulevard	Same as B1 + 1.5m boulevard	--
B3. Roadside Trail[a,b]				3.0m Wider where high user volumes anticipated		S5
B4. Wide Shoulder[b]				1.8m	1.5m[2]	--
C. Off-Road Walking Route						
C1. Pedestrian Pathway[a]				3.0m	1.5m	--
C2. Recreational Trail[a]				3.0m	2.7m[3]	--
D. Separated On-Road Cycling Route						
D1. Conventional Bike Lane[a,b,c]				1.8m+	1.5m	S4, P1
D2. Buffered Bike Lane[c]				1.8m lane + 1.2m buffer	1.5m lane + 0.5m buffer	S4, S5, P1
D3. Cycletrack[c]	1-way			2.0m	1.5m	S4, S5, P1
	2-way			4.0m	3.0m	
D4. Paved Shoulder[b,c]	≤ 4,500 AADT			1.5m	1.2m	S3
	> 4,500 AADT			2.0m		
E. Shared On-Road Cycling Route						
E1. Shared Use[c]				4.5m	4.3m side-by-side < 4.3m single file[4]	S3, S6, S7, P2
E2. Bicycle Boulevard[c,d]				n/a		S3
E3. Signed Bike Route[b,c]	≤ 4,500 AADT			1.5m	1.2m	S3
	> 4,500 AADT			2.0 m		
E4. Urban Shoulder[c,d]				1.8m+	1.5m	S3

Notes:

[1] Current Town road standards specify only 1.5m sidewalk for most standard cross-sections
[2] Caledon Trails Master Plan currently specifies 1.2m minimum and 1.5m desirable shoulder width
[3] Current Town road standard no.222 specifies 0.5 – 1.0m
[4] Shared Use widths exceed minimum widths recommended in OTM Book 18 to provide for enhanced cyclist experience

Signs

S1. Shared Pathway Sign



OTM RB-71
300 x 450

S2. Pathway Organization Sign



OTM RB-72a
300 x 450



OTM RB-72b
300 x 450

S3. Bicycle Route Marker Sign



OTM M511
450 x 450

S4. Reserved Bicycle Lane Signs



TAC RB-90
600 x 750



TAC RB-91
600 x 750



TAC RB-92
600 x 750

S5. Turning Vehicles Yield to Bicycles Sign



TAC RB-37
600 x 750

S6. Share the Road Sign



OTM WC-19
600 x 600



OTM WC-19t
300 x 600

S7. Shared Use Lane Single File Sign



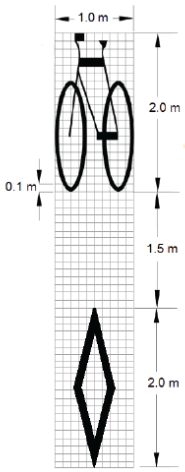
OTM WC-24
600 x 600



OTM WC-24t
300 x 600

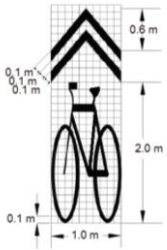
Pavement Markings

P1. Bicycle Lane Pavement Markings



TAC, Table 7-1

P2. "Sharrow" Pavement Marking



TAC, Section 7.4.3

Additional Design Considerations

Bicycle-Motorist Conflict Zones

Pavement markings may be applied to provide guidance to cyclists and motorists in conflict zones (e.g. offset intersections). The measures available for marking a bicycle facility through a conflict zone, in increasing order of visibility are:

- Bike stencils or chevrons at 1.5 m to 10 m spacing (with optional directional arrows to clarify cyclist trajectories);
- "Sharrows" at 1.5 m to 15 m spacing
- Dashed guide lines (with optional bike stencils or chevrons but not sharrows)
- Green surface treatment; or
- Dashed guide lines (with optional bike stencils or chevrons but not sharrows) and green surface treatment.

Refer to OTM Book 18, Section 5.4 for additional guidance on cyclist-motorist conflict treatments.

Additional signage alerting motorists to the presence of a pedestrian and/or cyclist crossing may be applied in conflict zones. The Pedestrian and Bicycle Crossing Ahead sign Wc-15 (OTM) should be placed on the roadway at the approach to an in-boulevard facility. The right or left version of the sign should be used as appropriate such that the pedestrian and bicycle symbols are oriented towards the centre of the road. The Crossing tab sign Wc-32t (OTM), must be attached below Wc-15 (OTM) to convey the meaning of the sign.



Wc-15 (OTM)
(600 mm x 600 mm)



Wc-32t (OTM)
(300 mm x 600 mm)

Trail Surface Treatment

Trail surface treatment will depend on the type of trail, user volume and surround context. Treatment options are as follows:

- Asphalt and/or concrete paving;
- Impressed and coloured paving;
- Granular surfacing;
- Wood mulch surfacing; or
- Natural earthen surfaces.

Refer to Caledon Trails Master Plan, Section 6.12 (pg. 57) for additional guidance on trail surfacing.

4.3.6 Bicycle Parking Design Requirements

The Town of Caledon does not currently have requirements for off-street bicycle parking in its Zoning By-law. For communities that do require off-street bicycle parking, the requirements are usually organized into two categories: [a] requirements for the quantity of both short-term and long-term off-street bicycle parking spaces to be provided in new developments and [b] design standards for off-street bicycle parking facilities to meet the needs of cyclists and to support increased bicycle use.

If the Town is not yet prepared to adopt off-street bicycle parking requirements into its Zoning By-law, it can instead provide policy guidance and recommendations to developers as part of its overall effort to build an active transportation network.

The provision of bicycle parking is an important part of developing an active transportation network. Fear of bicycle theft has been shown to discourage bicycle use, which has highlighted the need for bicycle parking. Bicycle parking provides security and encourages people to bike because they have a place to park at their destination. Off-street bicycle parking is commonly categorized as either short-term or long-term, described below.

- **Long-term parking** – a secure, weather-protected bicycle parking facility with controlled access used to accommodate long-term parking, such as for residents or employees, usually within a room or covered, fenced area. This type of parking can include bicycle racks and/or secure enclosures like bicycle lockers.
- **Short-term parking** – a short-term visitor bicycle parking facility that may offer some security, and may be partially protected from the weather, for example a bike rack at a building's entrance. This parking is provided in an accessible location that is available for public use.

The following design criteria should be considered for off-street bicycle parking facilities.

Long-term Bicycle Parking Standards

An off-street bicycle parking facility is commonly used by cyclists needing to park their bikes for a long period of time. Below are several recommended standards for bicycle storage facilities (i.e., bicycle parking areas) to ensure high quality design.

- Each long-term bicycle parking space should have at least 1.9 metres vertical clearance and be a minimum of 0.6 metres wide and 1.8 metres in length if the bicycles are to be placed horizontally, and 1 metre in length if the bicycles are to be placed vertically.
- Aisles between long-term parked bicycles should have a minimum width of 1.5m.
- Bicycle racks or storage lockers should be securely anchored to a hard ground surface or fixed structure and allow the bicycle frame to be locked.
- Bicycle parking facilities should be securely enclosed by solid opaque walls or a compound enclosed by metal mesh to maximize security.
- Bicycle parking facilities should be located at building grade or within one storey of building grade in an area that provides convenient access to main entrances or well-used areas to maximize security and convenience. The facilities should be located no more than 50 metres from an elevator or building entrance.
- A minimum of 50 percent of the long-term bicycle parking spaces in a bicycle storage facility should allow for a bicycle to be parked horizontally on the floor to ensure accessibility.
- Bicycle storage facilities should be designed to accommodate a maximum of 40 bicycles which does not include those with bicycle lockers

Short-term Bicycle Parking Standards

Short-term bicycle parking is intended for visitors whose visits may be less than two hours long. While short-term parking is commonly provided in multi-family residential buildings and offices, it is more commonly found at commercial or retail outlets, parks and recreation areas, community centres, and medical / dental offices. Recommended design standards for short-term bicycle parking areas are as follows:

- Each short-term bicycle parking space should be provided in the form of racks that are permanently anchored to the ground or a permanent structure.
- Each short-term bicycle parking space should be independently accessible by means of an aisle with a minimum width of 1.2 metres. The aisle should be separate from pedestrian access to the premises for which the parking space is required.
- Short-term bicycle parking should be provided in a convenient, well-lit location that is as close to the main building entrance as possible (maximum of 15 metres). The parking area should be clearly visible and accessible by visitors.

Supply Rates

Table 4.6 provides recommended bicycle parking specifications for consideration by the Town.

TABLE 4.6: RECOMMENDED BICYCLE PARKING SPECIFICATIONS

Use	Long-term Bicycle Parking	Short-term Bicycle Parking
Commercial		
Commercial, including retail store, sales and service repair shop, personal service shop, factory outlet, merchandise service shop, light equipment rental establishment, bakery, printing and processing service shop	1 per 750 m^2 of gross floor area	A minimum of 6 spaces for any building with 1,000 m^2 or more of gross floor area
Financial Institution		
Business Office	1 per 500 m^2 of gross floor area	A minimum of 6 spaces for any building with 2,000 m^2 or more of gross floor area
Institutional		
Art Gallery, Artisan Operation, Artist Studio and Gallery	1 per 500 m^2 of gross floor area	A minimum of 6 spaces for any building with 1,500 m^2 or more of gross floor area
Museum		
Community Centre, Sports Arena, Wellness Centre, Fitness Centre, Club	1 per 250 m^2 of gross floor area	A minimum of 6 spaces at each public entrance
Hospital	1 per 1,000 m^2 of gross floor area	A minimum of 6 spaces at each public entrance
Place of Worship	No requirement	A minimum of 6 spaces at each public entrance
Place of Assembly		
Schools	Elementary – 1 per 200 m^2 of gross floor area Secondary – 1 per 100 m^2 of gross floor area	1 per 300 m^2 of gross floor area
Industrial		
Warehouse, Retail	1 per 1,000 m^2 of gross floor area	No requirement
Warehouse, Wholesale		
Industrial Use		

4.3.7 Policies

Active transportation, as described in the Town of Caledon Official Plan, is any form of self-propelled transportation that uses human energy, such as walking and bicycling. Active transportation offers an alternative to trips made by automobile, especially for trips covering short distances. Increased reliance on active transportation, by itself or in combination with other sustainable modes, would not only help reduce the strain on the transportation system but will have immense individual, societal, environmental and economic benefits.

While active transportation modes account for a relatively small share of overall travel demand, it is imperative the provision of facilities and programs to support their use are implemented to develop a more sustainable transportation system. An increased share of trips made by active transportation would contribute towards the sustainability of the transportation system, reduce transportation-related pollutant emissions, provide health benefits and increase peoples' connection to their communities.

The Town wishes to promote a sustainable active transportation infrastructure where non-auto modes are increasingly recognized as a viable means of transportation. Non-motorized transport provides many benefits to users and non-users alike, including travel choice and mobility, affordability, reduced road congestion, infrastructure savings, improved health, recreation and enjoyment, environmental protection, and economic development.

Policy:

The Town will encourage the development of a system of bicycle and pedestrian facilities to link major public open spaces, activity centres and the transportation network in a manner that enhances the quality of life for residents, businesses and visitors.

Actions:

Implement the Long-Term Network Plans for Pedestrian and Cycling Routes

The Long-Term Network Plans developed in the TMP provide a network of pedestrian and cycling routes that improve overall connectivity, increase integration with other modes of transportation, ensures coordination with initiatives in other municipalities, and includes design standards for facilities.

Once adopted, the new plan will serve as the basis for future pedestrian and cycling network development and investment in the Town. The Town will ensure the network plans are referenced, maintained and updated on a regular basis, and appropriate financing apportioned for implementation.

Implement the Trails Master Plan

Completed in 2011, The Trails Master Plan focuses on providing a long-term planning document which guides the planning, design, development and maintenance of Town-owned recreational trails as well, encourages ongoing partnerships with the many other private and public trail providers in Caledon to ensure an overall network that is safe, diverse, protects the natural environment and is well connected. In addition, the Master Plan includes public input to define user needs and identify trail connection opportunities. The Town will ensure the Trails Master Plan continues to be referenced, maintained and updated at regular intervals.

Update the active transportation policies in the Official Plan

The Town's Official Plan policies on active transportation should be updated to further guide planning and encouragement of active transportation. Specifically:

- Provide sidewalks on at least one side of all local streets and on both sides of all new and reconstructed urban collector and arterial roads, where appropriate;
- Provide for bicycle lanes in accordance with the Long-Term Cycling Route Network in the construction or reconstruction of roads and bridges;
- Provide for multi-purpose paths in accordance with the Trails Master Plan in the construction or reconstruction of roads, bridges, parks and community facilities;
- Encourage and support measures which will provide for barrier-free design of pedestrian facilities;
- Ensure that property for active transportation routes are included with the land requirements for roads;
- Ensure that the rights and privacy of adjacent property owners are factored into the design process for active transportation routes;
- Ensure that all active transportation routes are designed based on the principles of accessibility, connectivity, continuity, directness of route, safety, convenience and comfort; and

- Ensure integration with Regional networks and amenities to promote cross municipal travel using active transportation modes

Apply for the Share the Road Bicycle Friendly Community Award

The Bicycle Friendly Community (BFC) Award is program providing incentives, hands-on assistance and award recognition for communities that actively support bicycling. The BFC Program was launched by the Share the Road Cycling Coalition in Canada in August 2010 in partnership with the Washington-based League of American Bicyclists. Communities complete a thorough application and are judged in five categories often referred to as the Five "Es": Engineering, Education, Encouragement, Enforcement, and Evaluation and Planning. A community must demonstrate achievements in each of the five categories to be considered for an award on the Bronze, Silver, Gold or Platinum or Diamond level.

Since 2012, the Town has been working towards receiving the Bicycle Friendly Community Award. The Town applied for the BFC designation in Fall 2013 and received an Honorable Mention. Feedback from the application was received in February 2014 including recommended action items. A Cycling Task Force was selected by the Town to assist with fulfilling the remaining requirements to reapply for the award.

Continue to participate in the Active and Safe Routes to School Program

The Town participates in the Peel Safe and Active Routes to School (PSARTS) initiative let by Peel Region's Transportation Planning and Peel Health department. Active and Safe Routes to School is a community-based initiative that promotes the use of active transportation for the daily trip to school, addressing health, physical activity, and traffic safety issues while taking action on air pollution and climate change. PSARTS' efforts in promoting safe, walkable school routes have made a large impact in the Region, benefiting the health of Peel's children and protecting Peel's environment.

Complete a Sidewalk Strategic Plan

The purpose of the Sidewalk Strategic Plan is to create a process to prioritize sidewalk projects within the Town, including new sections of sidewalk, and sidewalk ramps on existing sidewalks. The plan will identify missing sections of sidewalk for infill in existing developments, especially in older areas of Town, but will not include typical sidewalk repairs.

4.4 Transportation Demand Management

Several Transportation Demand Management (TDM) measures and policies have been initiated by Peel Region and the Town of Caledon, as described above in **Section 2.2**. Section 5.9.5.5 of the Town's Official plan provides the TDM policies which focuses on augmenting the capacity of the existing transportation system to ensure an optimal mix of both supply and demand rather than always adding capital-intensive new facilities.

There are still several opportunities within the Town to expand and improve transportation with the implementation of TDM programs and measures. The main types of TDM measures and programs focus on education, promotion and outreach, and travel incentives and disincentives. These measures coupled with sustainable travel options and supportive land use practices create an integrated approach to mobility management. To reduce single occupant vehicle trips in Caledon, the focal points of future TDM initiatives include: active transportation and transit in the rural service centres and carpooling in areas where fixed transit routes are not practical.

Smart Commute Brampton-Caledon provides several services to enhance the mobility of commuters in the City of Brampton and Town of Caledon. The program is led by a board of directors from Peel Region, City of Brampton, Town of Caledon and large employers in the area in partnership with Metrolinx. Smart Commute Brampton-Caledon operates in conjunction with thirteen other Smart Commutes in the Greater Toronto and Hamilton Area. Current Smart Commute Brampton-Caledon initiatives include:

- Carpooling/ridematching;
- Preferential carpool parking;
- Outreach campaigns;
- Emergency ride home; and
- Additional supportive measures.

In addition, Peel Region has completed considerable work in TDM over the past decade, developing the *Peel Region Transportation Demand Management (TDM) Plan (2014-2018),* an update to the 2008 plan outlining TDM measures to continue to improve air quality by reducing single occupant vehicle travel demand. The Town should continue to work with the Region and build upon this plan moving forward to explore new options for TDM implementation.

It is important that the Town coordinate with the Region, City of Brampton, the Province and Metrolinx when undertaking TDM actions, as TDM is generally more effective when applied on a broader scale.

Policy:

The Town should develop and implement, in conjunction with Peel Region, Metrolinx and the Province, Transportation Demand Management initiatives to reduce single-occupant vehicle travel, increase vehicle occupancy rates, lessen congestion on the Town's road system, especially during peak periods, facilitate more sustainable travel behavior, and endeavour to create street configurations, densities and urban form that support walking, cycling and the early integration and sustained viability of transit services.

Actions:

Develop a TDM Plan, beginning with the following initiatives:

- *Increase local awareness of TDM with marketing and education programs;*
- *Include TDM considerations in all municipal plans and studies;*
- *Lead by example by implemented Town TDM measures and expanding the Town's; role and participation in Smart Commute Brampton-Caledon; and*
- *Support Peel Region's TDM initiatives.*

To ensure long-term viability, the Town's TDM plan will need to reflect the more rural character, nature of travel behavior and transportation choices available in Caledon. The plan will be developed to leverage existing services and implement viable programs that can adapt and grow over time as behaviours and choices available change.

At this stage, the Town can most effectively advance its TDM program locally by leveraging and participating in Region-wide initiatives such as Smart Commute Brampton-Caledon and taking advantage of other Regional investments in TDM. But the Town will begin to establish its own initiatives as the community and its acceptance of TDM continue to mature.

It is important to note that stakeholder buy-in is critical to the success of TDM. The Town should proactively engage the business community and other participants through ongoing marketing and education. The municipality will also demonstrate leadership

through actions such as expanding participation in Smart Commute Brampton-Caledon to other municipal facilities.

Policy:

The Town will work with the Region, neighbouring municipalities, Metrolinx, the Province and other appropriate jurisdictions to devise a long-term Carpool Lot Strategy.

The Town will promote the establishment of carpool lots at strategic locations to integrate with GO Transit, York Region Transit, Brampton Transit and major highway interchanges.

Actions:

Develop and implement a long-term Carpool Lot Strategy

The Carpool Lot Strategy will identify ideal locations for carpools near major transit hubs and higher order transportation networks. The strategy will identify the phase and broad cost estimates for the carpool lots.

4.5 Other Policies to Support the Plan

4.5.1 Truck Routes

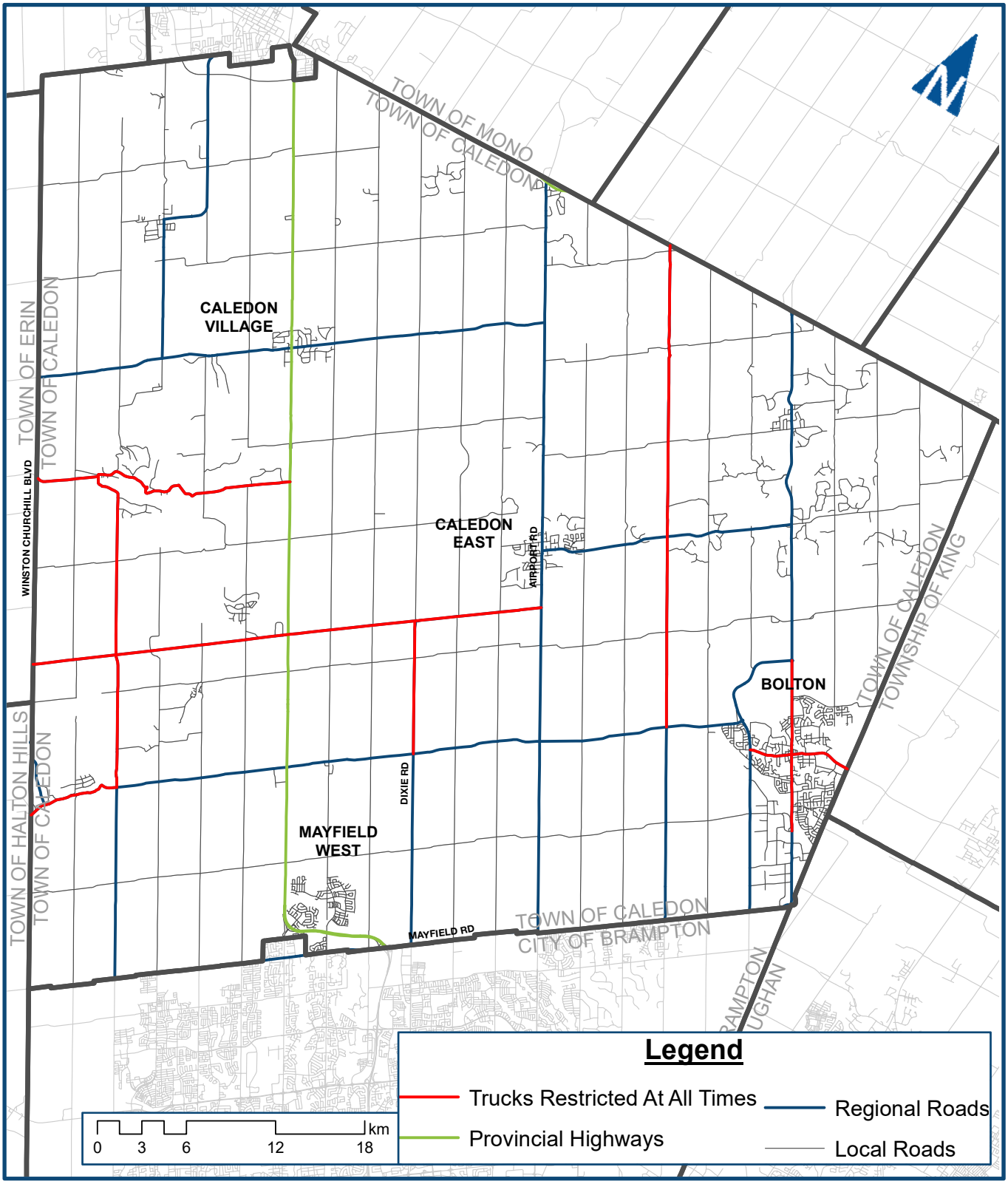
Heavy truck restrictions are used to protect road infrastructure that cannot bear heavy loads or roads where truck traffic would be unsuitable (e.g. narrow lanes, on or near local residential roads). A "Heavy Truck" is defined as commercial motor vehicle with a weight when unloaded, of three tonnes or more, or when loaded, of five tonnes or more, but does not include a passenger vehicle, an ambulance or any Vehicle of a police or fire department.

The Town of Caledon Traffic By-law No. BL-2015-058 details Heavy Truck Restrictions within the Town. Under Section 20, heavy trucks in Caledon are restricted to the Peel Regional Road network, with exceptions stated in Section 21, 22 and 23. Local deliveries, heavy trucks accessing owner's and/or operator's principal residence and vehicles identified under Section 23 of the By-law are permitted on the Town of Caledon Road network. Local deliveries and collections are exempt from heavy truck restrictions if the location cannot be reached by any other road and provided that the route taken is the shortest possible to and from the location on the truck restricted route.

Table 4.7 details the heavy vehicle restrictions on Peel Regional Roads in Caledon. **Figure 4.10** provides a map of the heavy vehicle truck routes in Caledon, including restrictions. Heavy vehicles are permitted on Hurontario Street (Highway 10) at all times. Any changes to the truck routes and truck restrictions should be publicized throughout the Town.

TABLE 4.7: PEEL REGIONAL ROAD HEAVY VEHICLE RESTRICTIONS

Regional Road	Between	Prohibited Times
Mississauga Road	King Street and Bush Street	Anytime
Dixie Road	King Street and Olde Base Line Road	Anytime
The Gore Road	Queen Street East and Mayfield Road	Anytime
The Gore Road	King Street and Highway 9	Anytime
King Street	Mississauga Road and Winston Churchill Boulevard	Anytime
King Street	Coleraine Drive to Albion Vaughan Road	Anytime
Forks of the Credit Road/Bush Street	Highway 10 and the boundary between the Region of Peel and the County of Wellington	Anytime
Olde Base Line Road	Airport Road and Winston Churchill Boulevard	Anytime
Highway 50	Emil Kolb Parkway and Healey Road	Anytime



TOWN OF CALEDON

Heavy Vehicle Truck Routes in Caledon

Figure 4.10

4.5.2 Goods Movement

Safe and efficient movement of goods and services within and through the Town is essential for sustainable economic growth and is an important component of the Town's economy in attracting and retaining a wide range of industries and businesses. Section 5.9.5.10 of the Town's OP details the policies surrounding trucking and goods movement in Caledon.

In the Town of Caledon, the community is concerned with the safety of goods movement, within the built-up areas near major arterials and collector roads. While the roadways were designed to accommodate heavy vehicles, they adversely affect the livability the community.

Policy:

The Town should provide for the safe efficient movement of trucks through and within the Town and minimize the impact of heavy trucks on residential areas.

Actions:

Participate in the Peel Region Goods Movement Strategic Plan

The Town should participate in the study to ensure its goods movements objectives are met, including:

- Developing and supporting a comprehensive, integrated and effective multimodal goods movement system for the safe and efficient movement of goods;
- Formulating a strategic goods movement network and to define a truck route network for the Town;
- Supporting the Region's effort to acquire a necessary goods movement database for strategic planning, analysis and formulation of goods movement plans and programs;
- Investigating the feasibility of truck-only lanes on selected roads in Peel and the Town should support the Region's efforts in encouraging the Province to undertake highway improvements in a timely fashion; and
- Encouraging railway companies to play a more significant role in the movement of goods to and from the Town of Caledon.

4.5.3 Neighbourhood Traffic Management/Traffic Calming

Traffic calming measures are implemented in many municipalities across Ontario and Canada in both new developments and existing neighbourhoods to mitigate the adverse impacts of motor vehicle traffic. Traffic calming is the installation of mainly physical modifications to a roadway and its roadside environment to reduce excessive vehicle speeds and cut-through traffic in a neighbourhood. Implementation of traffic calming measures also considers maintaining or improving the aesthetics of the roadway.

The Town's Urban Traffic Calming Manual, in effect since 2004, provides an established process to fairly screen all neighbourhood requests for the installation of traffic calming measures. The policy has been developed so that traffic calming measures can be used, where deemed appropriate to improve safety on Caledon streets and not adversely affect operation costs and Emergency services. The manual requires updating to reflect new initiatives and policies and to improve its effectiveness. The Town does not include policies on neighbourhood traffic management/traffic calming in its Official Plan and should update the OP to include directives.

Policy:

The Town may investigate the need to implement traffic calming measures in certain locations to reduce the negative effects of motor vehicle use, including but not limited to excessive speed and cut-through traffic and promote pedestrian safety. The Town will evaluate the functional, operational, servicing and financial issues associated with the use of traffic calming features before their implementation.

Actions:

Introduce neighbourhood Traffic Management/Traffic Calming policies into the Town of Caledon Official Plan

> At present, the Town's Official Plan does not include policy direction regarding neighbourhood traffic management/traffic calming. The policy statement above will be added to provide a basis for neighbourhood traffic management/traffic calming initiatives.

Update the Urban Traffic Calming Manual as required

The Town's Urban Traffic Calming Manual should be updated to reflect changes in policy and best practices over the past decade. It is recommended the Town wait to update the manual until after the new Transportation Association of Canada and Canadian Institute of Transportation Engineers *Canadian Guide to Traffic Calming* is available in late 2017/early 2018.

Participate in the discussion of Bill 65 Automatic Speed Enforcement at School Safety Zones and Community Safety Zones

Bill 65 amends the Highway Traffic Act. It addresses the ability of municipalities to set speed limits within their borders and the use of automated speed enforcement systems and red light camera systems. The Bill authorizes that municipalities can designate areas by by-law where they can impose speed limits that are lower than 50 kilometres per hour, the use of automated speed enforcement systems in community safety zones where the speed limit is below 80 kilometres per hour and in school zones, and removes the restriction that red light cameras may only be used in areas of the province designated by regulation. The Town should actively be involved in the discussion and implementation of Bill 65.

Investigate implementing a "Road Diet" on Queensgate Boulevard from Highway 50 to Albion-Vaughan Road

Queensgate Boulevard has a four-lane cross-section and currently functions as a collector road providing access to residential neighbourhoods and commercial areas from the surrounding arterial roadways. In keeping with the Town's goals to promote alternative modes and decrease auto dependency the Town should investigate implementing a "Road Diet" along Queensgate Boulevard. The "Road Diet" should consider the installation of on-road bike lanes through the reallocation of general purpose lanes while considering provisions for future transit services.

4.5.4 Parking Management

Parking is an essential component of the transportation system, as vehicles must park at all destinations. Parking comes at a major cost to society and parking conflicts including under or oversupply or parking and inefficient use of parking are the most common problems. Parking

management involves policies and programs that result in more efficient use of parking resources and a reduction in the number of parking spaces required. Section 5.9.5.8 of the Town's Official plan details the parking management policies which recognize the need to achieve careful planning of the location, quantity and cost of parking.

Policy:

As opportunities present themselves, the Town should investigate the need for parking management strategies, including the need for paid parking.

Actions:

Implement all-day parking on Queen Street in the Downtown Core (Bolton TMP)

4.6 Downtown Bolton

Downtown Bolton is centered on the intersection of Queen Street (Highway 50) and King Street. The downtown area has a number of commercial businesses including restaurants, banks, hair salons and specialty retail stores in addition to business offices and institutional uses. There also are residential units in the downtown, mostly multifamily dwellings but some single family dwellings as one gets to the periphery of the downtown. As part of the Bolton TMP, special focus has been paid to the downtown area in order to create a vision of a peoplefirst place that embraces the concept of "complete streets", meaning that the street network should be designed for all modes of transportation and all transportation system users.

The Bolton TMP provides an agent for change in the downtown, helping to transition the downtown from a traffic conduit to a people-friendly place where customers and the general public want to be. The downtown streetscape has safety in mind and embodies the concept of "complete streets" in that Queen Street has been re-visioned as a street that provides transportation facilities for all modes of transportation and all types of transportation system users. The transformation of the downtown has been developed with interim and ultimate solutions. In the interim solution, all-day onstreet parking is permitted with no time-of-day restrictions. Cyclists are accommodated using "super sharrows", which indicate that the cyclists should travel in the centre of the travel lane through this short portion of the downtown core. Bulb outs are used to decrease pedestrian crossing distances across Queen Street.

At the intersection of Queen Street and King Street, cyclists would remain in the centre of the lane. South of King Street, cyclists would transition to a proposed cycle track.

In the ultimate solution, all-day on-street parking is permitted northbound and bike lanes are provided northbound and southbound on Queen Street through the downtown core. A buffer has been provided between the northbound cycle lane and the northbound on-street parking in order to reduce the chance that cyclists might collide with people in parked cars opening their car doors.

At the intersection of Queen Street and King Street in the ultimate solution, two-stage left-turn boxes are proposed for cyclists. On each corner of the intersection, left- turn boxes that are outside of the travel lane have been designated for cyclists to wait until the traffic signal turns green in the direction that they wish to travel.

The interim and ultimate solutions for Queen Street in downtown Bolton are important to implement in order to re-vision downtown Bolton, reclaim the downtown for people and to embrace the concept of “complete streets” that provide for all transportation users and all modes. The benefits of implementing this vision are numerous, and include:

- Complete street design;
- Removal of truck through traffic on Queen Street (local deliveries only);
- All-day on-street parking;
- Facilities for cyclists;
- Opportunities for bicycle parking;
- Opportunities for enhanced pedestrian safety and amenities including:
    - Bulb outs to reduce pedestrian crossing time;
    - Fewer travel lanes for pedestrians to cross;
    - Public seating; and
    - Streetscaping, street furniture and public art.
- Special materials such as brick paving to create a sense of place;
- Increase in the number of street trees that could be planted;
- Reduced vehicle speeds;
- Potential for increased retail sales;
- Reduction in streetwater runoff;
- Improved water quality in nearby waterways;
- Increase in resident, business and customer satisfaction; and

- Responsive to public input.

Vehicle traffic congestion would be expected to increase over existing conditions, however, Emil Kolb Parkway provides an alternative route for through traffic. Increased congestion also could lead to a decrease in prevailing speeds of motor vehicles. The multi-modal benefits to creating a sense of place through a complete street design on Queen Street in the downtown core are deemed to vastly outweigh any increases to vehicle travel times.

Action:

The Town should engage in discussions with the Region of Peel and advocate for the transition of Queen Street into a "complete street" within Downtown Bolton.

Appendix A provides the executive summary for the Bolton Transportation Master Plan. The entire document is available on the Town of Caledon website.

5 Plan Implementation

5.1 Implementation Phasing for Road Network Improvements

The phasing of the road network improvements recommended in the TMP considers the forecast growth in population and employment within the Town and associated travel demand. Relative priority compared to other initiatives and the broader transportation objectives of the Town were also considered.

The recommended road network improvement projects have been classified in two phases:

- **Short term**, generally considered appropriate for implementation by the year 2021;
- **Long term**, considered to be needed for implementation by the year 2031.

Indicative costs for the projects were obtained from the 2014 Town of Caledon Development Charge Background Study, where available.

5.1.1 Short-Term Horizon

Projects recommended for implementation in the short-term horizon generally are considered needed to address existing conditions and to serve planned growth of population and employment to the year 2021. **Table 5.1** lists the recommended short-term improvements and indicative costs. The total cost for the three short-term projects is estimated at approximately $11.100 million.

5.1.2 Long-Term Horizon

Projects in the 2014 Development Charges Study were considered and reconfirmed to be necessary for implementation by the year 2031, which also include the works identified in the Bolton TMP and Mayfield West Phase 2 Secondary Plan TMP. **Table 5.2** lists the recommended long-term improvements and indicative costs. The total cost for the seven long-term projects is estimated at approximately $44.789 million.

Actions:

Implement the short-term and long-term transportation improvement programs

TABLE 5.1: SHORT TERM TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To	Type of Improvement	MEA Class EA Schedule	Indicative Cost
1	Simpson Road	Mayfield Road	260 m south of Parr Boulevard	Extension (0-2 lanes)	C	$10,600,000
2	Healey Road and Simpson Road	-	-	Intersection[1]	A	$250,000
3	Abbotside Way and Kennedy Road	-	-	Intersection[1]	A	$250,000
			TOTAL COST			**$11,100,000**

Note: 1. Only for the installation of traffic control signals.

TABLE 5.2: LONG TERM TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To	Type of Improvement	MEA Class EA Schedule	Indicative Cost
1	Albion Vaughan Road	Mayfield Road	King Street	Widening (2-4 lanes)	C	$23,219,030
2	George Bolton Parkway Extension	Highway 50	Industrial Road	Extension (0-2 lanes)	C	$5,863,680
3	Spine Road	Hurontario Street	Chinguacousy Road	New Road Construction	C	$5,472,560
4	McLaughlin Road	Mayfield Road	Old School Road	Road Improvements	B	$7,895,590
5	Chinguacousy Road	Mayfield Road	North Limits	Road Improvements	B	$1,838,290
6	Nixon Road and McEwan Drive	-	-	Intersection[1]	A	$250,000
7	Humber Station Road and Healey Road	-	-	Intersection[1]	A	$250,000
			TOTAL COST			**$44,789,150**

Note: 1. Only for the installation of traffic control signals.

5.2 Potential Active Transportation Network Improvements

Table 5.3 summarizes the active transportation network improvements identified in **Section 4.3,** segmented by type of facility. These potential active transportation network improvements will be implemented primarily as opportunities are presented through the Town's ongoing road rehabilitation and reconstruction program. The shared on-street cycling facilities will be introduced if sufficient pavement width already exists. If not, implementation will be deferred to reconstruction of the road. The paved shoulder improvements will be added through the Town's ongoing road rehabilitation program, consistent with the cross-sections detailed in **Section 4.1**. New multi-use routes will be constructed either through future development or as stand-alone projects, which will be identified in the Town's capital budget.

The timing and funding for these improvements will be reviewed annually through the Town's capital works budget process.

Actions:

Implement active transportation improvements through planned capital works projects to the extent possible

5.3 Potential Funding Sources

Potential funding sources to implement the recommended TMP elements, in addition to the general tax levy, include:

- **Development Charges** can be used to recover some of the capital cost expenditures necessary to service new developments. The Town's Development Charges Study identifies projects and costs eligible for collection through development charges.
- **New Building Canada Fund**, which was established in 2014 to fund projects from 2014 to 2024. There is $2.7 billion designated for Ontario projects in the New Building Canada Fund, and an estimated $8.12 billion under the federal Gas Tax Fund.
- **Infrastructure Ontario's Loan Program**, which provides long-term financing to eligible public-sector clients to help renew infrastructure.
- **Special Purpose Funding** that may be available at the time of implementation, such as the Provincial Cycling Funding announced at the 2014 Ontario Bike Summit and other similar initiatives.
- **Other Alternative Infrastructure Funding Mechanisms** such as private sector sponsorship and focused advertising.

TABLE 5.3: POTENTIAL ACTIVE TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To
Signed Cycling Routes – 2017 Pilot			
1	Kennedy Road	Etobicoke Creek Trail	Olde Base Line Road
2	St. Andrews Road	Olde Base Line Road	The Grange Side Road
3	The Grange Side Road	St. Andrews Road	Heart Lake Road
4	Heart Lake Road	The Grange Side Road	Olde Base Line Road
5	Creditview Road	Olde Base Line Road	Old School Road
6	Old School Road	Creditview Road	Kennedy Road
7	Walkers Road West	Mountainview Road	Marilyn Street
8	Marilyn Street	Walkers Road West	Miles Drive
9	Miles Drive	Marilyn Street	Marilyn Street
10	Marilyn Street	Miles Drive	Old Church Road
11	Brawton Drive	Patterson Side Road	Wallace Ave
12	Wallace Ave	Brawton Drive	Church street
13	Church Street	Wallace Ave	Highway 50
14	Pine Ave	Highway 50	Mount Hope Road
15	Deer Valley Drive	King Street West	Pathway
16	Pathway	Deer Valley Drive	Hickman Street
17	Hickman Street	Pathway	Highway 50
18	Humber Lea Road	Humber Valley Heritage Trail	King Street East
19	Old King Road	King Street East	Bond Street
20	Bond Street	Old King Road	Trail

TABLE 5.3: POTENTIAL ACTIVE TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To
21	Strawberry Hill Court	Trail	Allan Drive
22	Allan Drive	Strawberry Hill Court	Sant Farm Drive
23	Sant Farm Drive	Allan Drive	Queensgate Blvd
24	Landsbridge Street	Queensgate Blvd	Allan Drive
25	Allan Drive	Landsbridge Street	Strawberry Hill Court
Upgrade to Paved Shoulder from Existing Signed Route			
26	Old School Road / Healey Road	Creditview Road	Humber Station
27	Boston Mills Road	Mississauga Road	Creditview Road
28	The Grange Side Road	McLaren Road (East)	Mountainview Road
29	Patterson Side Road	Airport Road	Mount Hope Road
30	Caledon East Garafraxa Townline	Shaw Creek Road	Main Street
31	Creditview Road	Olde Base Line Road	Old School Road
32	Shaws Creek Road	Caledon East Garafraxa Townline	Bush Street
33	Mississauga Road	Queen Street West	Forks of the Credit Road
34	Main Street	Caledon East Garafraxa Townline	Queen Street West
35	McLaren Road	Forks of the Credit	Trans Canada Trail
36	McLaughlin Road	Forks of the Credit	Olde Base Line Road
37	Mountainview Road/Torbram Road	The Grange Side Road	Old School Road
38	Innis Lake Road	Patterson Side Road	Old Church Road
39	Humber Station Road	Castlederg Side Road	Healey Road

TABLE 5.3: POTENTIAL ACTIVE TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To
40	Duffy's Lane	Old Church Road	Between Old Church Road and Castlederg Side Road
41	Mount Wolfe Road	Highway 9	Castlederg Side Road
Paved Shoulder			
42	Healey Road	The Gore Road	Highway 50
43	Holland Drive	Coleraine Drive	Healey Road
44	Wilton Drive	Ellwood Drive West	Highway 50
45	Old School Road	Winston Churchill Boulevard	Creditview Road
46	Creditview Road	Old School Road	Mayfield Road
47	Highpoint Side Road	Hurontario Street	Heart Lake Road
48	Heart Lake Road	Highpoint Side Road	Mayfield Road
49	Castlederg Side Road	Airport Road	Caledon King Townline South
50	Humber Station Road	Healey Road	Brampton Boundary
51	Humber Station Road	Old Church Road	Castlederg Side Road
52	Mount Hope Road	Pine Avenue	Hunsden Side Road
53	Main Street	Caledon East Garafraxa Townline	Highpoint Side Road
54	Heritage Road	King Street	Mayfield Road
55	Centreville Creek Road	Patterson Side Road	Healey Road
56	Duffy's Lane	Between Old Church Road and Castlederg Side Road	Emil Kolb Parkway
New Multi-Use Route			

TABLE 5.3: POTENTIAL ACTIVE TRANSPORTATION NETWORK IMPROVEMENTS

No.	Road	From	To
57	Off Road bounded by Columbia Way, Mount Hope Road, King Street and Caledon King Townline South		
Buffered Bike Lanes			
58	Queensgate Boulevard	Highway 50	Albion Vaughan Road
Other			
59	Bike racks		
60	Bike specific signage, traffic control signals and pavement markings		

5.4 Future Environmental Assessment Requirements

The TMP will be relied upon in completing the Municipal Class EA studies for future projects identified herein. In some cases, the plan will satisfy Phases 1 (identify the problem) and 2 (identify alternative solutions to the problem) of the five-phase Municipal Class EA planning and design process. Functional plans will be completed for each project to assess costs and impacts in greater detail. It is assumed that these more detailed studies will not result in a complete re-think of the underlying basis for the project, but rather the implementation and adaptation of the initiative.

It may be desirable to alleviate adverse environmental consequences of a proposed project by relocating the facility, altering the design or choosing not to proceed with its implementation. However, in many instances the infrastructure already exists or the options for new or improved alignments are limited. In these situations, mitigation measures are needed to minimize the negative impact of the transportation facility or service.

5.5 Monitoring and Updates

Regular reviews and updates of the TMP allow for the ongoing assessment of its effectiveness and relevance. Establishing this stable transportation planning cycle ensures the plan strategies remain flexible to respond to unforeseen developments and imprecise assumptions. The performance of the plan in achieving the transportation vision and goals can also be reviewed, and necessary adjustments in strategy made.

The *Planning Act* requires the Town to assess the need for an update to its Official Plan every five years. That review process provides a timely opportunity to revisit the assumptions of the TMP and consider the need for an update.

An ongoing monitoring program will also provide an indication of the need for a review. A comprehensive program allows progress to be tracked and performance to be measured and reported. The program would feature Town-wide monitoring to track changes in land use patterns, demographic characteristics, and system performance and modal choice over time. It is anticipated that the elements of this program will be monitored every five to ten years, depending on the availability of data sources.

Corridor and area-specific monitoring may be considered in the future to measure development and transportation system performance in key corridors. This will help to proactively identify areas of concern and timely responsive measures. It is anticipated that the elements of this program may be monitored more frequently, perhaps every one to five years given the nature of the data and their collection methods. Care should be exercised not to duplicate, but rather to build upon, other performance measurement exercises already underway.

Over the period preceding the formal review, Town Council decisions on transportation issues will have the inevitable effect of amending, deleting, replacing or complementing some of the policies in the TMP. For this reason, individuals must consider this plan in conjunction with the record of subsequent Council decisions to obtain a complete understanding of current policy and plans.

Actions:

Design and implement an ongoing transportation monitoring program

Review the TMP every five years, ideally in conjunction with a review of the Town Official Plan

> Conducting ongoing monitoring and regularly reviewing the TMP ensures the document remains relevant and a useful source for transportation planning within the municipality.

TOWN OF CALEDON



Transportation Master Plan

! LJLJŜyŘÅŎŜă

paradigm TRANSPORTATION SOLUTIONS LIMITED

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WATT Consulting Group



APPENDIX A

Bolton Transportation Master Plan Executive Summary



APPENDIX B

Community Engagement Program Summary



APPENDIX C

Cultural Heritage Landscape Inventory Report and Built Heritage Resources Inventory Report



APPENDIX D

Peel Long Range Transportation Plan Assessment of Alternatives



APPENDIX E

Intersection Prioritization Process



APPENDIX F

Detailed Intersection Analyses



APPENDIX G

Active Transportation Background Paper



APPENDIX H

Cycling Route Summary