Mississauga Transit and Road Infrastructure Plan

Technical Report

April 2025

MISSISSAUGA

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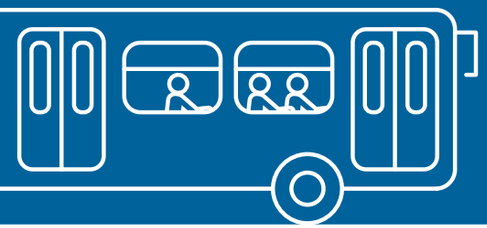


About This Plan

1.1 Purpose

The Mississauga Transportation Master Plan (MTMP), identifies the transportation vision for the city:

In Mississauga, everyone and everything will have the freedom to move safely, easily, and efficiently to anywhere at any time.

Approved by council in 2019, the MTMP outlines goals and actions to achieve the transportation vision and guides the development of the transportation system to the year 2041.

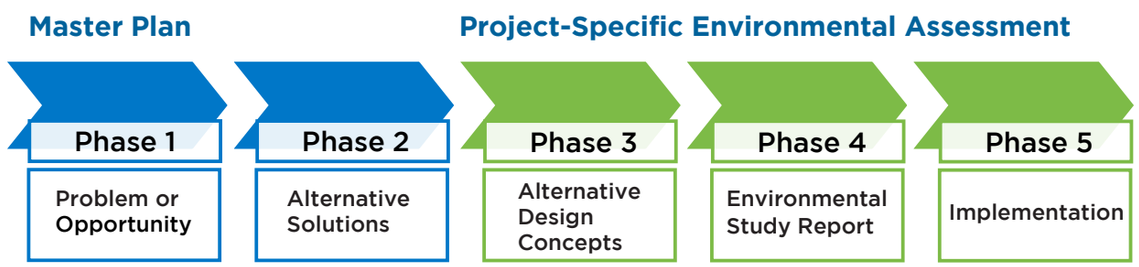
The **Transit and Road Infrastructure Plan (TRIP)** was initiated in August 2020 to build upon the strategic vision and goals of the MTMP and address two recommended actions of the MTMP: to update the long-term transit network plan and to update the long-term road network plan.

1.2 Process

Transportation construction projects are subject to the Ontario Environmental Assessment (EA) Act. The TRIP study follows a master planning process (Approach #1), as identified in the Municipal Class Environmental Assessment[1], which allows road and transit infrastructure recommendations to proceed to subsequent design and implementation phases following the completion of the master plan. **Figure 1.1** illustrates the fives phases of the class EA process.

The master plan process for the TRIP study will satisfy Phase 1 and Phase 2 of the Municipal Class EA which is to 1) identify the Problem and Opportunity and 2) to identify and evaluate Alternative Solutions. The master plan becomes the basis for future investigations for Schedule B and C projects identified within the plan.

Figure 1.1 Municipal Class EA Process



1 Municipal Class Environmental Assessment, Municipal Engineers Association, Amended March 2023.

1.3 Engagement and Consultation

Stakeholder engagement and public consultation are important components of the master planning process. Feedback from residents and stakeholders helped shape the direction of the TRIP study and confirm the transportation needs in Mississauga.

1.3.1 Engagement Activities

Over the course of the study, engagement and consultation activities included the following:

- **Three rounds of public engagement**
  - Each round of engagement included a virtual Public Open House held over a 3-week period. The first round was held in December 2020, the second in June 2022 and the final round in May 2023.
  - An in-person Public Open House was also held for the third round of engagement at the Great Hall at City Hall on the evening of May 23, 2023.
- Community outreach through 'kitchen table guides' sent to neighbourhood associations, homeowners associations, ratepayers associations, business groups (BIAs, Board of Trade), and interest groups following the first round of public engagement.
- **Notification to Indigenous communities, including:**
  - Alderville First Nation
  - Curve Lake First Nation
  - Haudenosaunee Confederacy Chiefs Council / Haudenosaunee Development Institute
  - Hiawatha First Nation
  - Huron-Wendat First Nation
  - Mississaugas of the Credit First Nation
  - Mississaugas of Scugog Island First Nation
  - Six Nations of the Grand River
  - Anishinabek Nation / Union of Ontario Indians
  - Assembly of First Nations
  - Association of Iroquois and Allied Indians
  - Chiefs of Ontario
  - Credit River Métis Council
  - The Indigenous Network
  - Williams Treaties First Nations
- **Three meetings with external technical review agencies, including:**
  - Peel Region
  - Halton Region
  - City of Brampton
  - City of Toronto
  - Town of Oakville
  - Town of Milton
  - Metrolinx
  - Ministry of Transportation
  - Credit Valley Conservation
  - Toronto and Region Conservation Authority
  - Toronto Transit Commission
  - Brampton Transit
  - Oakville Transit

1.3.2 What we heard

First Round of Engagement – Public Open House #1

The first Public Open House was held from November 30 to December 20, 2020. The open house had over 600 visits to the website and 49 individuals completed the online questions and comment form. Feedback on the draft directions for the TRIP study and preliminary alternative solutions identified during Phase 1 were gathered. Key findings from the first round of engagement are as follows:

- Many common themes were heard from the community. Over 89% respondents agreed that the identified transportation issues reflect their opinion of the issues facing Mississauga. Additional concerns from respondents included road network capacity, transit service performance, priority of cycling and walking, road safety for all users, and network connections.
- The top three directions that were rated as "most important" and "important" by at least 70% of respondents were:
  - providing a connected system and access to hubs,
  - making sustainable modes more attractive, and
  - implementing more Transit Priority Corridors.
- The top two alternative solutions that were rated "most important" and "important" by at least 70% of respondents were:
  - transit priority measures and
  - bus-only lanes.
- Most respondents (68%) agreed with the draft evaluation criteria. Safety, environment, effectiveness, efficiency, and transparency were mentioned as important factors during the evaluation process.

Second Round of Engagement – Public Open House #2

The second Public Open House was held from June 6 to June 27, 2022. The website had almost 150 visits and 14 individuals completed the online questions and comment form. The open house collected input on the Draft Preferred 2041 Transit Priority Network and Draft Preferred 2014 Road Network developed during Phase 2 of the study. The key findings from the second round of engagement are as follows:

- There was a preference for the solutions identified in the transit priority network over those in the road network because it would benefit the most amount of people, particularly those who rely on public transit the most such as students and workers.
- The transit priority network is important in connecting under-served areas and increasing overall network connectivity.
- Both the road network and transit priority network must work together to achieve the objectives outlined in the transit priority plan. The road priority should focus on improvements to transit, cyclists, and pedestrians.
- Road diets were preferred as was a focus on transit improvement, traffic calming, and greater walkability.
- There was modest support for road widenings if they are necessary to allow bus priority lanes but with environmental and financial concerns.

Third Round of Engagement – Public Open House #3

The third Public Open House was held both in-person (May 23, 2023) and online (May 23 to June 12, 2023). The study website had recorded 237 visits and 21 respondents to the online questions and comment form. This open house collected input on the preferred plan and the prioritization/phasing for the recommended transportation infrastructure. The key findings from this round of engagement are as follows:

- There was support for maximizing investment in dedicated transit infrastructure and enhanced transit frequency to meet the long-term travel needs of Mississauga. Suggestions were made for service improvements and route planning for faster and more convenient transit service levels in the short term.
- Better connectivity to transit services in adjacent cities, most notably providing for more connections to/from TTC in Toronto and GO transit was strongly desired by many residents who work in areas outside of Mississauga.
- Suggested first and last mile improvements to make transit more attractive included the co-location of amenities and shelters at transit stops and stations in neighbourhoods, improving walking access to stations, and enhancing connectivity and accessibility around all Mississauga Transitway stations.
- Mixed views were received regarding road diets. Some raised concerns about how reducing vehicle travel lanes on minor roads could cause more congestion on major roads that are vital for moving about the city. Others encouraged the idea of reallocating roadway space for transit, cyclists, and pedestrians.
- Integrating active modes with transit, specifically improved cycling network and pedestrian safety, is seen as a priority to shift people from driving to sustainable modes.

The Public Feedback reports and minutes of stakeholder meetings are included in **Background Report A — Engagement Summary**.

1.4 What's Inside

This report is structured into the following sections:

- **Section 2** — Overview of the Mississauga Transportation Master Plan
- **Section 3** — Mississauga's Transportation Vision and TRIP Study Directions
- **Section 4** — Existing Conditions and Future Travel Demands
- **Section 5** — Shaping the Future Transportation Network
- **Section 6** — The Recommended Network
- **Section 7** — Achieving the Plan

Accompanying the TRIP report are five technical background reports that provide a greater level of detail on key components of the TRIP study.

- **Background Report A** — Engagement Summary
- **Background Report B** — Existing Conditions and Directions
- **Background Report C** — Development and Evaluation of Alternatives
- **Background Report D** — Transportation Assessment Technical Report
- **Background Report E** — Rail Grade Separation Technical Memo

02 Mississauga Transportation Master Plan

Mississauga Transportation Master Plan

As presented in **Section 1**, the City's transportation vision is for everyone in Mississauga to have the freedom to move safely, easily, and efficiently. The Mississauga Transportation Master Plan (MTMP) outlined 91 actions for the City to complete, including a series of mode-specific plans to establish a preferred long-term network for each mode and to determine strategic priorities for program development and infrastructure investment. The TRIP study is intended to address the following MTMP actions:

Action 15: Long-term transit network plan

Complete a comprehensive review of the City's long-term transit network, including a potential high-frequency network, and update the associated schedule that appears in the Mississauga Official Plan.

Action 16: Long-term road network plan

Complete a comprehensive review of the City's long-term road network and update the associated schedule that appears in the Mississauga Official Plan.

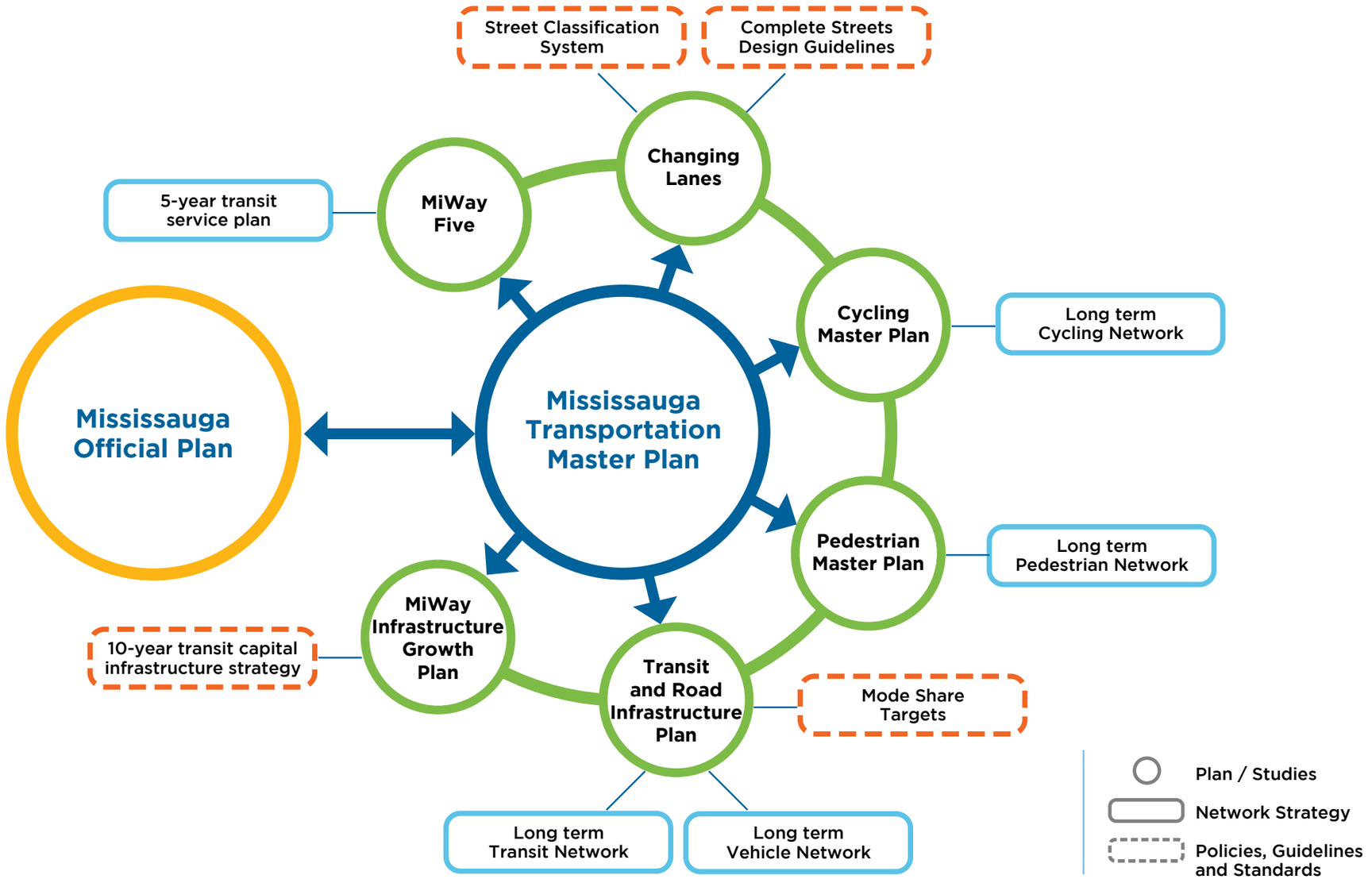
Other recommendations of the MTMP are being addressed through other parallel studies. The studies work together to support the integrated vision of the MTMP and the Mississauga Official Plan. The relationship between the MTMP, Official Plan and supporting plans and studies are shown in **Figure 2.1**.

The City of Mississauga is also undertaking an Official Plan Review to address conformity with provincial and regional policy such as the 2019 Provincial Growth Plan and 2020 Provincial Policy Statement; to simplify Official Plan policy and reduce duplications, to consider policy best practices, new trends and innovations; and to provide certainty in policy direction. The recommended networks developed through the TRIP study will be reflected in the relevant schedules of the updated Official Plan.

The City of Mississauga has adopted **Vision Zero**, an approach to transportation that sets a vision for zero fatal or injury-causing collisions.

The City's **Climate Change Action Plan** aims to reduce greenhouse gas emissions by 80% by 2050. As transportation is one of the major contributors to greenhouse gas emissions, the City supports efforts to shift travellers to lower-emission modes, such as transit, cycling and walking.

Figure 2.1 Relationship between MTMP and Other City Studies



A summary of key recommended actions from the MTMP and their outcome are described below.

Mississauga TMP Recommended Action

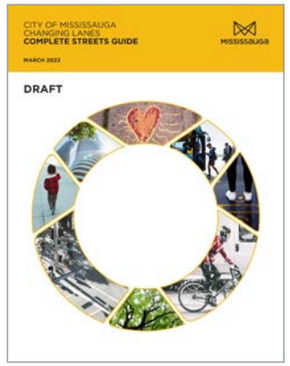
Action 1: Complete Streets design guidelines

Create and apply Compete Streets design guidelines and implementation plan that specify the types of infrastructures and streetscape elements that may be suitable for different classes of road.

Action 2: Road classification system

Revise the City's Road Classification system to recognize movement and placemaking function of streets, incorporate into City's transportation planning practices and update Mississauga Official Plan accordingly.

Outcome

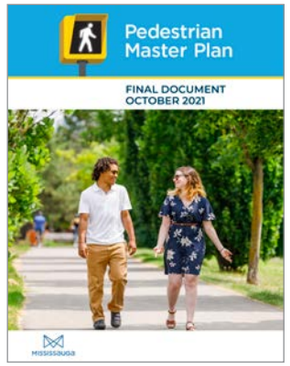


Changing Lanes — Complete Streets Guide

(Draft March 2022)

Action 14: Pedestrian network plan

Identify and address gaps and inconsistencies in the pedestrian network, with special attention to connectivity and accessibility standards, by conducting a detailed audit.



Pedestrian Master Plan

(Completed 2021)

Action 59: Long-term cycling network

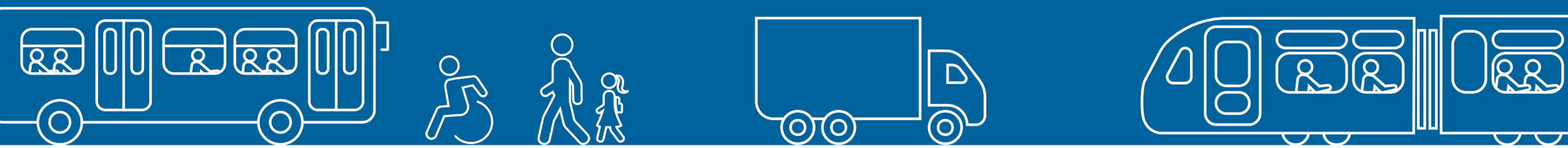
Establish implementation program for long-term cycling network, as it appears in the Cycling Master Plan.

Cycling Master Plan

(Completed 2018)

03 A Vision for Transportation

- Key Issues
- TRIP Study Directions



A Vision for Transportation

The TRIP study is developed under the umbrella of the transportation vision identified in the Mississauga Transportation Master Plan:

In Mississauga, everyone and everything will have the freedom to move safely, easily, and efficiently to anywhere at any time.

Implementing this vision will provide mobility in Mississauga that supports quality of life as the city enters its next phase of growth.

3.1 Key Issues

The review of existing transportation conditions in Mississauga indicated several issues that need to be addressed in the TRIP study to help achieve the transportation vision. The key issues are:

- For most Mississauga residents, the automobile is their primary mode of transportation for travel to, from and within Mississauga and, as a result, the transportation network has developed over past decades in a manner that favours the private automobile.
- The road network will approach vehicular capacity in many areas of Mississauga if current travel trends continue, impacting how well people and goods are able to move around the city. As travel demand in Mississauga continues to grow, there are physical limits to continuing to expand the road network through building new roads and widening existing roads.
- Transit travel times can take two to three times as long as automobile travel times for the same trip. Long transit travel times and challenging connections means transit is not often the first choice for travellers.
- Transit and road improvements are needed to support equity-deserving neighbourhoods and new transit-oriented communities around Major Transit Station Areas. The transportation system plays a critical role in providing equitable access to employment, education, social services, and healthy foods for everyone in Mississauga.
- Addressing road safety for all users will make roads safer and more comfortable for pedestrians and cyclists — allowing these modes to be the mode of choice for short trips.
- Connections outside of Mississauga are also important to Mississauga's residents and workers. Travel needs do not stop at the city's borders – Mississauga's residents work outside of the city and Mississauga's workers live outside the city.

3.2 TRIP Study Directions

To address the study issues, a workshop with internal stakeholders at the City of Mississauga from transportation planning, community planning, public works, transit, and other departments was held to identify study directions to guide the TRIP study.

Six key directions were identified:

Support the City's Climate Change Action Plan by making sustainable, lower-emission modes (low-emission MiWay transit vehicles, walking and cycling) more attractive for more travellers.

Expand infrastructure and services where needed to ensure equitable access for all users – with a focus on equity-seeking neighbourhoods and transit-oriented communities.

Move people and goods more reliably by addressing gaps in the network, prioritizing transit between key destinations, and developing strategies for goods movement.

Support Mississauga's Vision Zero initiative by focusing on protecting vulnerable road users when planning and implementing road and transit infrastructure.

Implement more Transit Priority Corridors to provide fast, reliable, and efficient transit to more people.

Provide a connected, integrated transportation system within Mississauga and improved access to hubs outside the city where people are travelling to.

04 Existing Context and Trends

- Context
- Existing Transportation Conditions
- Transportation Trends
- Growth

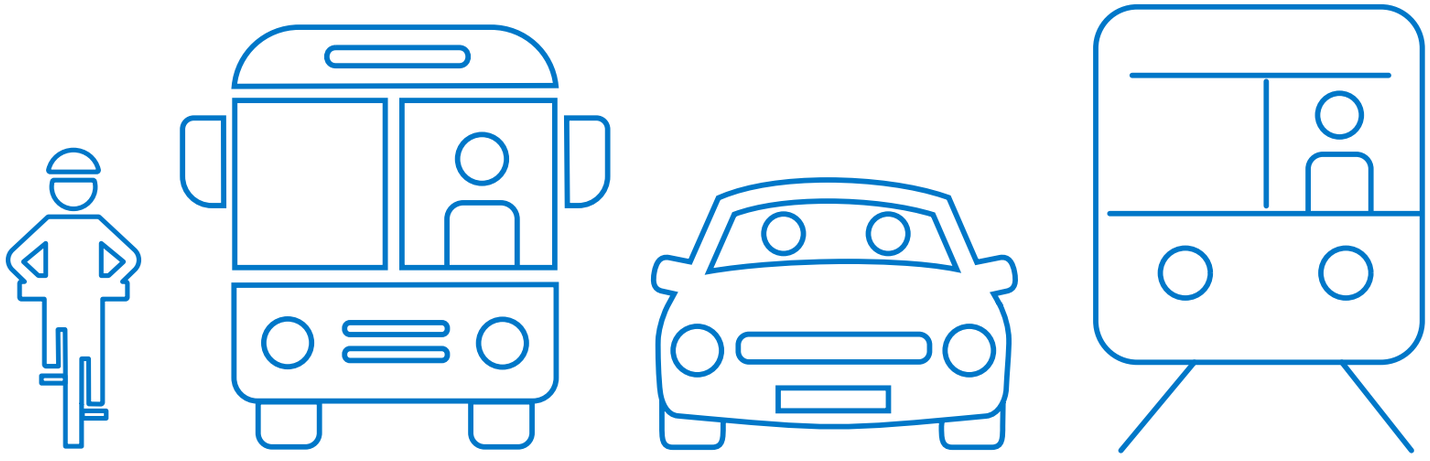
Existing Context and Trends

4.1 Context

Mississauga is a dynamic, successful city that has grown rapidly over the last 50 years. How the city has grown and how the transportation system has developed was shaped by policy directions, natural heritage features, and historical growth trends.

4.1.1 Planning Policy

Provincial, regional, and municipal policy context have informed the direction of the TRIP study. Key policies that are relevant to the study are summarized in the following section. Detailed descriptions of the planning policy context for Mississauga are provided in **Background Report B — Existing Conditions and Directions**.



Provincial Policy Context

- **Provincial Policy Statement 2020** The Provincial Policy Statement provides direction on land use planning, development, and the transportation system that support increasing housing, supporting jobs, and reducing barriers for growth.
- **Growth Plan for the Greater Golden Horseshoe (2019)** The updated Growth Plan sets forth a framework for implementing the provincial government's 2041 vision for building stronger, prosperous communities by better managing growth in the Greater Golden Horseshoe region.
- **Metrolinx 2041 Regional Transportation Plan (2018)** The Regional Transportation Plan (RTP) integrates multi-modal regional transportation systems throughout the Greater Toronto and Hamilton Area (GTHA) to support the Growth Plan. Projects that were identified in Mississauga include Hurontario LRT, 15-minute all-day two-way GO service, Dundas BRT and Priority Bus Routes along corridors such as Eglinton Avenue, Britannia Road, and Derry Road.

Regional Policy Context

- **Peel Region Official Plan (2022)** The Regional Official Plan provides a long-term policy framework for land use decision-making in Peel Region.
- **Peel Region Long Range Transportation Plan (2019)** The Long Range Transportation Plan (LRTP) guides regional transportation planning and infrastructure needs to accommodate anticipated growth to 2041. The LRTP identified a goal to shift more travel to sustainable modes.
- **Peel Region Sustainable Transportation Strategy (2018)** The Sustainable Transportation Strategy (STS) is a policy document that provides a framework to make travelling in Peel Region more environmentally sustainable by increasing the share of travel made by transit, cycling, walking, and carpooling, and reducing the number of trips made through telework.
- **Peel Region Goods Movement Strategic Plan (2017)** The Goods Movement Strategic Plan combines initiatives based on current goods movement needs and the long-term vision for the goods movement system in Peel Region — one of the most significant freight hubs in Canada.

Municipal Policies and Context

- **City of Mississauga Official Plan (2019 Consolidation)** The Mississauga Official Plan (OP) provides policies that guide and direct the physical structure of the City, including a multimodal transportation system that supports transit and automobile modes while encouraging active transportation.
- **Our Future Mississauga – Strategic Plan (2009)** The City's Strategic Plan is supported by five Strategic Pillars of Change – Move, Belong, Connect, Prosper, and Green – including key considerations for the future vehicle and transit network.
- **Mississauga Climate Change Action Plan (2020)** This Action Plan lays out a course of action for the City of Mississauga over a 10-year period to mitigate and adapt to climate change.
- **Mississauga Transportation Master Plan (2019)** The MTMP outlines the visions, goals, and action items that will guide Mississauga's transportation system until the year 2041.
- **Changing Lanes Complete Streets Guidelines (Draft 2022)** The Changing Lanes study introduces a new street classification system and Complete Streets Guidelines for planning and designing streets for all users.

4.1.2 Socio and Economic Environment

Mississauga has been one of the fastest growing and most economically successful cities in the country. Mississauga is ranked as the third most densely developed municipality in the region after Toronto and Hamilton and seventh largest city by population in all of Canada. Over 448,000 employment opportunities in Mississauga provide jobs for local and regional residents, making it the leading player in the Greater Golden Horseshoe office market after Toronto. As identified in the MTMP, Mississauga is anticipated to grow to 878,000 people and 552,000 jobs by 2041.

Mississauga has a vibrant Downtown, several Major Nodes and Community Nodes, several prestigious Corporate Centres, stable residential Neighbourhoods, diverse Employment Areas, and two Special Purpose Areas, all connected by a network of Corridors. **Figure 4.1** and **Figure 4.2** shows the City's Urban System and Character Areas as presented in the Official Plan.

The Downtown area, identified as Mississauga's Urban Growth Centre in the Provincial Growth Plan, has the highest density and greatest mix of uses. The Downtown is projected to achieve a minimum gross density of 200 residents and jobs per hectare by 2031. To accommodate this increase, development in the Downtown will be in a form and density that achieves a high-quality urban environment.

Canada's busiest airport, Pearson International Airport, is located in Mississauga's northeast quadrant and is surrounded by the second largest concentration of jobs in the country. Serving as a major transportation hub, the airport and highway network supports the manufacturing, warehousing, and logistics industries and provides tens of thousands of employment opportunities. Almost 45 million passengers, and growing, travel through the airport each year. Overall, the airport acts and will continue act as a vital booster to Mississauga's economy and development.

4.1.3 Natural Environment

The natural environment is an important ecological, economic, and social element in an urban setting such as Mississauga.
As the first layer of the City's Urban System, Mississauga's Green System is composed of the Natural Heritage System, Urban Forest, Natural Hazard Lands, and Parks and Open Spaces. An overview of the City's Green System is shown in **Figure 4.3** as presented in Schedule 1a of the Official Plan.

The extent of the Natural Heritage System and Natural Hazard Lands are also illustrated in Schedule 3 of the Official Plan as shown in **Figure 4.4**. With its location on the shores of Lake Ontario, Mississauga has many significant valleys and watercourses, including Credit River, Etobicoke Creek, Mimico Creek, and Sixteen Mile Creek, and provincially significant wetlands that are generally located along Credit River.

Figure 4.1 City of Mississauga Official Plan — Urban System

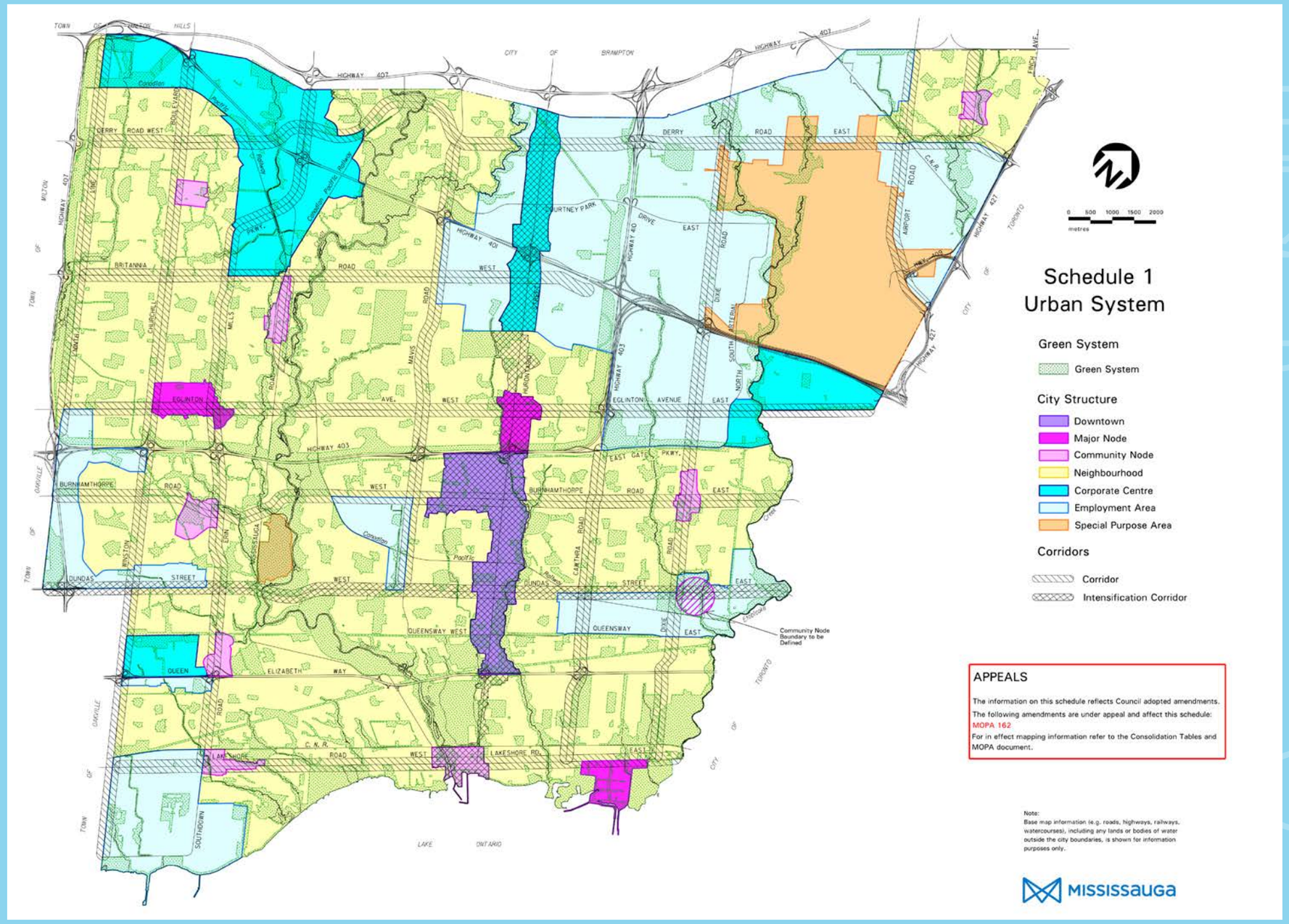


Figure 4.2 City of Mississauga Official Plan — Character Areas

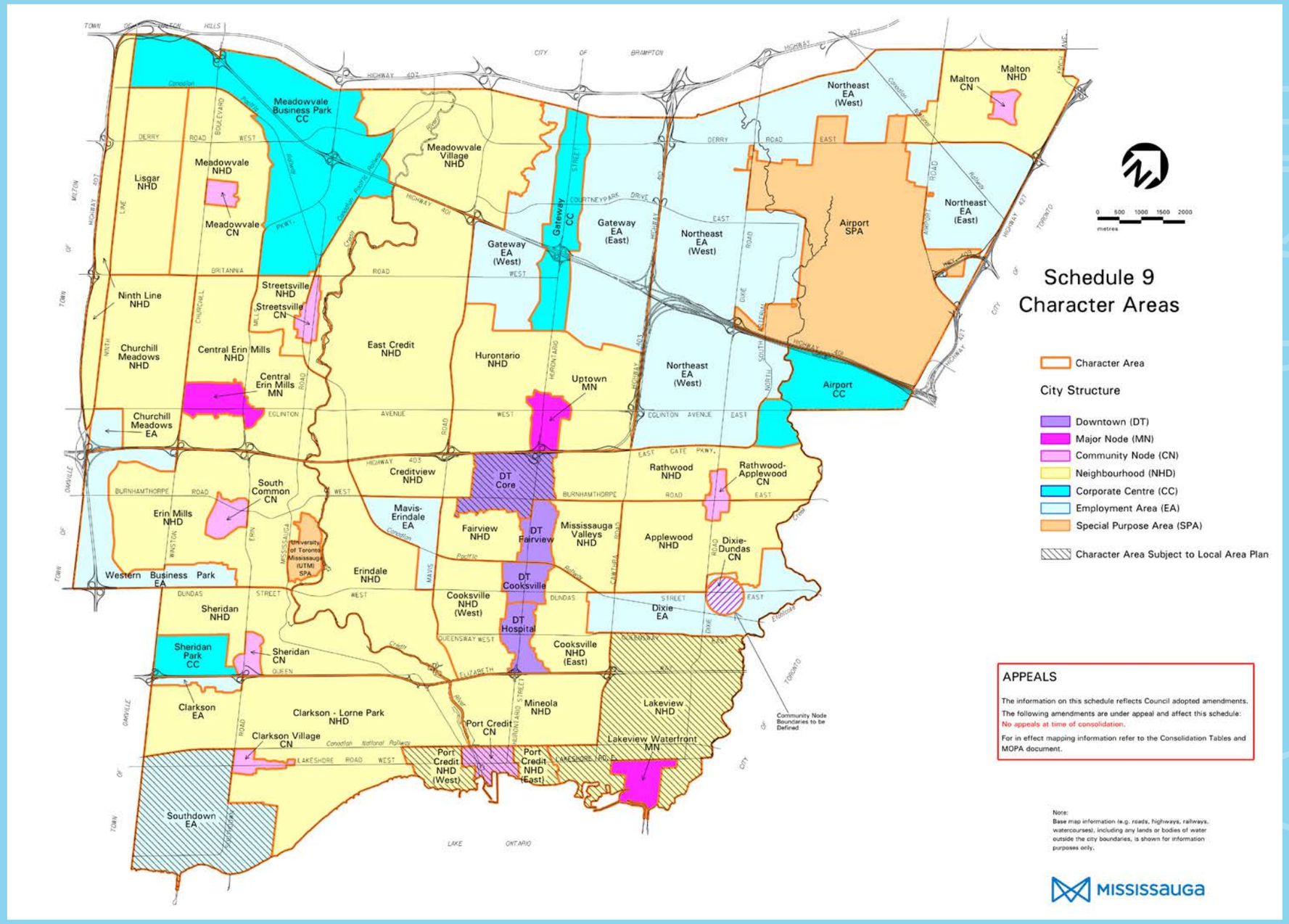


Figure 4.3 City of Mississauga Official Plan — Green System

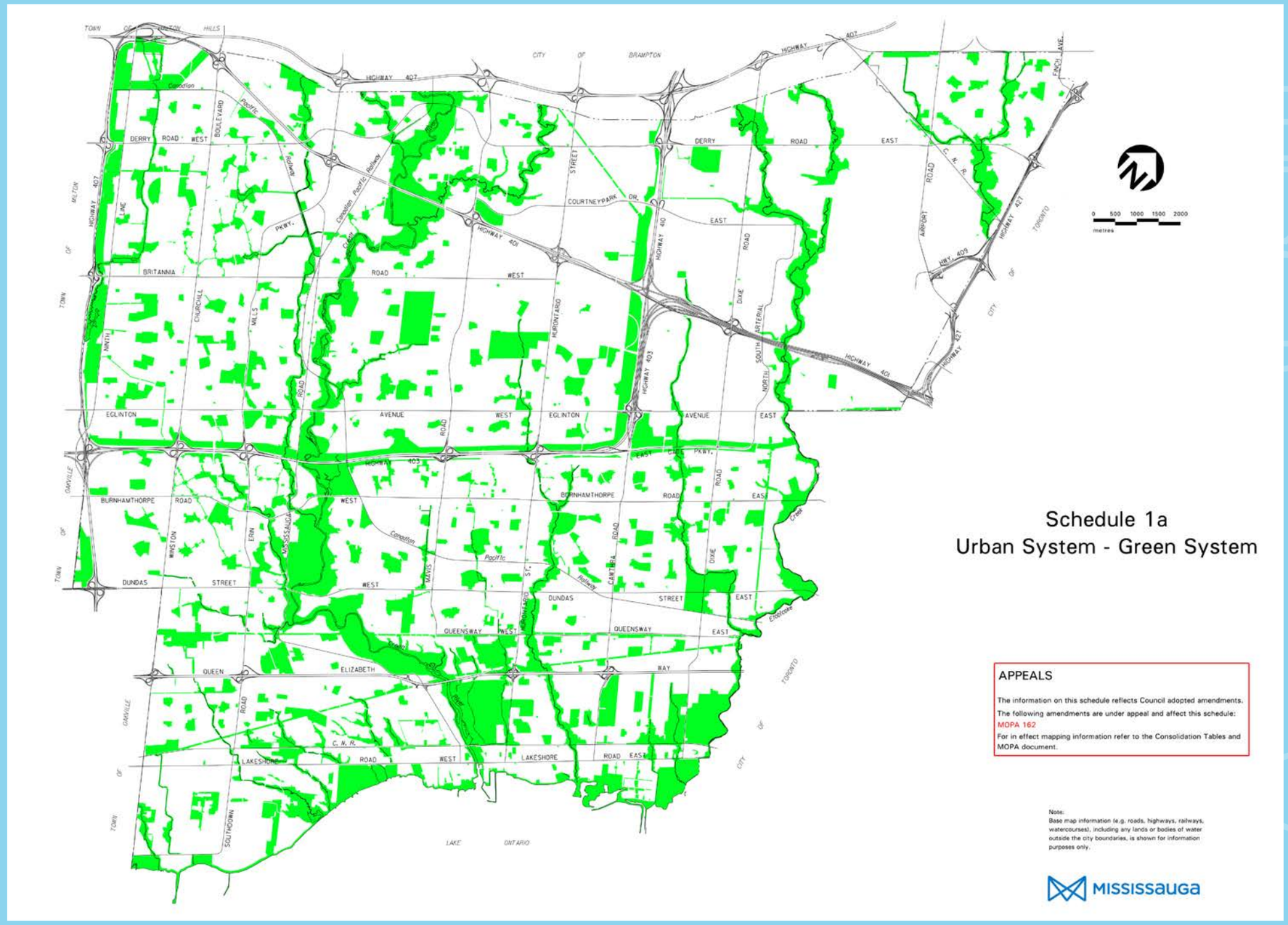
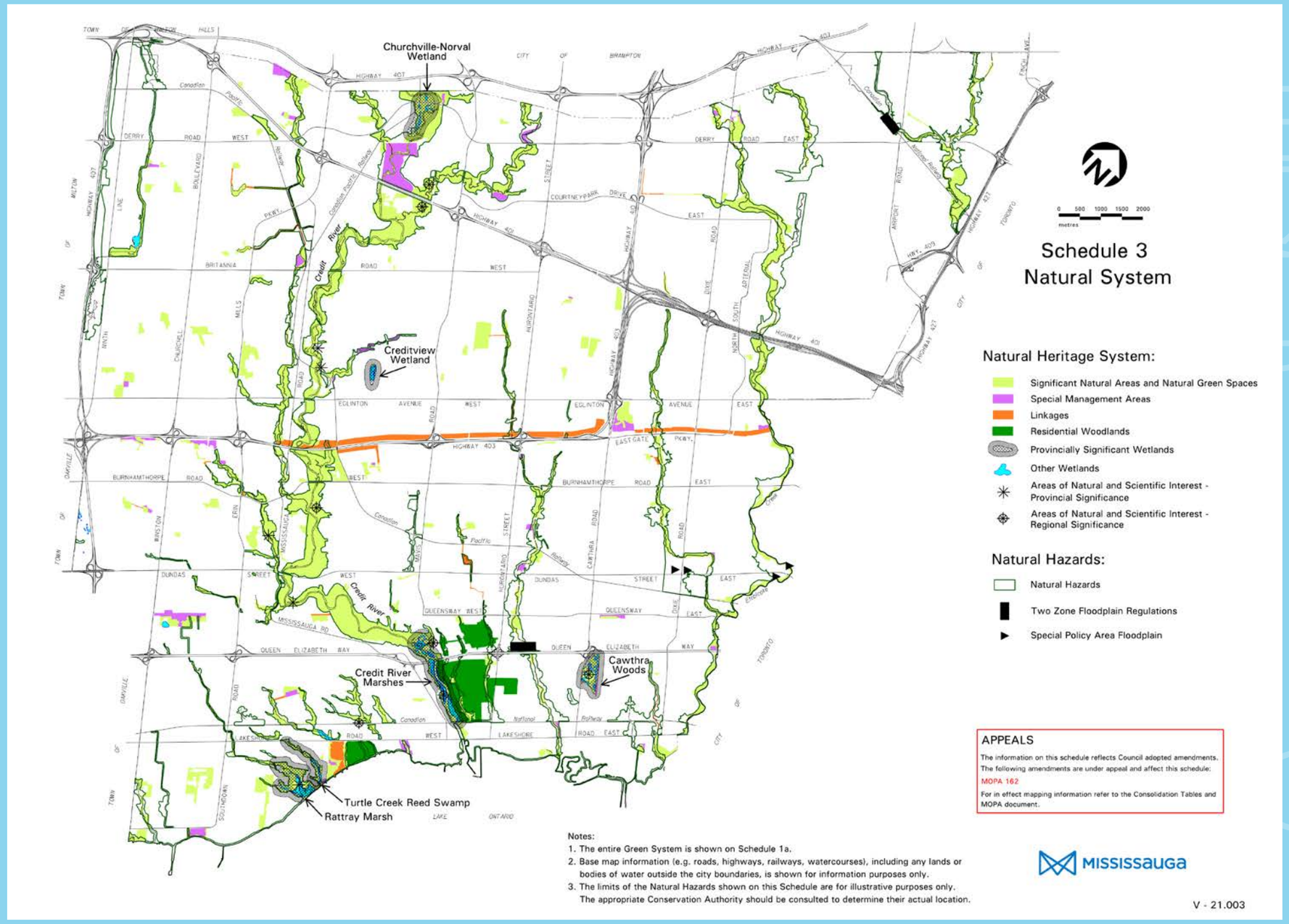


Figure 4.4 City of Mississauga Official Plan — Natural System



City of Mississauga
Climate Change Action Plan

The City of Mississauga is committed to reducing its greenhouse gas emissions and has set an ambitious and achievable greenhouse gas reduction target of **80% below 1990 levels by 2050 with a long-term goal of becoming net-zero.**

4.1.4 Climate Change

The City of Mississauga has already begun to feel the impacts of climate change, including increased seasonal flooding, extreme rainfall, ice storms, and some of the hottest summers on record as documented in the **Mississauga Climate Change Action Plan**. Extreme weather events can incur millions of dollars in damage, clean up, and recovery costs.

Greenhouse gases are a driving factor of climate change and cities are major contributors of greenhouse gas emissions. Large amounts of energy are consumed to heat and cool buildings and to move people and goods. In Mississauga, 32% of greenhouse gas emissions are from transportation. Across Ontario, the largest sectors for greenhouse gas emissions are transportation at 36%, buildings at 24%, and heavy industries at 17%[2]. More than half of the emissions from transportation is from passenger vehicles (cars, light trucks, motorcycles).

The Mississauga Climate Change Action Plan lays out a course of action for the City of Mississauga to mitigate and adapt to climate change. This includes an 80% reduction in greenhouse gas emissions by 2050 and an increase in resilience and capacity of City assets to withstand and respond to current and future climate events. Shifting travel towards low-emissions modes such as low or zero-emission transit, walking, and cycling will play a major role in reducing transportation-related emissions.

32%
of greenhouse gas emissions in Mississauga are from transportation.

2 *National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in Canada, Canada's Submission to the United Nations Framework Convention on Climate Change, Part 3. Table A12-7 GHG Emissions for Ontario by Canadian Economic Sector, Selected Years.*

4.2 Existing Transportation Conditions

The current transportation system in Mississauga includes a transit network with local and interregional services, a road network, and an active transportation network that includes sidewalks, bike lanes, trails, and paths.

Mississauga's road network is built around a grid of major roads, with some breaks in the grid where it is crossed by highways, rail corridors, or river valleys.

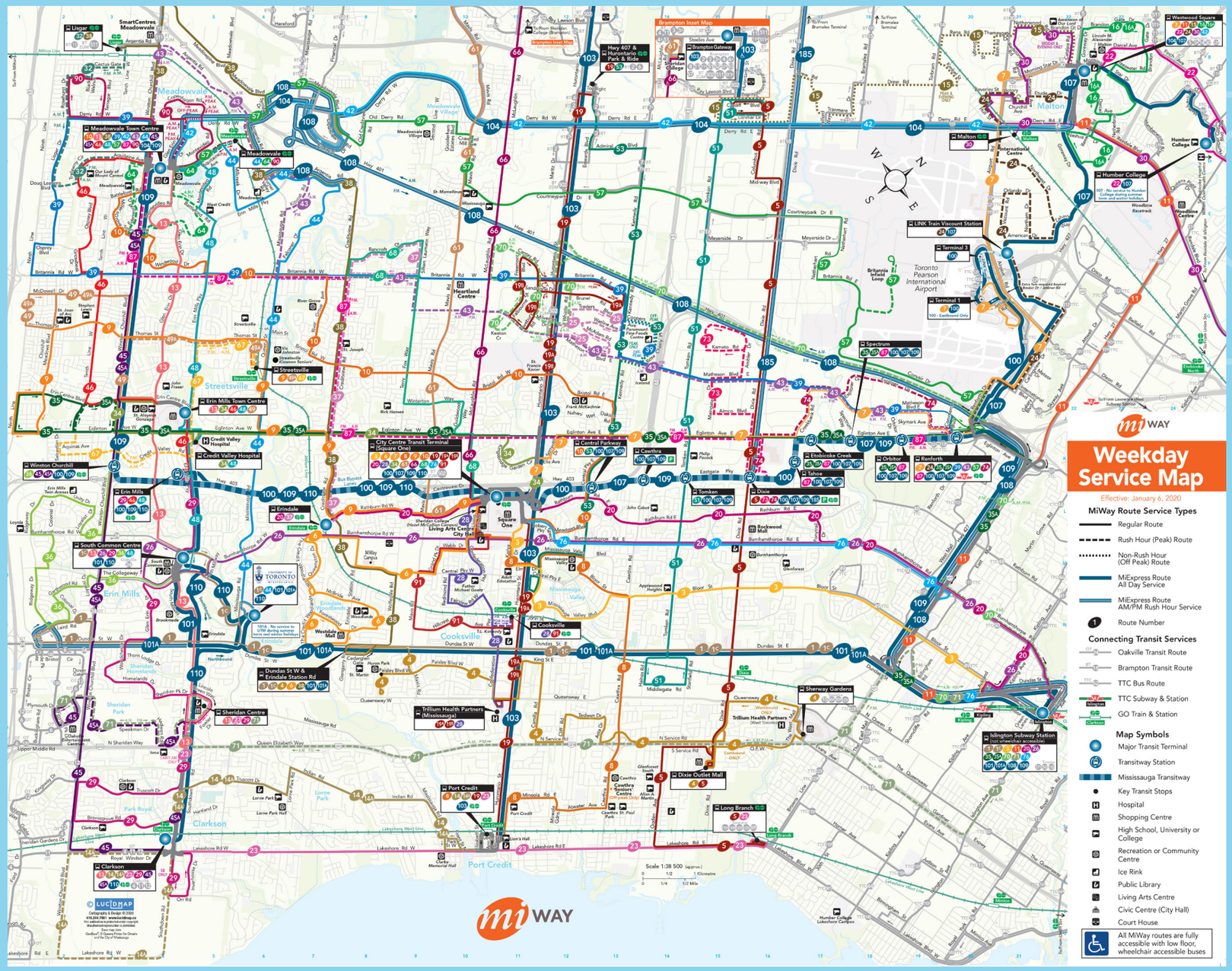
4.2.1 Transit

MiWay is the municipal transit service provider in Mississauga. MiWay operates 63 core routes (54 local and 9 express) and 16 school routes, serving approximately 200,000 daily passengers[3]. Service generally follows a grid network, with connections at transit terminals, GO Stations, and key nodes in Mississauga. MiWay also provides connections in Toronto at Kipling Bus Terminal / Subway Station, Islington Subway Station, and Long Branch GO Station. MiWay's weekday service map is shown in **Figure 4.5**. The City Centre Transit Terminal is Mississauga's main terminal; other major terminals served by MiWay include Meadowvale Town Centre, Westwood Square, and, since 2021, the Kipling Bus Terminal in Toronto.

Additionally, there are several agreements that allow transit service providers from neighbouring municipalities to operate in Mississauga. The Toronto Transit Commission (TTC) and Brampton Transit both have service agreements that permit pick-up and drop-off of passengers at stops in Mississauga along three specific routes.

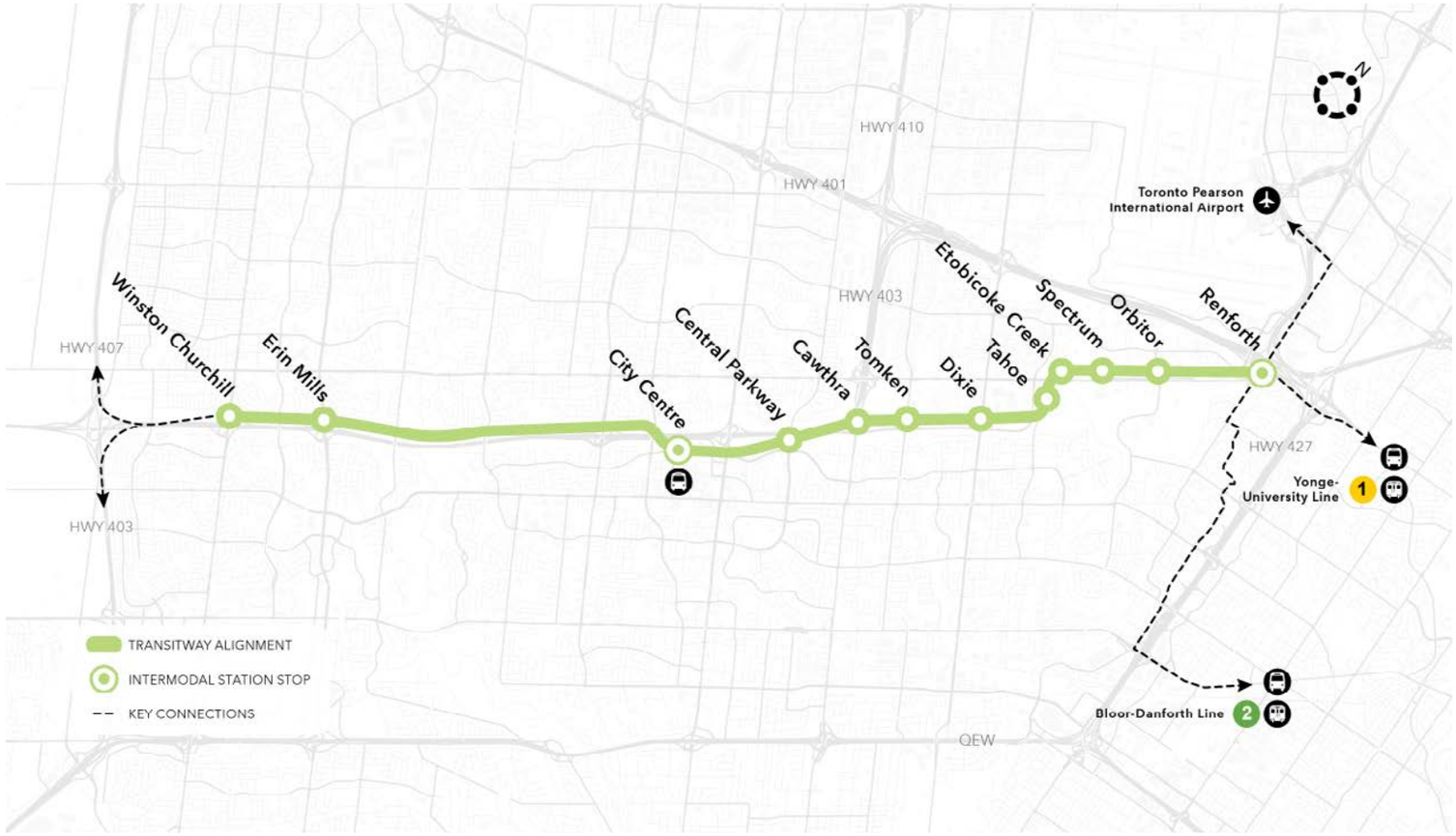
3 As of January 2020, the last reporting period before changes were made in response to the COVID-19 pandemic.

Figure 4.5 MiWay Weekday Service Map (January 2020)



The Mississauga Transitway is a dedicated east-west bus corridor, running parallel to Highway 403 and Eglinton Avenue, with 12 stations through the centre of Mississauga as shown in **Figure 4.6**. The west terminus of the 18-km transitway is at Winston Churchill Boulevard and the east terminus is at Renforth Drive. The section between Erin Mills Station and City Centre Transit Terminal operates in mixed traffic on Highway 403. MiWay is the main transit operator on the Transitway, with local and express routes connecting to destinations such as Downtown Mississauga (City Centre), Toronto Pearson International Airport, and Kipling Station.

Figure 4.6 Mississauga Transitway and Stations

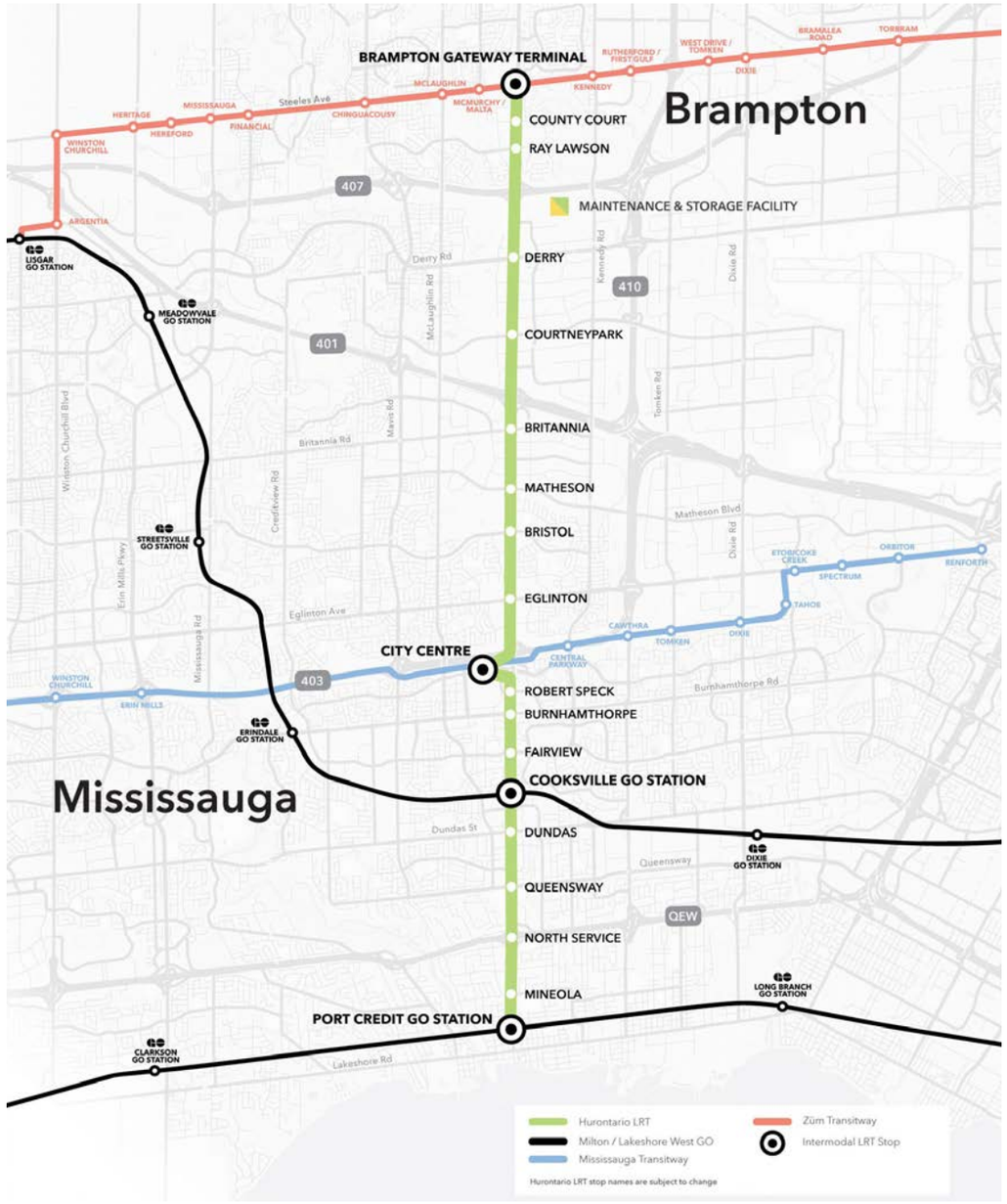


Source: Metrolinx

The Hazel McCallion LRT (formerly Hurontario LRT) is a light rail line currently under construction to serve the busiest transit corridor in Mississauga. The 18-km long rapid transit line is planned to serve both Mississauga and Brampton. The Hazel McCallion LRT will provide key connections at Brampton Gateway Terminal, City Centre Transit Terminal, Cooksville GO, and Port Credit GO. The Hazel McCallion LRT alignment is illustrated in **Figure 4.7**.

Two additional higher-order transit corridors are in the planning stages. The City of Mississauga is undertaking a Transit Project Assessment Process (TPAP) and preliminary design for the Lakeshore BRT that will connect Port Credit with Long Branch GO in the City of Toronto. The City is also working with Metrolinx on the TPAP study for the Dundas BRT with the Environmental Project Report for the Mississauga East section completed in early 2022.

Figure 4.7 Hazel McCallion LRT Alignment



Source: Metrolinx

4.2.2 Roads

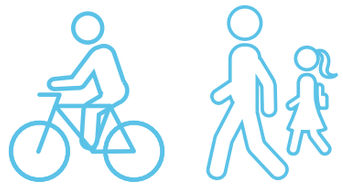
The network of roads in Mississauga includes municipal roads, Peel Region roads, provincial 400-series highways (Highways 401, 403, 409, 410, 427 and Queen Elizabeth Way), and 407 Express Toll Route (407ETR).

The City's municipal roads are classified as arterial, major collector, minor collector, or local roads with additional sub-classifications that consider adjacent land uses such as residential, industrial, or commercial. Mississauga's road classification system is shown in **Figure 4.8**.

The number of lanes on Mississauga roads range from one to six lanes (combined for both directions of travel) as shown in **Figure 4.9**. High-capacity, 6-lane roads that connect to the central area of Mississauga include Mavis Road, Hurontario Street, Eglinton Avenue, as well as sections of Burnhamthorpe Road and Dundas Street.

Most collectors and arterials have right-of-way (ROW) widths of at least 30 m and up to 67 m as shown in **Figure 4.10**. Wider right-of-way widths present opportunities to allocate space within the corridor for all travel modes and other public uses, including sidewalks, multiuse paths, cycling facilities, transit stops and amenities, street furniture and plantings. Given the physical limitations of right-of-way widths, increasing travel capacity and person throughput on the City's arterial network should consider the addition of higher-order transit and active transportation facilities as alternatives to additional vehicle lanes

The **Mississauga Complete Streets Guide** is the City of Mississauga's new reference for planning and designing streets in the city. The guide provides processes and techniques for planning, designing, operating, and maintaining streets to meet the needs of all street users.



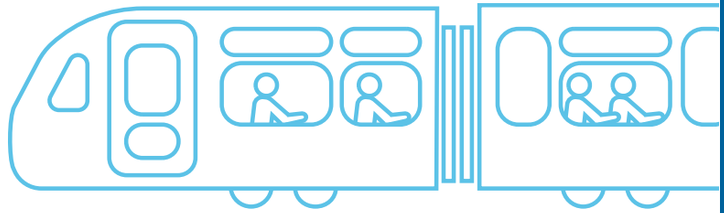


Figure 4.8 Existing Road Classification

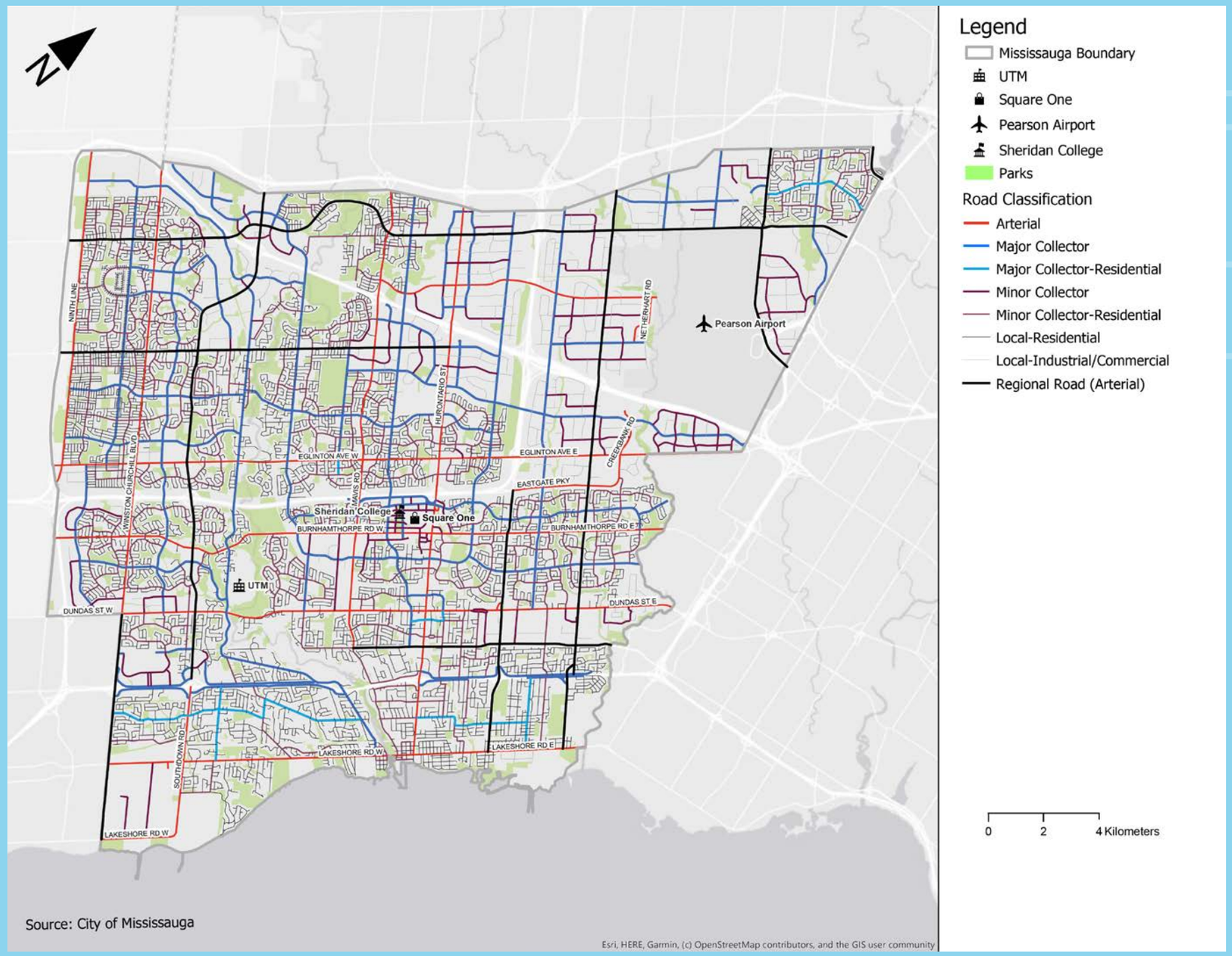


Figure 4.9 Existing Number of Lanes

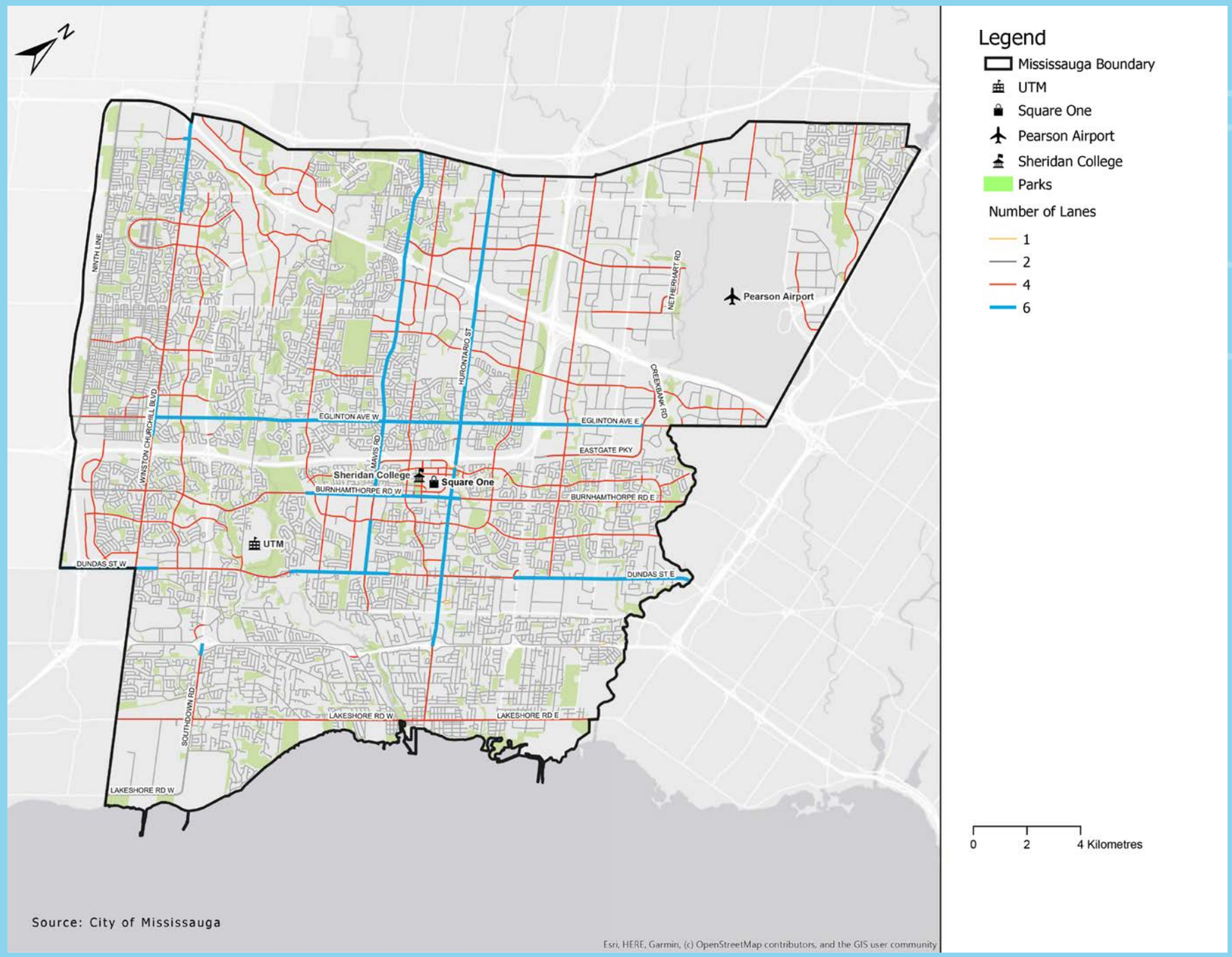
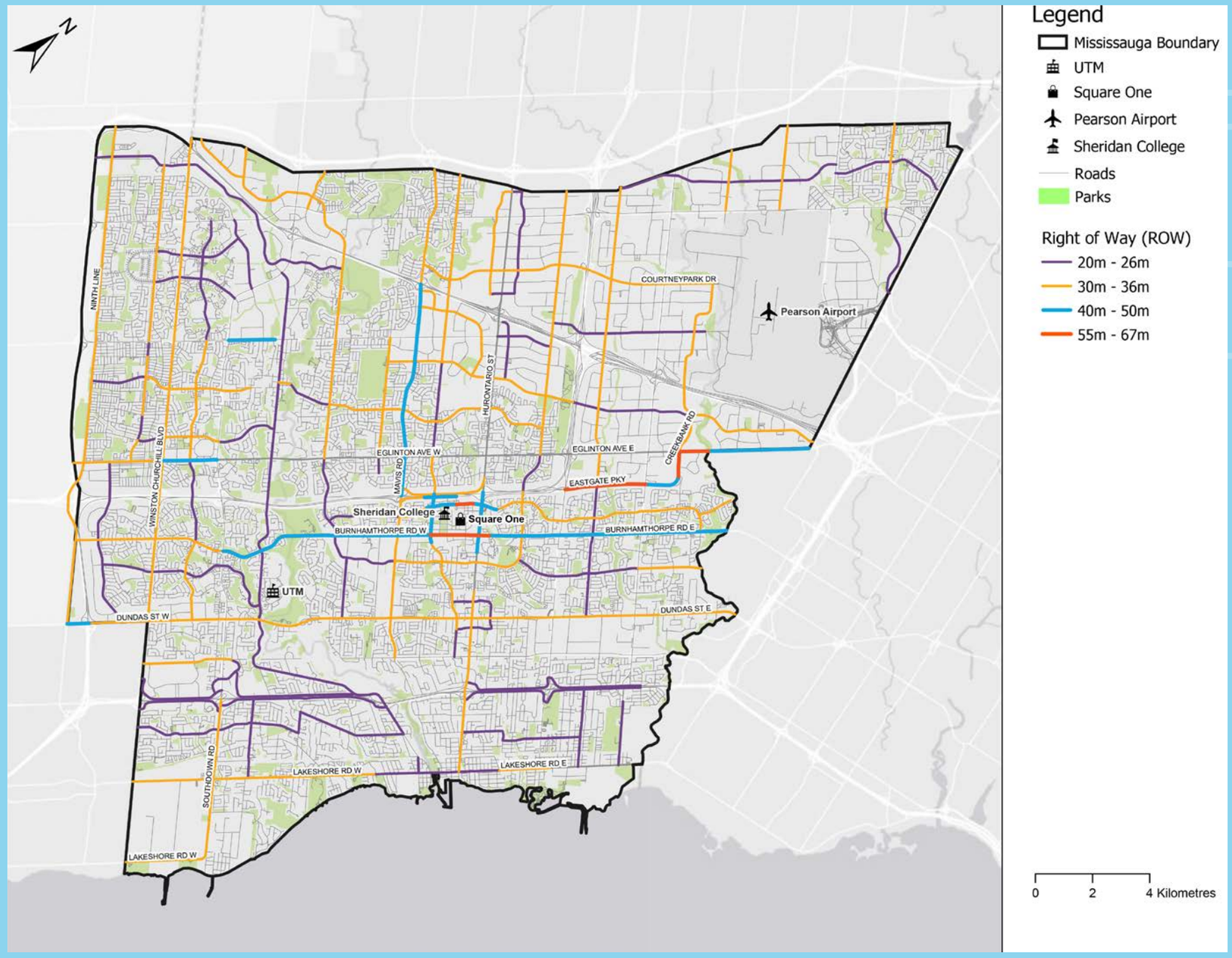


Figure 4.10 Designated Right-of-Way Width



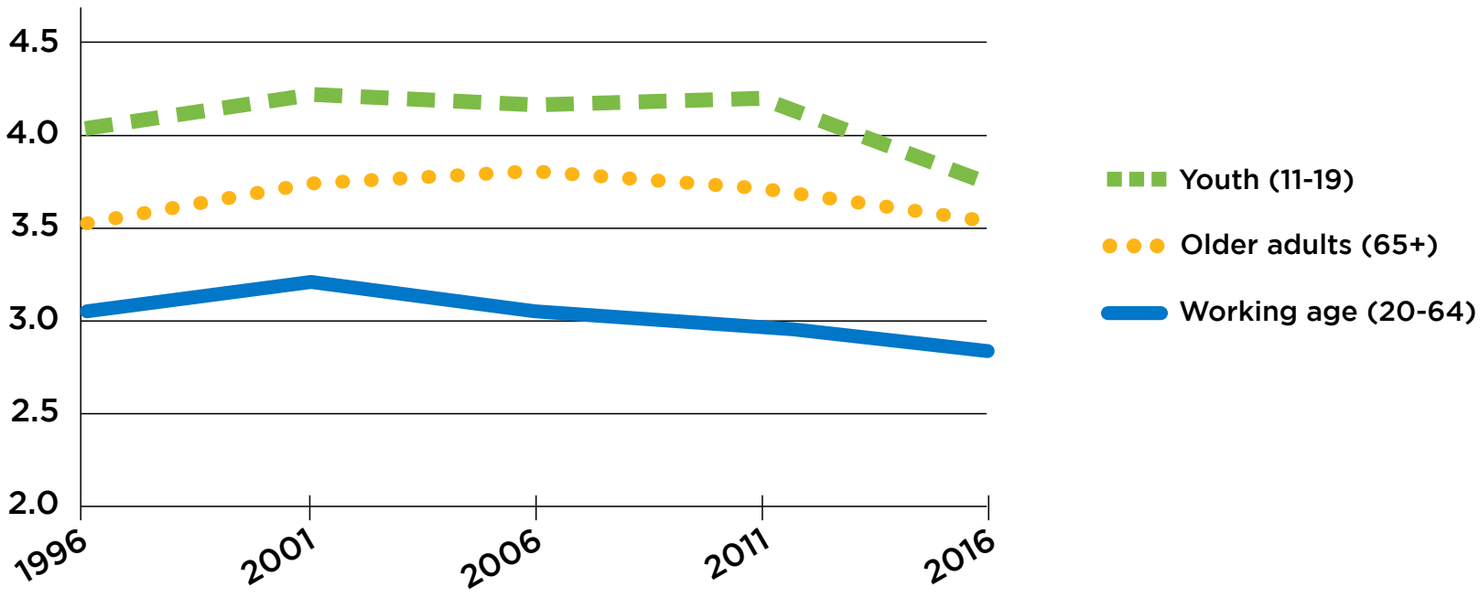
4.3 Transportation Trends

4.3.1 Trip Making

Trip-making tendencies vary by different age groups. Over the last 20 years, there has been a slight downward trend in trip making for each age group. The average number of trips per person per day by age group is shown in **Figure 4.11**. On average, working adults make the most daily trips while youth make the fewest. As the proportion of older adults increases faster than other age groups, there may be more demand for travel in the future, particularly outside of the commuter peak periods.

The COVID-19 pandemic resulted in a massive shift in travel as people adapted to health and safety protocols established mid-2020. Comparing data for Mississauga from the 2016 Census and the 2021 Census shows that there has been a nearly 400% increase in individuals who reported "worked at home" as their place of work status as remote work opportunities were made available during the pandemic. There have also been observed changes for those who continue to commute to a place of work outside of the home, including fewer trips over 45 minutes and a shift away from public transit to private car modes.

Figure 4.11 Average Number of Daily Trips by Age



Source: Transportation Tomorrow Survey

Additional commuting data from Statistics Canada's Labour Force Survey in May 2022 (when most public health measures were removed) compared 2022 commuter data to 2016 and 2021 Census data as shown in **Figure 4.12**. The infographic shows that, Canada-wide, the number of people commuting by car in 2022 exceeded 2016 levels but commuting by almost every other mode was still below 2016 levels. Transit ridership by bus, subway or train was down by 33% to 58%, but showing recovery over the previous year. In Ontario, the total number of commute trips by car in 2022 was comparable to 2016; however, commute trips that are longer than 60 minutes have been observed to remain below 2016 levels in Toronto and the surrounding urban centre.

Figure 4.12 Number of Commuters by Main Mode of Commuting in Canada

	Driver / Passenger in a car	Bus	Subway	Train	Walk	Bicycle	Motocycle
2022 (thousands)	12,768	797	271	103	726	215	37
2021 to 2022 (% change)	18.3	17.5	14.4	32.6	11.6	57.4	83.8
2016 to 2022 (% change)	2.5	-32.7	-48.1	-58.3	-14.5	-2.1	43.9
2021 (thousands)	10,790	678	237	78	651	137	20
2016 (thousands)	12,454	1,184	523	248	849	220	25

Notes(s): The census data exclude First Nations reserves, full-time military and the territories.
Source(s): Census of Population, 2016 and 2021 (3901), and Labour Force Survey, 2022 (3701).

Source: Statistics Canada, The Daily, 2022-11-30, Infographic 2. https://www150.statcan.gc.ca/n1/daily-quotidien/221130/dq221130c-eng.htm

Figure 4.13 Historical Mode Share Trends in Mississauga

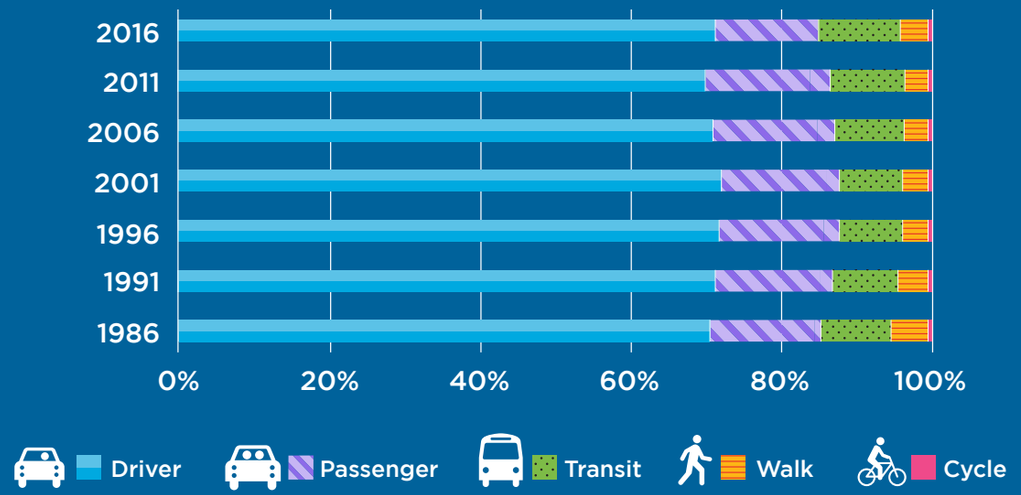
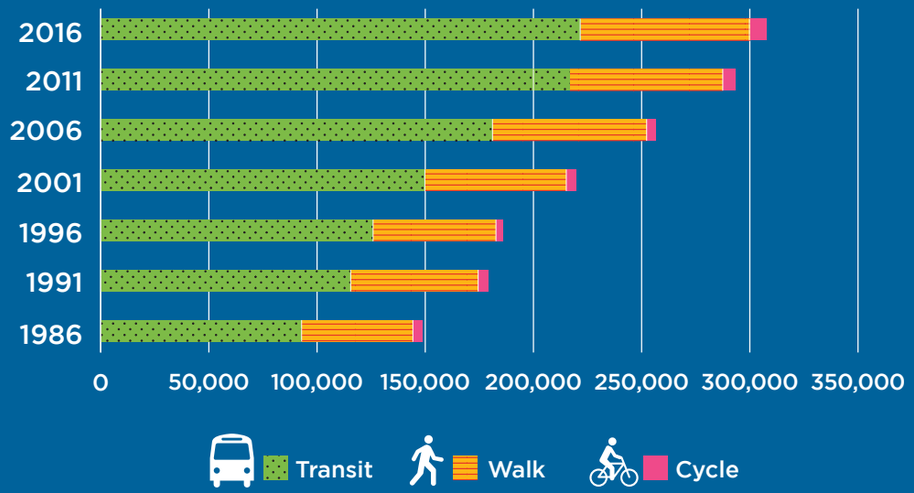


Figure 4.14 Historical Growth in Transit, Walking and Cycling Trips



Source: Transportation Tomorrow Survey

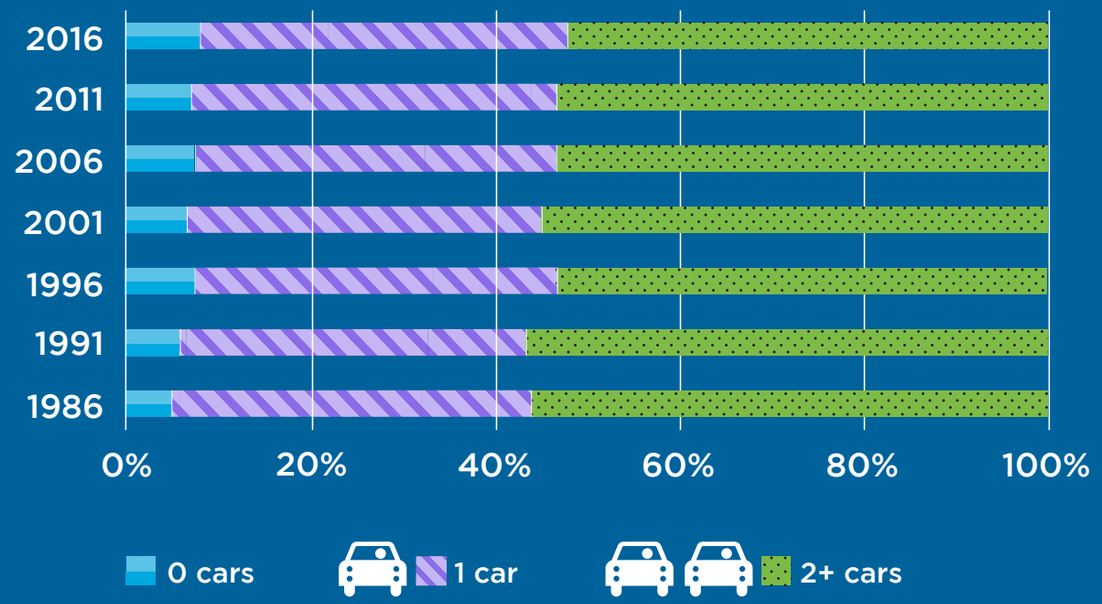
4.3.2 Travel Modes

A review of the historical trends in travel mode share can reveal changes in travel preferences over time. **Figure 4.13** shows that there has been little change to mode share in Mississauga over the last 30 years. Automobile modes (driver and passenger) continue to be the predominant mode of travel in Mississauga. While we have seen limited change in the share of transit and active trips, the magnitude of trips made by transit, walking or cycling have increased significantly as shown in **Figure 4.14**. However, a real shift from automobile to non-automobile modes is needed to meet Mississauga's and Peel's sustainable mode share targets of 55% and 50% by 2041, respectively.

Over
90% of households
own at least one vehicle

Over
50% of households
own two or more vehicles

Figure 4.15 Historical Household Vehicle Ownership



Source: Transportation Tomorrow Survey

4.3.3 Vehicle Ownership

People are more likely to make trips by car if they have access to a private vehicle. An indicator of higher non-car travel share is lower household vehicle ownership. The historical trend in vehicle ownership for Mississauga households is shown in **Figure 4.15**. Although there has been a slight decrease in average vehicle ownership over time, from 1.68 vehicles per household in 1986 to 1.61 vehicles per household in 2016, over 90% of households own at least one vehicle and over 50% own two or more vehicles. This indicates that Mississauga households have a heavy reliance on car travel and significant changes would be required to make sustainable modes convenient and accessible to the average household.

The cost of car ownership

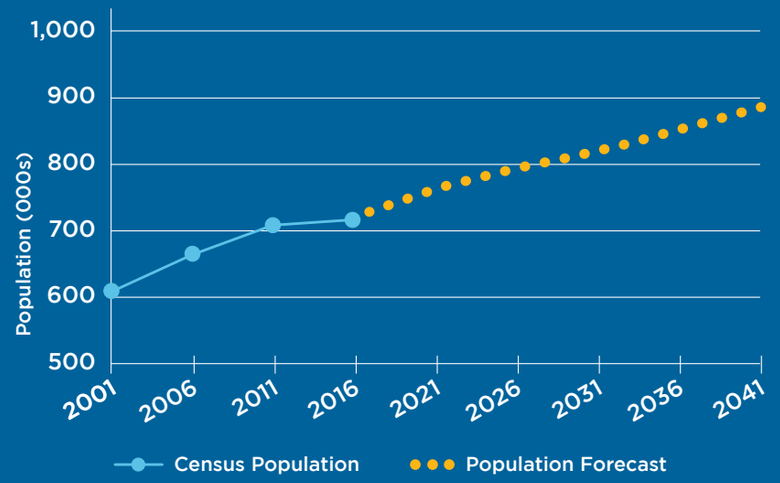
The cost of owning a car is more than just the purchase price. Car ownership costs also include the cost of fuel, maintenance, insurance, parking, and depreciation.

The CAA Driving Costs calculator* provides an estimated total driving cost for an average compact vehicle in Ontario is over $8,600** annually.

* carcosts.caa.ca
*** Assuming a driver under 65, purchase of new vehicle, and 20,000 km of travel.*

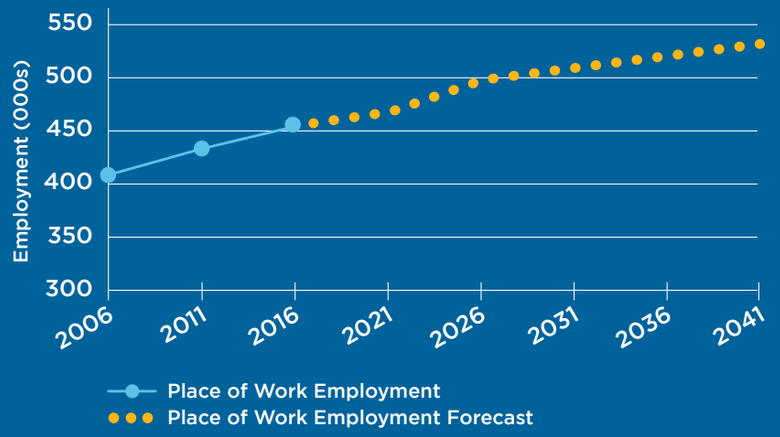
Population is expected to grow by **16%** to **883,000** by 2041.

Figure 4.16 Population Growth in Mississauga



Employment will grow at **14%** to **531,000** jobs in 2041.

Figure 4.17 Employment Forecast Growth in Mississauga



Source: City of Mississauga 2019 Development Charge Background Study, Mississauga TMP

4.4 Growth

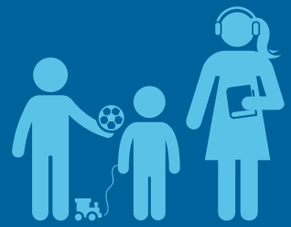
The Mississauga TMP provided an overview of past growth in Mississauga and how it helped shape the transportation system over the last century. Rapid urban growth in the 1950s to the 1990s was enabled by transportation capacity improvements including new highway corridors, new GO Rail corridors, and an expanded grid of major arterial roads.

4.4.1 Planned Growth

The city's population nearly doubled during Mississauga's rapid growth in the 1980s and 1990s. In the two decades after 2001, Mississauga's population grew by 17%. Looking forward, Mississauga's population is expected to grow by 16% to 883,000 by 2041. **Figure 4.16** shows Mississauga's population forecast to 2041. Employment, or the number of jobs, in Mississauga will grow at a similar rate of 14% to 531,000 jobs in 2041. **Figure 4.17** shows employment growth forecasts in Mississauga.

Older adults age group will grow by

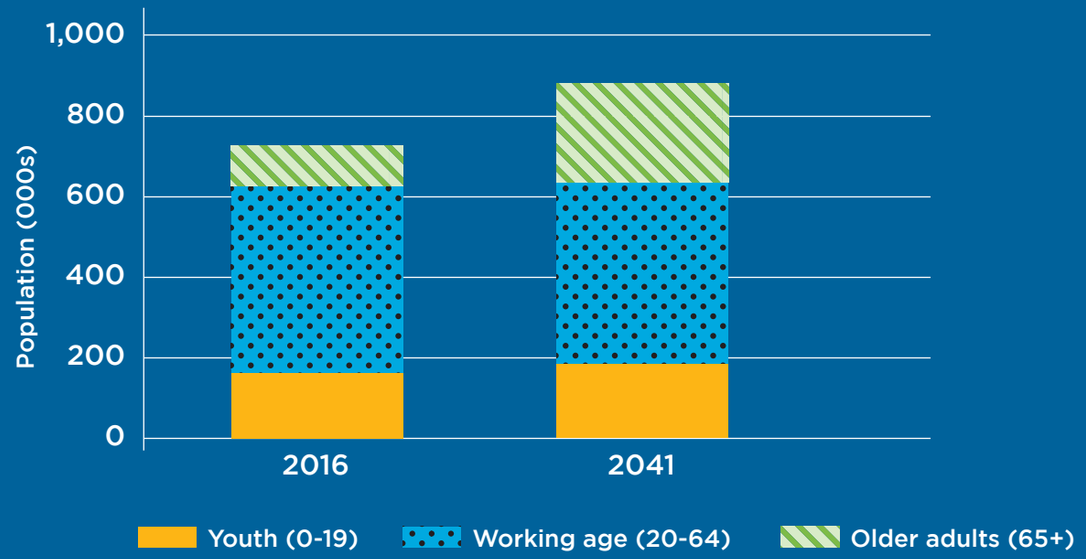
133%



Youth age group will grow by

14%

Forecast Population Change by Age Group



Source: City of Mississauga 2019 Development Charge Background Study, Mississauga TMP

While the proportion of working age adults (20-64 years) in Mississauga have remained consistent in the past 30 years, there has been a growing proportion of older adults (65+ years) and a decreasing proportion of youth (11-19 years). Over the next 20+ years, a pronounced shift in the proportion of older adults is expected as this age group will grow by 133% while the youth age group will grow by only 14%. The travel needs and preferences of these different age groups must be considered in developing future networks.

4.4.2 Anticipated Changes to Growth Forecasts

In October 2022, the Ontario government introduced Bill 23, the More Homes Built Faster Act, which proposed significant changes to the planning framework that will impact how municipalities across the province plan for growth. Bill 23 identified a housing target for Mississauga of 120,000 new homes by 2031, which is about 87,000 more homes than the City's current plan for 2031 and is expected to exceed the City's planned population totals for 2041 **(see Section 4.4.1)**

Housing is a top priority for the City of Mississauga and, on March 1, 2023, City Council endorsed Growing Mississauga: An Action Plan for New Housing that outlines actions for the City to work to deliver more housing with support from the private sector and other levels of government.

While the details of the new growth forecasts are not yet available, the intent is that future growth will continue to be focused in areas already identified for growth and intensification. The future transit and road networks identified in TRIP may need to be advanced to support shortened timelines for population growth to be realized in Mississauga.

05 Shaping the Future Transportation Networks

- Evaluation Criteria and Considerations
- Alternative Solutions
- Evaluation of Alternative Solutions

Shaping the Future Transportation Networks

5.1 Evaluation Criteria and Considerations

5.1.1 Evaluation Criteria

The evaluation criteria and measures for the transit and road alternatives include:

- Vision: how well the alternative aligns with the transportation vision and TRIP study directions.
- Mobility Impacts: how well the alternative accommodates travel demand on the networks and reduces travel delays.
- Community Impacts: how well the alternative promotes community health, supports active lifestyles, and provides transportation equity.
- Economic Impacts: how well the alternative supports businesses and provides reliable goods movement.
- Environmental Impacts: how well the alternative minimizes impacts to the natural environment (e.g., woodlands, rivers) and minimizes impacts to cultural heritage features (e.g., historic buildings, cemeteries).
- Financial Impact: how well the alternative minimizes capital costs and minimizes on-going operations and maintenance costs.

5.1.2 Considerations for Equity, Safety, Health, and Climate Change Criteria

The measures used to assess the alternatives against the above evaluation criteria are both qualitative and quantitative. In some cases, the City's travel demand model was used to estimate future traffic demands, ridership, and network performance to inform the evaluation.

Some criteria are more difficult to define and measure. Transportation equity, safety, community health and climate change are four aspects of the study criteria where additional description on measuring performance is helpful. More information on the evaluation criteria is provided in **Background Report C — Development and Evaluation of Alternatives**.

Transportation Equity

Transportation equity is an important consideration in developing Mississauga's future transportation system. The transportation system provides access to resources and opportunities such as employment, education, and healthcare. An equitable transportation system is one that provides everyone with the access they need to get to their destination — whether that is to work, school, essential goods and services, or recreation. Mississauga's TMP vision is to provide everyone and everything with the freedom to move. However, the TMP does not provide guidance on how to provide this freedom equitably.

Examples of transportation-related barriers to equity include:

- **Cost** — cost of owning and/or operating a car, cost of transit fare.
- **Distance** — having a reasonable walking distance to a bus stop from the trip origin and/or destination.
- **Physical barriers** — lack of sidewalk connections to transit stops, lack of curb cuts at pedestrian crossing locations, non-audible pedestrian signals.
- **Safety** — cycling in mixed traffic, lack of lighting along sidewalks and pathways, snow and ice accumulation.
- **Convenience** — having the ability to drop-off kids at school or daycare on the way to work, pick up groceries on the way home.
- **Time** — access to transit service for early morning work shifts or late night work shifts

For the TRIP study, the number of transportation projects that serve equity-deserving communities is a measure of how the alternative supports equitable access to transportation. To identify equity-deserving communities, a social equity index and Peel Region's Neighbourhood Index were used. Communities with higher proportions of lower-income households, new immigrants, youth, and senior residents, include Malton, Cooksville, Burnhamthorpe, Summerville, and Downtown Mississauga. Other neighbourhoods that could be considered equity-deserving are Erin Mills, Erindale, and Lakeview.

Safety

Vision Zero is an approach to road safety with the goal of zero traffic-related fatalities and serious injuries. The City of Mississauga officially committed to Vision Zero in 2018 and the City's **Vision Zero Action Plan** (2021) identified 99 actions towards reaching that goal.

For the evaluation of alternative solutions, supporting safety in transportation is measured by the potential for a project to reduce vehicular travel speeds, reduce vehicular traffic volumes, or protect vulnerable road users.

The outcome of the TRIP study is a long-term transit and road network plan that will require subsequent planning and design for each component of that future network to incorporate safety considerations.

Community Health and Active Lifestyles

The transportation system plays an important role in providing opportunities for individuals to incorporate physical activity into their daily routines. Physical activity is a significant indicator of community health outcomes. Increasing physical activity in an individual's daily routines can be as simple as cycling to work/school, walking for errands or social visits, or walking to the bus stop or transit station. A 2014 report prepared by the Medical Officers of Health in the GTHA[4] indicated that The Big Move, an earlier version of Metrolinx's Regional Transportation Plan which included improvements to the transit and active transportation system, had the potential to prevent 184 premature deaths and 1,061 cases of diabetes every year through modest increases in physical activity. With projected growth in population, the number of preventable deaths and cases of diabetes would only increase.

For the evaluation of alternative solutions, alternatives that promote active transportation and transit will rank higher on community impacts while those that maintain the status quo or further support travel in motorized vehicles will rank lower.

Although, the TRIP study does not explicitly include recommendations for active transportation network solutions (these are covered in Mississauga's Pedestrian Master Plan and the Cycling Master Plan), the TRIP study will consider how well active transportation network components can be integrated with the alternative solutions.

4 Improving Health by Design in the Greater Toronto-Hamilton Area, A Report by the Medical Officers of Health in the GTHA, May 2014 2nd Edition.

Natural Environment and Climate Change

Greenhouse gases are a driving factor of climate change and transportation is the largest contributor[5]. Of the emissions from transportation, more than half is from passenger vehicles (cars, light trucks, and motorcycles).

Other transportation-related impacts to the natural environment include loss of natural heritage features (e.g., wood lots or wetlands) for road expansion projects, disturbing natural features or wildlife during construction, and noise and air pollution from vehicles. For the evaluation, alternative solutions that minimized impacts to the natural environment and reduced greenhouse gas emissions from transportation were rated higher.

5 *National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in Canada, Canada's Submission to the United Nations Framework Convention on Climate Change, Part 3. Table A12-7 GHG Emissions for Ontario by Canadian Economic Sector, Selected Years.*

5.2 Alternative Solutions

Alternative solutions to address the problem and opportunity statement were developed through a workshop with internal City stakeholders followed by engagement with external agencies and the public.

Seven alternative solutions were identified and are described in the following sections.
For more information, see **Background Report C — Development and Evaluation of Alternatives**.

5.2.1 Alternative 1: Higher-order Transit Corridors with Bus-only Lanes

In this alternative solution, transit is prioritized by implementing higher-order transit corridors with bus-only lanes to increase transit operating speeds and improve reliability, resulting in shorter travel times and reduced delays for transit riders. Higher-order transit corridors move more riders more efficiently than conventional transit service that operate in mixed traffic. **Figure 5.1** shows an example of a Bus Rapid Transit corridor with dedicated transit lanes in the median. **Figure 5.2** shows an example of painted bus-only lanes in the curb lane.

Figure 5.1 Example of Bus Rapid Transit (BRT) concept on Dundas Street

Source: Dundas BRT TPAP, Metrolinx/Mississauga

Figure 5.2 Example of Curbside Bus-Only Lane on Kingston Road, Toronto

Photo credit: HDR

5.2.2 Alternative 2: Transit Priority Measures

In this alternative, transit priority measures (TPM) are implemented at major intersections to give priority to transit vehicles. TPMs are a collection of improvements that work to reduce transit delay, improve transit travel time, and improve reliability of transit service, particularly at major intersections, bus stops and/or bottlenecks by prioritizing the right-of-way of the transit vehicle.

TPM can include regulatory measures such as time of day restrictions on lane use or on-street parking and transit signal priority (TSP) to provide priority for transit vehicles at signalized intersections. Physical TPM measures include queue jump lanes, preferential bus stop placement, bus bulbs, bus bays, etc. **Figure 5.3** shows an example of a queue jump lane that allows transit vehicles to by-pass other vehicle queues.

Generally, TPMs have moderate implementation costs as they do not require major infrastructure construction over a long corridor. Improved transit operations through TPM can provide opportunities for cost savings as increased transit operating speeds can improve service frequency, capacity, and reliability.

Figure 5.3 Example of Queue Jump Lane on Dundas Street West at Erin Mills Parkway

Photo credit: HDR

5.2.3 Alternative 3: HOV Lanes Shared by Carpools and Buses

Alternative 3 allocates roadway space to carpools and transit vehicles to increase overall person-carrying capacity of the corridor. While similar to bus-only lanes, High Occupancy Vehicle (HOV) lanes allow passenger vehicles with multiple occupants, typically a minimum of 2 or 3 persons, to share the designated lane with transit vehicles. **Figure 5.4** shows an example of a HOV lane in Mississauga.

An HOV lane does not provide the same level of priority to transit vehicles as a dedicated bus-only lane. An HOV lane could be an initial phase in developing a higher-order transit corridor with an interim conversion of a general-purpose lane to an HOV lane to be followed by a subsequent conversion of the HOV lane to bus-only lane at a later time.

Figure 5.4 Example of a 3+ HOV Lane on Dundas Street east of Dixie Road

Photo credit: HDR

5.2.4 Alternative 4: Traffic System Management

Mississauga's road network is a complex system of road segments and intersections controlled by traffic signals. A traffic system management tool to monitor the city-wide network of traffic signals, including transit signal priority, and improve traffic flow in real time maximizes the existing capacity of the road network.

The City of Mississauga has implemented an Advanced Transportation Management System (ATMS) to actively manage congestion by maximizing the capacity in the road network. The ATMS allows City staff to monitor traffic operations, respond to incidents or emergencies, communicate with traffic signals, and apply smart technologies to manage traffic. Improving the flow of traffic on city streets benefits general purpose traffic, goods movement, and transit. **Figure 5.5** shows the City's ATMS traffic management centre.

As the City grows, it is not sustainable nor physically feasible to continue to increase network capacity by building new roads or widening existing roads. Maximizing the available capacity in the City's existing network of roadways maximizes the City's prior investment in the transit and road networks.

Figure 5.5 Mississauga's ATMS Traffic Management Centre

Source: City of Mississauga

Investment in ATMS, such as upgrades to traffic signal communications, traffic control systems, signal controllers, traffic cameras, etc., have city-wide benefits for a relatively low cost. Collaboration and coordination of the City's ATMS with Peel Region and adjacent municipalities will further integrate the multi-jurisdictional networks. The City's ability to implement and manage transit signal priority is also linked to the ATMS.

Continued upgrades and expansions to the City's ATMS will allow Mississauga to keep abreast of new technologies and initiatives that could provide incremental improvements to the network without additional road infrastructure.

5.2.5 Alternative 5: New Roads or Road Widenings

This alternative solution seeks to expand the road network by constructing new roads or widening existing roads to increase capacity for all vehicles. The increased capacity serves growth in growth areas and addresses existing bottlenecks in the network. **Figure 5.6** shows a road reconstruction project.

The City's capital forecast was used a starting point for analyzing this alternative. Committed road projects were assumed to be in place in the future base network. Two additional road scenarios were modelled to identify high and low impacts of future travel demand and network performance to help inform the evaluation.

Figure 5.6 Roadway Reconstruction

Source: City of Mississauga

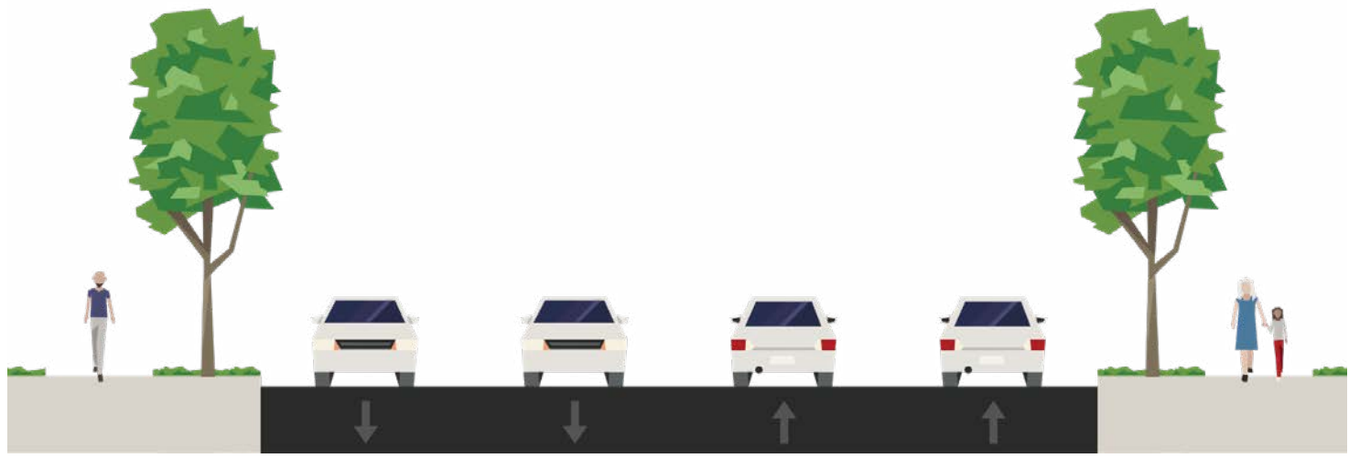
5.2.6 Alternative 6: Road Balancing

Roads are corridors that move people and goods through and around a city but roads are also public spaces for passive and economic activity. Road balancing refers to balancing the allocation of road space, usually by repurposing the space from one or more vehicle lanes for public realm uses and other users. Improvements to the public realm within the road right-of-way can support vibrant communities, foster economic development, and improve the quality of life for the community.

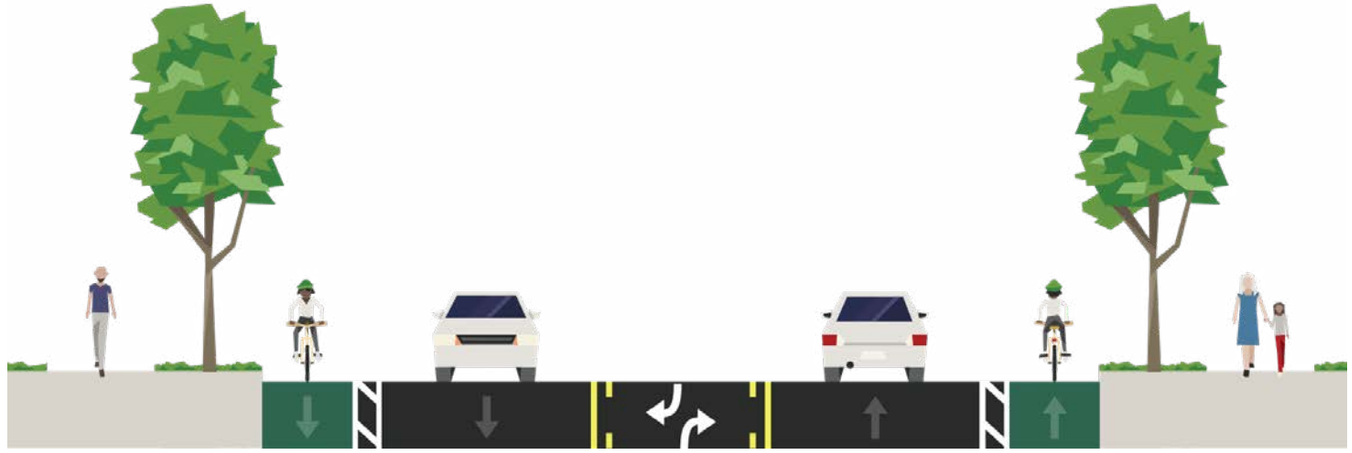
A common road balancing project is the re-configuration of a 4-lane road to a 3-lane road with a centre two-way left-turn lane as shown in **Figure 5.7**. The remaining space may be allocated for use by pedestrians (wider sidewalks), cyclists (new bike lanes/paths), businesses (restaurant patios, on-street parking), or other public uses (parklets, pedestrian amenities, transit stops, transit landing pads, transit shelters). Any transit stop and its associated infrastructure should be included as part of the road redesign.

Reallocation of vehicle travel lanes might not be an appropriate solution for every road corridor. Major arterial roads that function to carry a high volume of traffic may not be suitable. However, road balancing on some major collector roads or minor arterial roads may benefit the adjacent communities and land uses along those corridors.

Figure 5.7 Example Road Balancing Project



Before



Made with Streetmix

After

5.2.7 Alternative 7: Travel Demand Management

Travel Demand Management (TDM) refers to strategies that influence travel behaviour to make more efficient use of the transportation system. Strategies can target changes in travel mode, time of day, frequency, length, route, or cost. Examples of TDM strategies include carpooling support programs, parking management, road pricing, flexible work hours, telecommuting, incentives for choosing carpooling, transit or active modes, and initiatives that discourage driving alone. Programs to promote and support more sustainable modes of travel such as ridematching, emergency-rides-home, transit passes, and supporting infrastructure (e.g., bicycle parking, transit amenities) help to remove the barriers that prevent people from choosing more sustainable modes. TDM programs may be city-wide (or region-wide) initiatives while other programs may target major employers or residential developments.

The City of Mississauga's **TDM Strategy and Implementation Plan** (2018) was developed to enable and encourage more sustainable modes of transportation. The plan recommends actions for decreasing automobile use by increasing the attractiveness of walking, cycling, carpooling, and transit.

TDM programming supports and promotes changes in travel behaviour that are beneficial for the municipality – through more efficient use of the existing transportation investments – and the individual – through more and lower-cost mobility options. Case studies on workplace TDM programs across North America highlight the effectiveness of a well-run program with engaged employees. In 2015 Metrolinx published a Smart Commute Workplace Program Impact Report[6] that demonstrated the value of the Smart Commute program through a business case review. At the GTHA region-wide scale, the Smart Commute Workplace Program was estimated to have removed 2.4 million annual car trips and added 2.9 million walking trips and 2.2 million carpool trips. At the employer level, the program was estimated to reduce single-occupant vehicle trips by 2% to 35%.

6 *Smart Commute Workplace Program Impact Report, 2015.* https://www.metrolinx.com/en/regionalplanning/projectevaluation/benefitscases/Smart_Commute_Workplace_Impact_Report_EN.pdf

5.3 Evaluation of Alternative Solutions

5.3.1 Analysis

The City of Mississauga's travel demand forecasting model (GTAModel v4.1) was used to estimate future 2041 travel demands to inform the assessment of alternatives and development of the recommended networks. Modelling scenarios were used to provide a comparative analysis of components of the Alternative Solutions, including bus-only lanes, more frequent transit service, new roads, and road widening projects. In addition to the 'Business-As-Usual' scenario, four modelling scenarios were identified to test improvements to both road and transit infrastructure. The modelling analyses were undertaken using population and employment forecasts available in fall 2021.

A summary of the modelling scenarios is provided in **Table 5.1**. Transit network changes are shown in **Figure 5.8** and road network changes are in shown in **Figure 5.9**. The full list of transit and road projects by scenario is documented in **Background Report C — Development and Evaluation of Alternatives**.

The modelling scenarios were designed to provide an understanding of the independent impacts of road and transit improvements on the overall network. Road scenarios included road projects that supported growth, served employment areas, or provided improved connectivity across major barriers. Transit scenarios included service frequency improvements and dedicated transit priority infrastructure such as bus-only lanes.

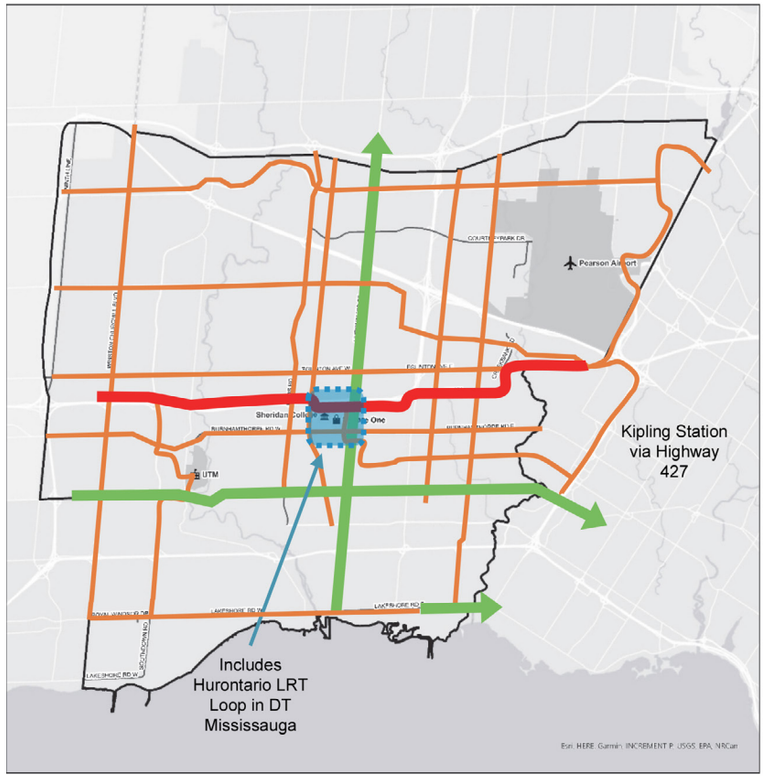
The Transit 2 and Roads 2 scenarios were intended to represent aspirational or ambitious expansions of network infrastructure to drastically increase capacity for transportation demand in the 2041 horizon year.

Table 5.1 Modelling Scenarios

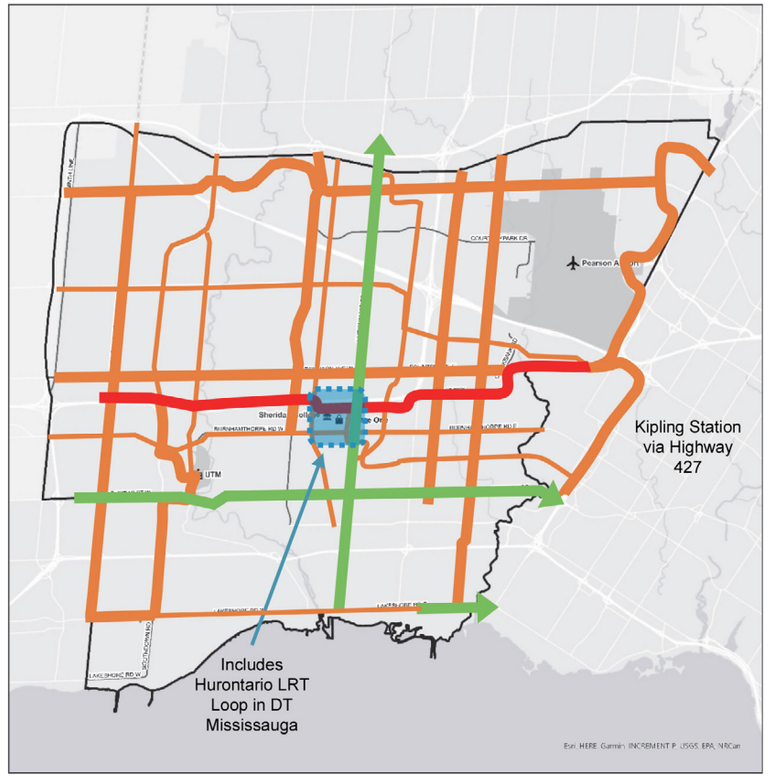
Scenario	Transit Changes in Model	Road Changes in Modal
Base Road / Transit — "Business as Usual"	Minimal transit improvements	Committed road projects
Transit 1	2041 MiWay Assumptions	Base Roads
Transit 2	Transit 1 + bus-only lanes on major corridors	Base Roads
Roads 1	Base Transit	Road improvements in growth areas and employment areas
Roads 2	Base Transit	Roads 1 + Crossing of Major Barriers

Figure 5.8 Transit Modelling Scenarios

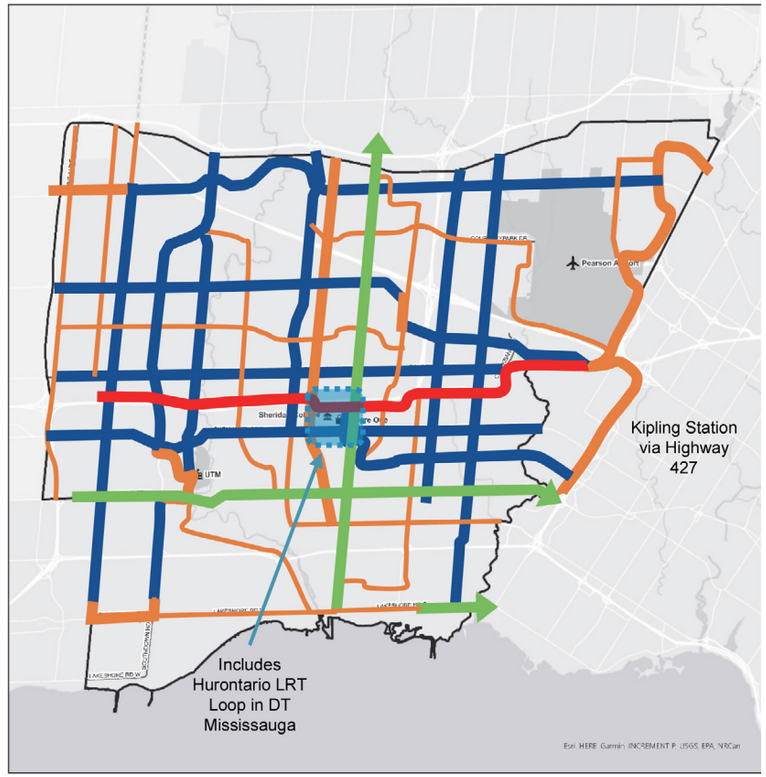
2041 Base Transit



2041 Transit Scenario 1



2041 Transit Scenario 2

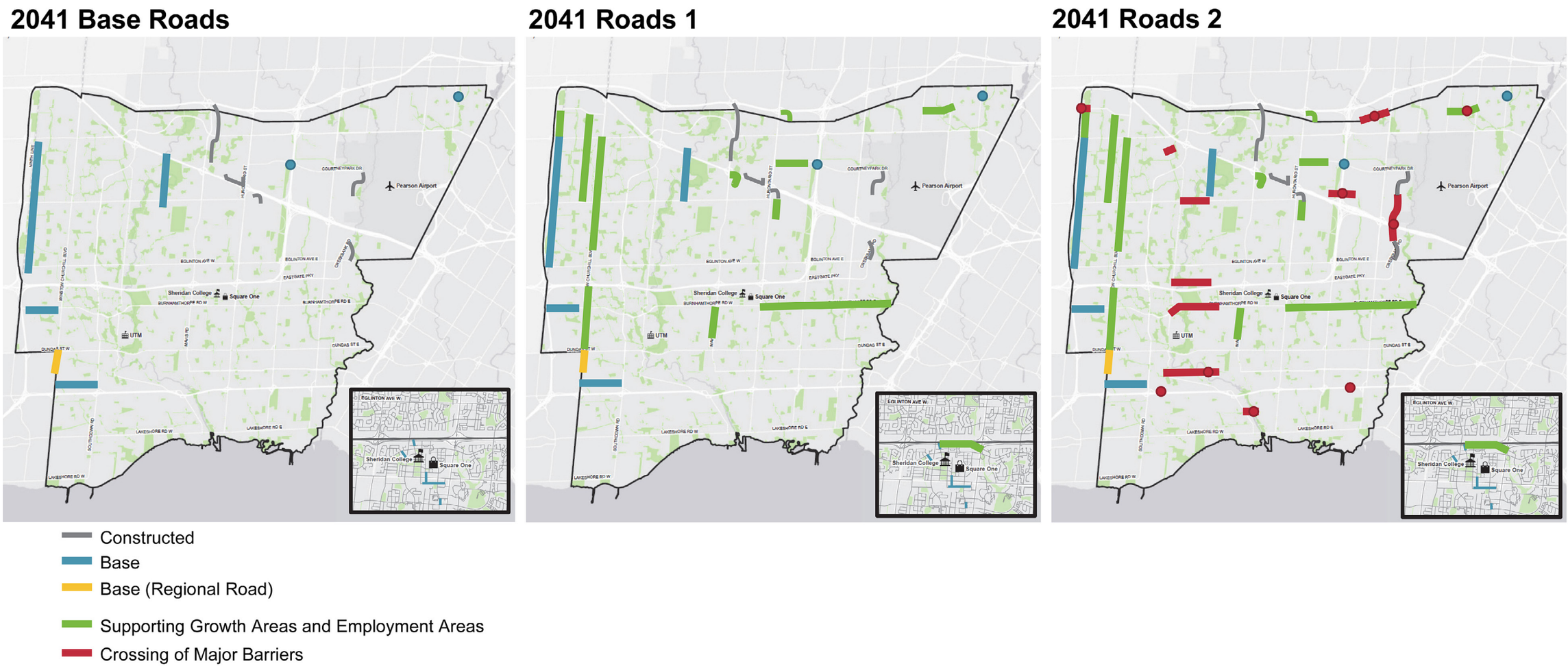


- Current Rapid Transit Projects (Dedicated Lanes)
- Mississauga Transitway
- Transit Priority (Dedicated Lanes)
- ≤ 5 minute headways
- 5 – 10 minute headways

Notes:

- Assumed no changes to GO service across 2041 scenarios
- Connections to strong transfer points within adjacent municipalities where possible
- Considerations of dedicated transit lanes in Transit Scenario 2 based on Transit Scenario 1 results
    - Existing 6 lane road would lose a GPL; existing 4 lane road would require widening

Figure 5.9 Road Modelling Scenarios



Modelled future travel demands for each of the five modelling scenarios are shown in **Figure 5.10** and **Figure 5.11** for transit and automobile travel, respectively. Total vehicle-kilometres travelled (VKT) and congested vehicle-kilometres travelled are shown in **Figure 5.12** and **Figure 5.13**.

Based on growth between 2016 and 2041, almost 50,000 (25%) additional car trips and 30,000 (50%) additional transit trips are expected in the morning peak period.

Amongst the 2041 scenarios, the Transit 2 scenario shows the largest change in travel demands, with an 8% increase in transit demand (6,000) resulting in a 1% increase in transit mode share across Mississauga compared to the 2041 Base scenario.

In the future road scenarios, the total VKT is higher by approximately 30,000 veh-km compared to the 2041 Base scenario. In the future transit scenarios, the total VKT is lower by approximately 55,000 veh-km compared to the 2041 Base scenario.

To better understand network congestion in the modelling scenarios, congested VKT was also explored. Congested VKT is reduced by approximately 20,000 veh-km in each of Roads 1, Roads 2, and Transit 1 scenarios compared to the 2041 Base scenario. However, in the Transit 2 scenario, congested VKT is higher by approximately 20,000 veh-km due to the reduction in available lane-km as general-purpose travel lanes were converted to transit-only lanes on most major corridors in this scenario.

The modelling results indicate that the automobile will continue to be the prominent travel mode in Mississauga. While road projects provide additional road capacity within the network and improve congestion in specific areas, transit improvements promote noticeable shifts to sustainable mode share and help the network accommodate more person trips throughout Mississauga.

Figure 5.10 AM Peak Period Transit Demand and Transit Share in Mississauga

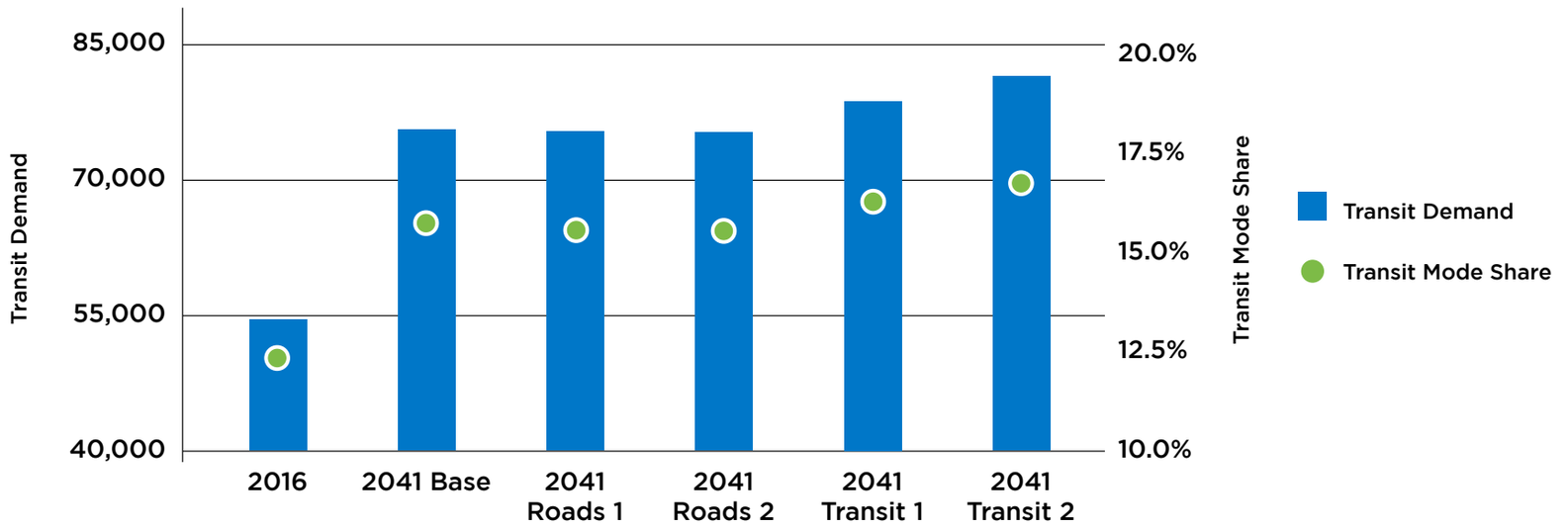


Figure 5.11 AM Peak Period Automobile Demand and Driver Share in Mississauga

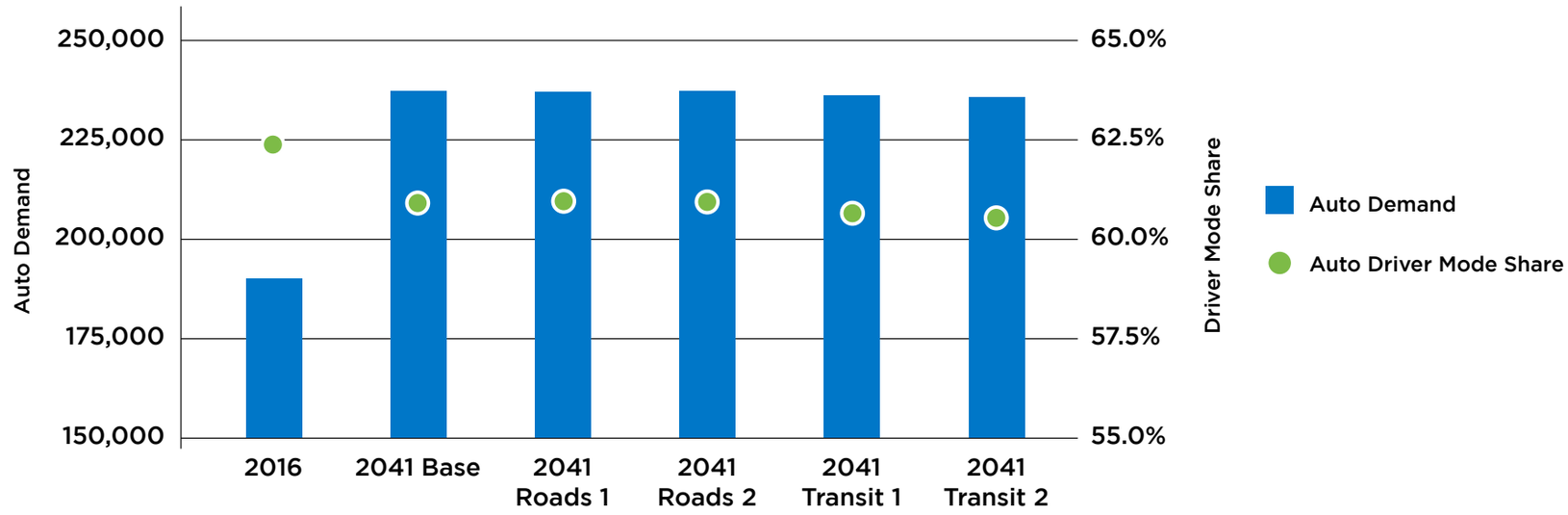


Figure 5.12 Vehicle Kilometres Travelled (VKT) in Mississauga, AM Peak Period

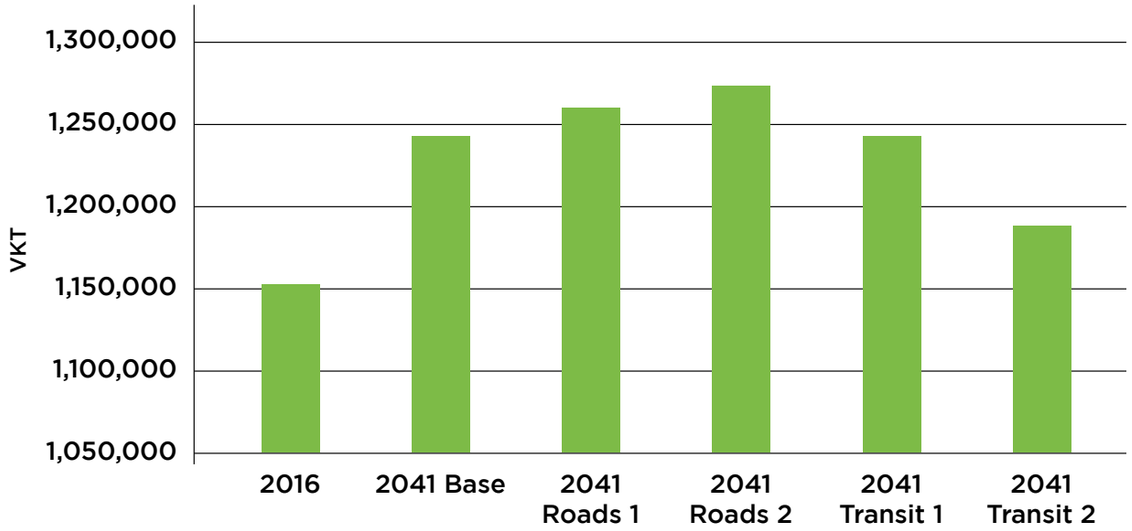
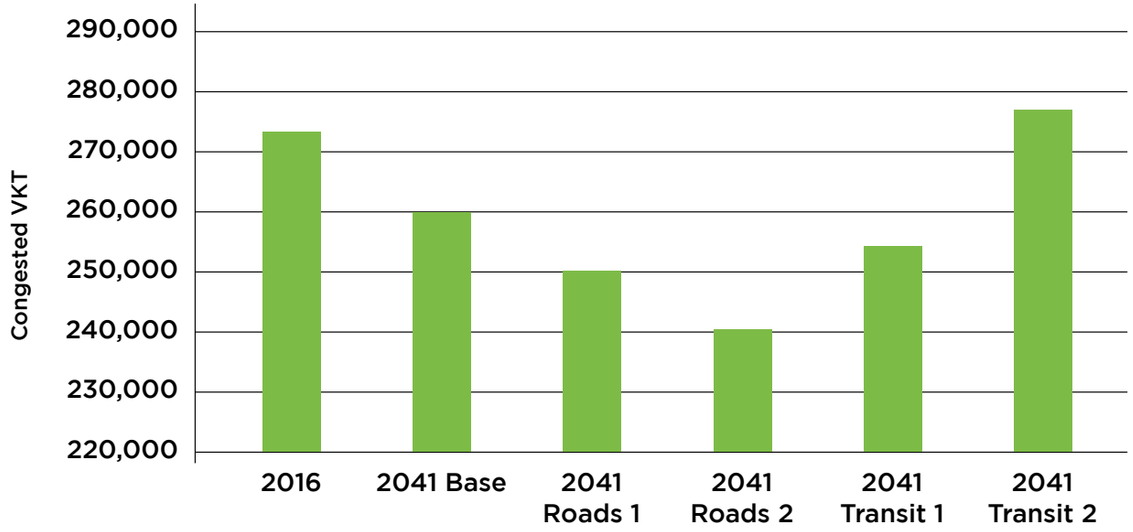


Figure 5.13 Congested Vehicle-Kilometres Travelled (Congested VKT) in Mississauga, AM Peak PeriodPeak Period



5.3.2 Evaluation

Each alternative solution was evaluated relative to each other using the measures presented in **Section 5.1**. For each criterion, alternatives were assigned a rating of 'poor', 'acceptable', 'good', or 'preferred' as presented in **Table 5.2**. A more detailed description of the evaluation is provided in **Background Report C — Development and Evaluation of Alternatives**.

The evaluation identified positive benefits in all the alternatives. The outcome of the evaluation was to carry forward advantageous components of each of the alternative solutions in the development of the preferred transit and road networks.

Table 5.2 Summary of Evaluation of Alternative Solutions

Criteria	Transit-focused Solutions		Road-focused Solutions			Network Solutions	
	1	2	3	5	6	4	7
	Bus-only lanes	Transit priority measures	HOV lanes	New or wider roads	Road diets	Traffic system mgt.	Travel demand mgt.
Vision • TMP vision • Study directions	Preferred	Preferred	Good	Acceptable	Preferred	Preferred	Good
Mobility Impacts • network performance • network capacity • reductions in delays	Preferred	Preferred	Good	Good	Acceptable	Preferred	Good
Community Impacts • community health and active lifestyles • transportation equity	Preferred	Preferred	Preferred	Acceptable	Good	Good	Preferred
Economic Impacts • support businesses • goods movement	Acceptable	Good	Acceptable	Good	Acceptable	Preferred	Good
Environmental Impacts • natural environment • cultural heritage	Good	Preferred	Good	Acceptable	Good	Preferred	Preferred
Financial Impacts • capital costs • operations and maintenance costs	Acceptable	Preferred	Acceptable	Poor	Good	Preferred	Good
Recommendation	Good Carry forward at strategic locations.	Preferred	Acceptable Carry forward at strategic locations.	Acceptable Carry forward at strategic locations.	Good Carry forward at strategic locations.	Preferred	Good

06 The Recommended Network

- A Complete Streets Approach
- Long-Term Transit Network
- Long-Term Road Network

The Recommended Network

The recommended solution for Mississauga's future transportation system is a combination of the alternative strategies that support travel by a variety of modes and the movement of goods.

The recommended transit and road networks combine higher-order transit, transit priority corridors, key road capacity improvements at strategic locations and, where appropriate, road balancing. The network infrastructure is supported by city-wide transportation system management and travel demand management initiatives. The recommended transportation system is described below.

6.1 A Complete Streets Approach

6.1.1 Multi-Modal Network

Providing greater mobility choice is key to promoting equity for all road users and supporting the health and economic vitality of the community. In recent years, the City of Mississauga has taken great strides in identifying a multi-modal transportation plan, investing in transit infrastructure and services, building sidewalks, bike lanes and multi-use paths, and managing the traffic system.

A Complete Streets approach is a concept that provides a transportation network that supports the movement of people by all modes. Complete Streets are streets that are carefully and thoughtfully planned, designed, constructed, and maintained to account for the safety and comfort of the intended road users regardless of the mode of transportation. The City of Mississauga recently completed Changing Lanes, a project that developed the Mississauga Complete Streets Guide that provides techniques for the City to plan and design streets for users of all ages, abilities, and modes of travel. An example complete street cross-section is shown in **Figure 6.1**.

The recommendations of the TRIP study are focused on the function of a roadway — how it connects communities and how it moves people and goods. These recommendations are intended to align with the Mississauga Complete Streets Guide with respect to street classification, street design, including convenient and comfortable pedestrian access and incorporating space for transit amenities, transit priority measures, and dedicated transit lanes.

The TRIP recommended network includes transit priority on roads under Peel Region's jurisdiction. Future collaboration with Peel Region and Metrolinx will be needed to advance transit priority infrastructure on Regional Roads.

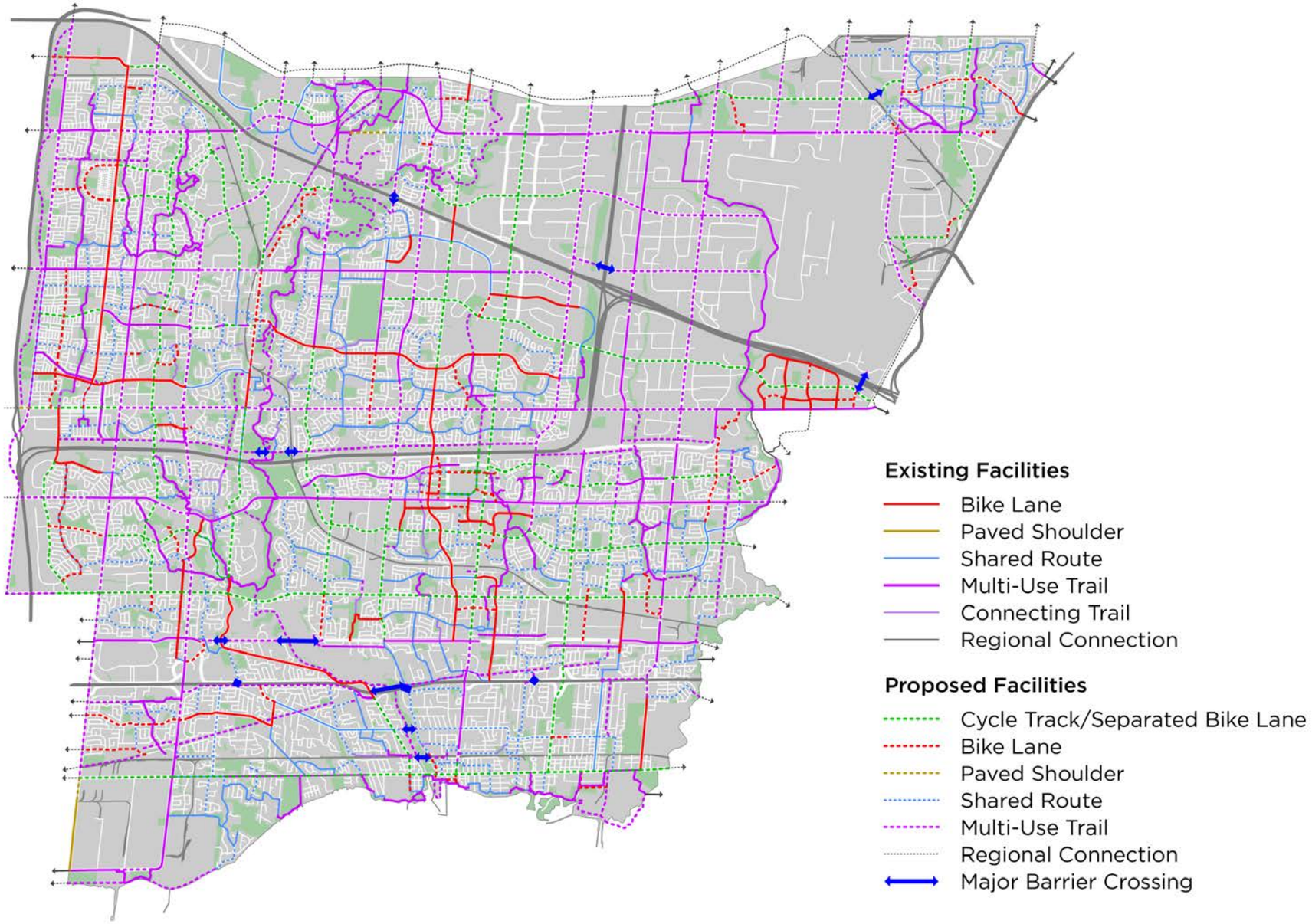
6.1.2 Integrating with the Pedestrian and Cycling Networks

The recommended transit and road networks are intended to integrate with the pedestrian and cycling networks identified in Mississauga's Cycling Master Plan as shown in **Figure 6.2** and Pedestrian Master Plan as shown in **Figure 6.3**. Wherever possible, implementation of cycling and pedestrian improvements should be bundled with road or transit projects and be designed and constructed as one integrated project.

Figure 6.1 Arterial Strategic Growth Demonstration Cross-section — Complete Streets Guide

Source: Complete Streets Guide, Figure A.1.

Figure 6.2 Proposed Future Cycling Network



Source: Mississauga Cycling Master Plan (2018), Figure 15.

Figure 6.3 Pedestrian Network Priorities

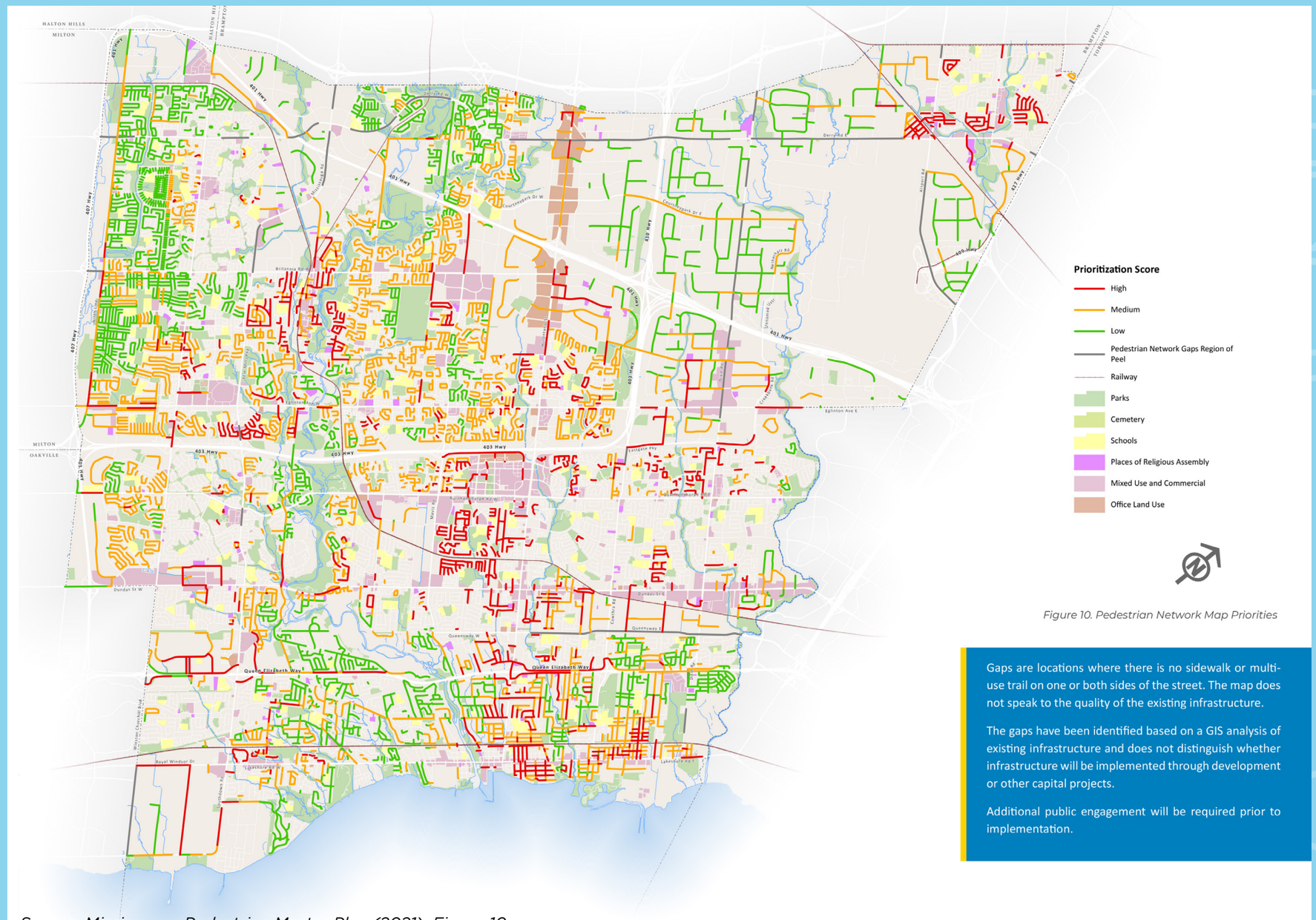


Figure 10. Pedestrian Network Map Priorities

Gaps are locations where there is no sidewalk or multi-use trail on one or both sides of the street. The map does not speak to the quality of the existing infrastructure.

The gaps have been identified based on a GIS analysis of existing infrastructure and does not distinguish whether infrastructure will be implemented through development or other capital projects.

Additional public engagement will be required prior to implementation.

Source: Mississauga Pedestrian Master Plan (2021), Figure 10.

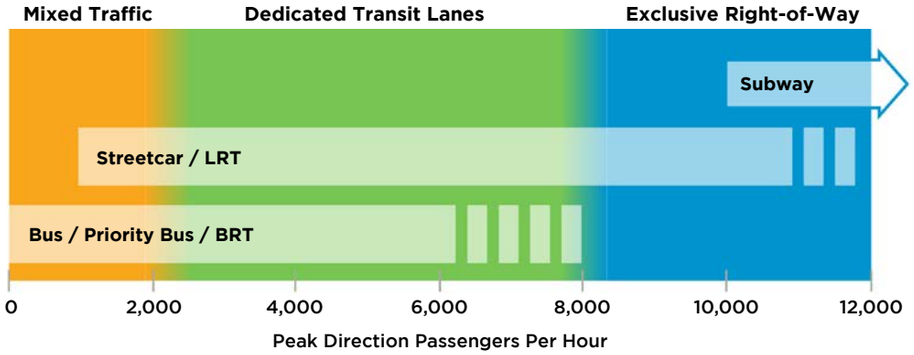
6.2 Long-Term Transit Network

6.2.1 Transit Priority and Higher Order Transit

The modelling exercise undertaken for the analysis of alternative solutions (discussed in **Section 5.3.1**) identified corridors with the highest transit demands. The review of pre-pandemic and mid-pandemic ridership highlighted transit corridors that served essential businesses/services and essential workers. These factors, combined with the City's vision to provide high-quality, frequent transit service to most of Mississauga, informed the recommended transit network.

Ultimately, the type of transit service on each transit corridor will be determined through subsequent environmental assessment studies to be led by City of Mississauga, with potential partnership opportunities with Metrolinx, TTC, Brampton Transit, and/or Oakville Transit. Consideration can also be given to implementing projects in phases — for example, intersection-level transit priority measures may be implemented in the near term while planning for fully dedicated transit lanes in the longer term. **Figure 6.4** shows the wide range of transit ridership capacities that are accommodated by different transit types, from buses operating in mixed traffic to fully exclusive transit rights-of-way such as a subway.

Figure 6.4 Typical Ridership Capacity by Transit Corridor Type



Recommended transit infrastructure improvements have been categorized into three categories based on anticipated future ridership, areas with known rights-of-way limitations, and transportation equity considerations.

- **Transit Priority 1 (Higher Order Transit)**
  Key corridors with the highest ridership that support BRT or LRT in dedicated transit lanes. Corridors that are recommended for higher order transit are presented in **Table 6.1**.
- **Transit Priority 2 (Transit Lanes)**
  Key corridors with moderate to high ridership where curbside transit lanes would improve transit operations. Corridors that are recommended for Transit Priority 2 are presented in **Table 6.2**.
- **Transit Priority 3 (Intersection Improvements)**
  Other key corridors/segments where strategic intersection transit improvements are recommended to provide efficient transit operations and network connectivity. Corridors where intersection transit priority measures should be considered (but specific intersection locations are not identified) are presented in **Table 6.3**.

A map of the recommended long-term transit network is shown in **Figure 6.5**. As noted, the ultimate type of transit service on each corridor, for example BRT, LRT, or some other form, will be refined and confirmed through subsequent planning and implementation stages.

Table 6.1 Transit Priority 1 Corridors – Higher Order Transit

#	Corridor	Segment	Rationale
Existing and Current Higher Order Transit Projects			
T-1	**Transitway**	Winston Churchill Boulevard to Erin Mills Parkway; Hurontario Street to Renforth Drive.	Existing dedicated transit lanes.
T-2	**Dundas Street**	Confederation Parkway to Etobicoke Creek (Mississauga-Toronto border).	Planned dedicated transit lanes.
T-3	**Hurontario Street**	Lakeshore Road to Highway 407 (Mississauga-Brampton border).	Planned dedicated LRT lanes. Under construction.
T-4	**Lakeshore Road**	East Avenue to Etobicoke Creek (Mississauga-Toronto border).	Planned dedicated transit lanes.
Recommended Higher Order Transit (Transit Priority 1)			
T-5	**Britannia Road**	Winston Churchill Boulevard to Hurontario Street	Moderate/high ridership and key corridor for east-west network connectivity.
T-6	**Burnhamthorpe Road**	Erin Mills Parkway to Mississauga-Toronto border	High ridership corridor. Serves equity deserving areas. Key corridor for east-west connectivity to downtown and Toronto.
T-7	**Derry Road**	Winston Churchill Boulevard to Goreway Drive Brampton to Queensway	High ridership corridor. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations.
T-8	**Dixie Road**	Brampton to Queensway	High ridership corridor. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations.
T-9	**Dundas Street**	Oakville to Confederation Parkway	Moderate/high ridership segment. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations and supports of east-west GTA connection (Burlington to Toronto).
T-10	**Eglinton Avenue**	Ninth Line to Etobicoke Creek Station	High ridership corridor. Connects to Transitway and Toronto,
T-11	**Erin Mills Parkway**	Brampton to Eglinton Avenue	Moderate/high ridership and key corridor for network connectivity. Serves west side of Mississauga with connection to Brampton. Aligns with 2041 RTP recommendations.
T-12	**Lakeshore Road**	Hurontario Street to East Avenue	High ridership and key segment for network connectivity.
T-13	**Mavis Road**	Mississauga-Brampton border to Burnhamthorpe Road	Moderate/high ridership. Serves equity deserving areas. Key corridor for network connectivity to Brampton.

Table 6.2 Transit Priority 2 Corridors – Transit Lanes and/or Other Corridor Priority Measures

#	Corridor	Segment	Rationale
Recommended Transit Lanes (Transit Priority 2)			
T-14	**Airport Road**	Mississauga-Brampton border to Mississauga-Toronto border	Key corridor for network connectivity to Brampton and Toronto. Serves employment areas.
T-15	**Erin Mills Parkway — Southdown Road**	Eglinton Avenue to Royal Windsor Drive-Lakeshore Road	Moderate/high ridership and key corridor for network connectivity. Serves west side of Mississauga.
T-16	**Winston Churchill Boulevard**	Derry Road to Royal Windsor Drive	Moderate/high ridership and key corridor for network connectivity.

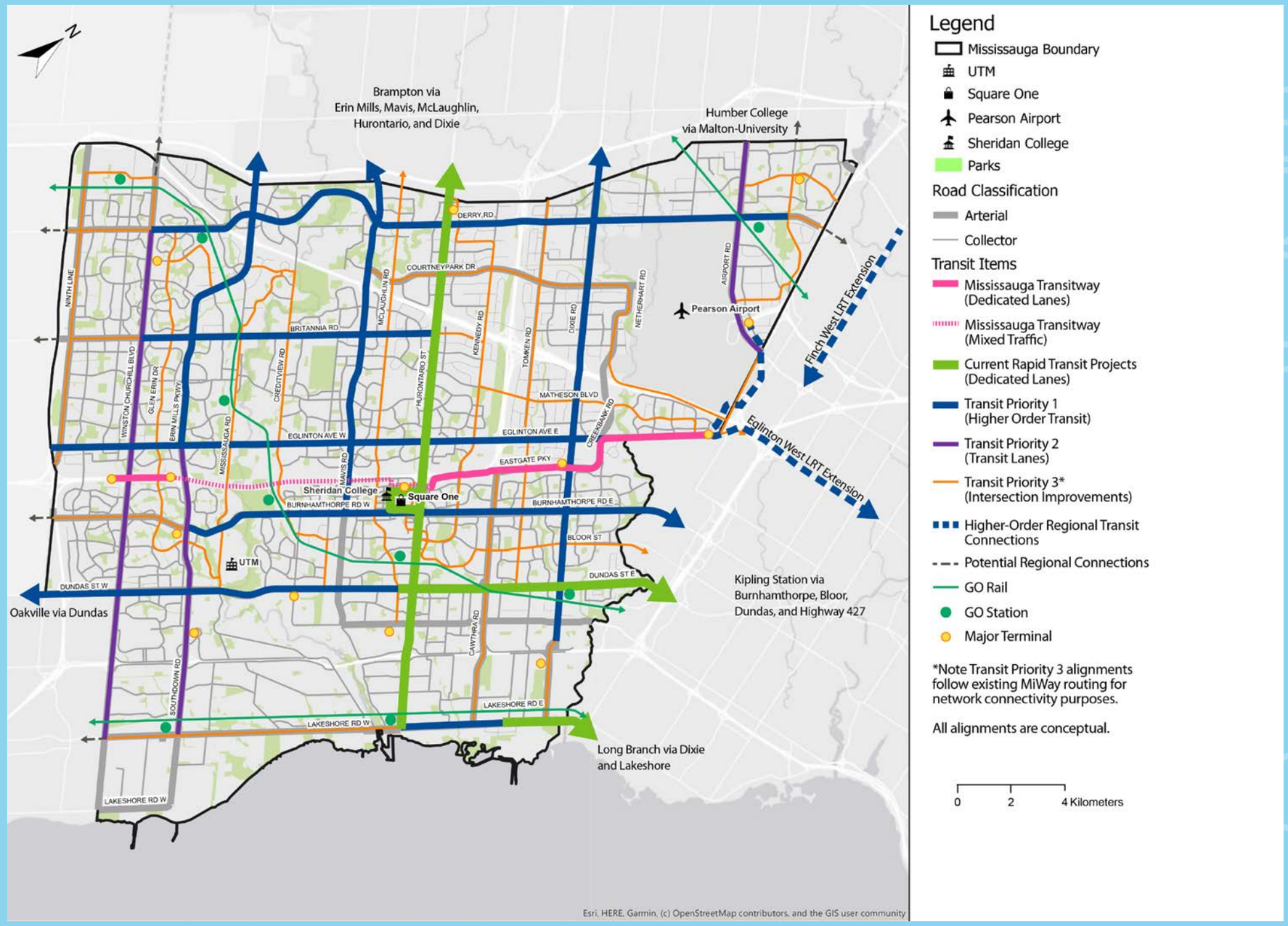
Table 6.3 Transit Priority 3 Corridors – Intersection Transit Priority

#	Corridor	Segment	Rationale
Intersection Transit Priority (Transit Priority 3)			
T-17	**Bloor Street**	Central Parkway to Etobicoke Creek	Key corridor for network connectivity. Serves equity deserving areas.
T-18	**Britannia Road — Matheson Boulevard**	Ninth Line to Winston Churchill Boulevard; Hurontario Street to Kennedy Road; Kennedy Road to Renforth Drive	Key segment for network connectivity. Extends Transit Priority recommendations on other segments (Transit Priority 1 between Winston Churchill Boulevard and Hurontario Street).
T-19	**Burnhamthorpe Road**	Mississauga-Oakville border to Erin Mills Parkway	Key segment for network connectivity. Extends Transit Priority 1 recommendations on other segments of Burnhamthorpe Road and connects to growth areas in Oakville.
T-20	**Cawthra Road**	Eastgate Parkway to Lakeshore Road	Key corridor for network connectivity.

Table 6.3 Transit Priority 3 Corridors – Intersection Transit Priority *(continued)*

#	Corridor	Segment	Rationale
T-21	**Courtneypark Drive — Convair Drive**	Mavis Road to Renforth Drive	Key corridor for network connectivity. Serves employment areas.
T-22	**Creditview Road — Wolfedale Road**	Argentia Road to Dundas Street	Key corridor for network connectivity.
T-23	**Derry Road**	Mississauga-Milton border to Winston Churchill Boulevard	Key segment for network connectivity. Extends Transit Priority 1 recommendations on other segments of Derry Road and connects to growth areas in Milton.
T-24	**Dixie Road**	Queensway to Lakeshore Road	Key segment for network connectivity. Extends Transit Priority 1 recommendations on other Dixie Road segments.
T-25	**Glen Erin Drive**	Derry Road to The Collegeway	Key corridor for network connectivity.
T-26	**Goreway Drive — American Drive**	Derry Road to Airport Road	Key segment for network connectivity. Supports existing routing used to connect with Mississauga Transitway
T-27	**Kennedy Road — Central Parkway**	Derry Road to Hurontario Street	Key corridor for network connectivity. Serves equity deserving and employment areas.
T-28	**Lakeshore Road**	Winston Churchill Boulevard to Hurontario Street	Key segment for network connectivity. Serves south Mississauga.
T-29	**McLaughlin Road — Confederation Parkway**	Brampton to The Queensway	Key corridor for network connectivity. Serves equity deserving areas.
T-30	**Mississauga Road**	Britannia Road to Dundas Street	Key corridor for network connectivity.
T-31	**Ninth Line**	Argentia Road to Eglinton Avenue	Key corridor for network connectivity.
T-32	**Tomken Road**	Mississauga-Brampton border to Dundas Street	Key corridor for network connectivity. Serves equity deserving and employment areas.

Figure 6.5 Recommended Transit Network



Bike Share to Support Transit

Public shared bike, e-bike, or e-scooter systems provide users with affordable access to a shared pool of mobility devices. These are a popular strategy to support and promote cycling as a travel mode and also to help address the 'first and last mile' challenge of making public transit more accessible.

Mississauga launched a system of shared pedal-assist bicycles and kick-style scooters in 2024.

6.2.2 'First and Last Mile'

The term 'first and last mile' is used to describe the beginning and end of every transit trip between the individual's starting point (e.g., home) and transit stop and, at the other end, between the transit stop and final destination (e.g., workplace). The first and last mile for many transit trips is on foot, but could also be by bicycle, car, or another mode. Sidewalks, walkway connections, and safe crossing opportunities to/from transit stops and stations are important components of a high-quality transit network. Pedestrian connections should be designed without barriers to provide access to all users. Even those who access transit via park-and-ride or passenger-drop-off have a segment of the trip on foot when transferring between modes.

The Pedestrian Network Priorities map (see **Figure 6.3**), developed through the Pedestrian Master Plan, shows the pedestrian network gaps on the road and trail network. One of the considerations in the prioritization process was proximity to transit and improving connections to transit. Proposed improvements that closed network gaps and connected to transit stations and stops scored higher in priority.

Similarly, the proposed Cycling Network (see **Figure 6.2**), developed through the Cycling Master Plan, includes cycling routes that provide direct connections to major transit station areas. The Cycling Master Plan also identified that access to transit is a key priority to make public transit more accessible and that a bike share program can help address the first and last mile challenge.

Downtown Movement Plan

The Downtown Movement Plan study is the technical background study to the Downtown Strategy. It is an implementable, multi-modal transportation plan for Downtown Mississauga to help achieve Mississauga's Transportation Master Plan objectives. Recommendations for key road and transit projects in the downtown (such as the Hazel McCallion LRT Loop) have been included in the TRIP work for consistency between plans.

6.3 Long-Term Road Network

6.3.1 Road Network

The analysis and evaluation of alternative solutions identified new roads and road widening as an acceptable solution. While the strategy scored low under several criteria, it is recognized that roads are necessary to provide connections and capacity to new development areas and across major barriers while also providing capacity for the movement of goods. In many cases, new roads or road widenings also provide improved connectivity for transit, walking, and cycling.

Concurrent with the TRIP study, the Downtown Movement Plan (DMP) assessed transportation needs in Mississauga's downtown core. The DMP identified the need for an extension of Square One Drive but also determined that the Northern Distribution Road (and related connections) and widening of Centre View Drive, proposed in previous studies, are not required.

New crossings of major barriers that provide significant network benefits are included in the recommended network. These include an extension of Britannia Road West across Highway 410 and extension of Creekbank Road across Highway 401.

The road network summarized in **Table 6.4** and shown in **Figure 6.6** are recommended to serve growth areas, employment areas, and provide improved capacity across major barriers.

Table 6.4 Road Network Modifications

Corridor		Description	Limits	Rationale
In Current Capital Program or Planned by Others				
R-1	**Burnhamthorpe Road**	Widen 2 to 4 lanes	Ninth Line to Loyalist Drive	Committed funding in Capital Program.
R-2	**Courtneypark Drive**	Widening across Highway 410	Kennedy Road to Dixie Road	Committed funding in Capital Program.
R-3	**Creditview Road**	Widen 2 to 4 lanes	Bancroft Road to Old Creditview Road	Committed funding in Capital Program.
R-4	**Goreway Drive**	Grade separation	At CN Rail	Committed funding in Capital Program.
R-5	**Kariya Drive**	South of Elm Drive	Central Parkway West	Committed funding in Capital Program.
R-6	**Ninth Line**	Widen 2 to 4 lanes	Derry Road to Eglinton Avenue	Committed funding in Capital Program.
R-7	**Sheridan Park Drive**	New 2 lane road	Speakman Drive (W) to Speakman Drive (E)	Committed funding in Capital Program.
R-8	**Square One Drive W**	New 2 lane road	Confederation Parkway to Rathburn Road	Committed funding in Capital Program.
R-9	**The Exchange**	New 2 lane road	Burnhamthorpe Road to Webb Drive	Committed funding in Capital Program.
R-10	**Webb Drive**	New 2 lane road	Duke of York Boulevard to Kariya Drive	Committed funding in Capital Program.
R-11	**Winston Churchill Boulevard (RR 19)**	Widen 4 to 6 lanes / Lane conversion for transit	Dundas Street to South Sheridan Way	Proposed widening in Peel's Long Range Transportation Plan.
Capacity and Connectivity — Growth Areas				
R-12	**Ninth Line**	Widen 2 to 4 lanes	Derry Road to Highway 401	Supports growth areas in northwest Mississauga.
R-13	**Ninth Line at Canadian Pacific Railway (CPR)**	New grade separation	At CPR crossing	Traffic growth on Ninth Line and potential expansion of Milton GO line.
R-14	**Square One Drive**	New 2 lane road	Hurontario Street to Rathburn Road	Downtown Movement Plan.

Table 6.4 Road Network Modifications *(continued)*

Corridor		Description	Limits	Rationale
Improving Access to Employment / Industrial Areas and Goods Movement				
R-15	**Belgrave Drive Ramp Extension**	New 4 lane road; widen existing 2 lanes to 4 lanes.	Mavis Road to Cantay Road	Supports employment areas and goods movement.
R-16	**Courtneypark Drive**	Widen 4 to 6 lanes	Maritz Drive to Kennedy Road	Serves major employment areas on both sides of Highway 410. Continuation of widened Courtneypark Drive east of Kennedy Road.
R-17	**Creekbank Road**	New 4 lane road	Britannia Road to Highway 401	Supports employment areas, goods movement, and access from Highway 401. Provides additional north-south capacity that could help offset proposed transit improvements along Dixie Road.
R-18		New 2 lane road; widen existing 2 lanes to 4 lanes.	Highway 401 to Matheson Boulevard	
R-19	**Drew Road**	New 2 lane road	Dixie Road to Tomken Road	Supports employment areas and goods movement access.
R-20	**Drew Road**	Widen 2 to 4 lanes	Torbram Road to Airport Road	Supports employment areas and goods movement access.
R-21	**Drew Road at Canadian National Railway (CNR)**	New grade separation	At CNR crossing	Supports employment areas and goods movement access.
R-22	**Edwards Boulevard**	New 2 lane road	Topflight Drive to Hurontario Street	Supports employment areas and goods movement access.
R-23	**Whittle Road**	Widen 2 to 4 lanes	Britannia Road to Matheson Boulevard	Supports employment areas and goods movement access.

Table 6.4 Road Network Modifications *(continued)*

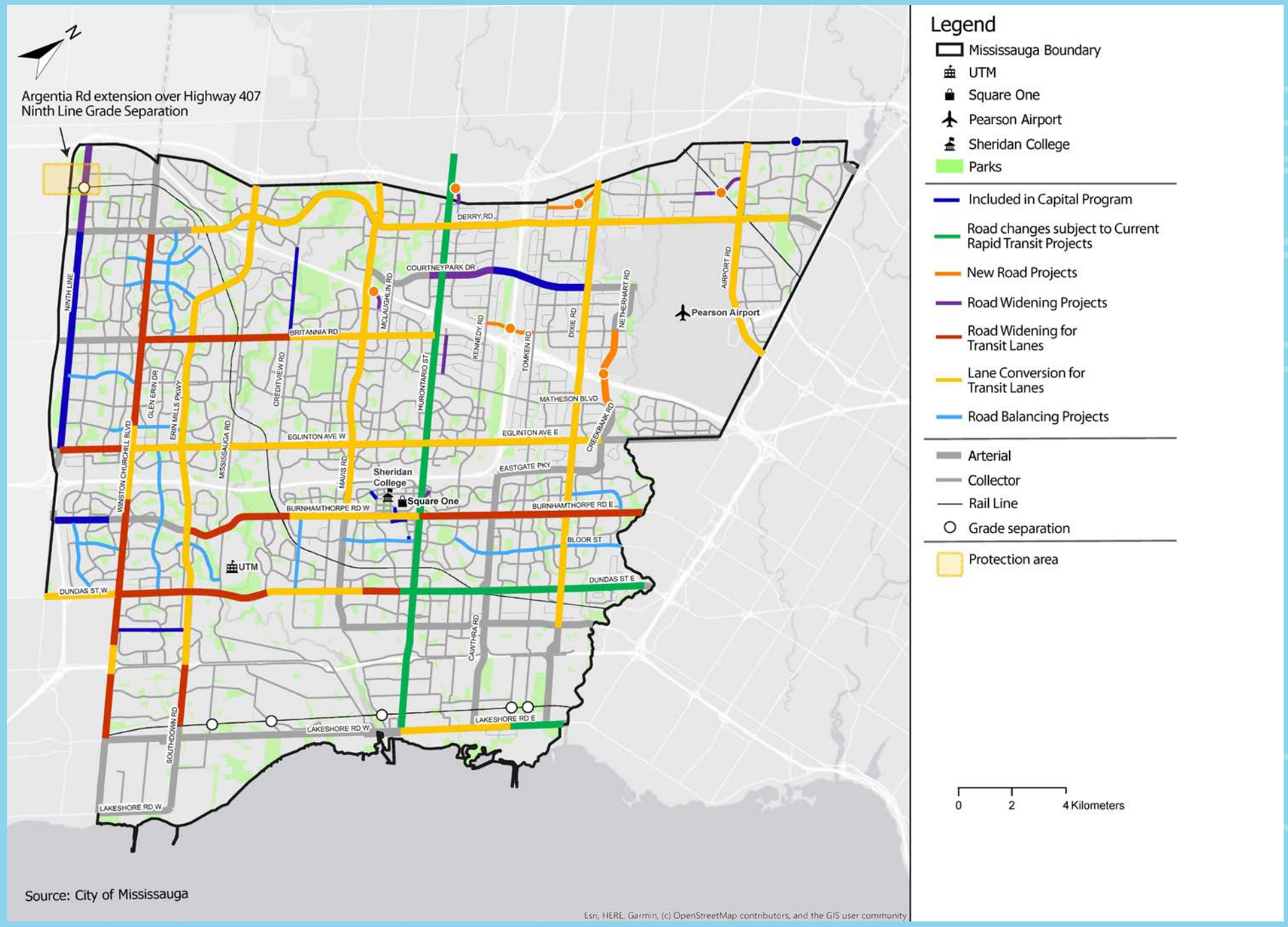
Corridor		Description	Limits	Rationale
Crossings of Major Barriers				
R-24	**Argentia Road Future Extension**	New crossing of 407ETR	Tenth Line to 407ETR	Protect for future crossing across Highway 407ETR into Milton. Need is tied to future growth.
R-25	**Britannia Road Extension**	New crossing of Highway 410 (north of Highway 401)	Kennedy Road to Tomken Road	Supports goods movement on both sides of Highway 410. Provides additional east-west capacity that could help offset proposed transit improvements on Derry Road.
R-26	**Lakeshore West rail corridor**	Grade Separation	Up to 5 locations	**See "Rail Grade Separation".** Explore grade separation at Clarkson Road, Lorne Park Road, Stavebank Road, and Ogden Avenue locations. Monitor Haig Boulevard for potential grade separation.
Transit-related Road Projects				
R-27	**Airport Road**	Lane conversion for transit	Mississauga-Brampton border to Mississauga-Toronto border	Key corridor for network connectivity to Brampton and Toronto. Supports employment areas.
R-28	**Britannia Road (RR3)**	Widen for transit and crossing of Credit River	Winston Churchill Boulevard to Creditview Road	Provides critical person-carrying capacity across Credit River with additional benefit of improving transit operations. Moderate/high ridership and key corridor for network connectivity.
R-29		Lane conversion for transit	Creditview Road to Hurontario Street	
R-30	**Burnhamthorpe Road**	Widen for transit and crossing of Credit River	Erin Mills Parkway to Erindale GO	High transit ridership demand. Provides additional person-carrying capacity across the Credit River and improves transit operations.
R-31		Lane conversion for transit	Erindale GO to Hurontario Street	
R-32		Widen for transit	Hurontario Street to Mississauga-Toronto border	
R-33	**Derry Road (RR 5)**	Lane conversion for transit	Winston Churchill Boulevard to Goreway Drive	High transit ridership demand. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations.
R-34	**Dixie Road**	Lane conversion for transit	Brampton to Queensway	High transit ridership corridor. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations.

Table 6.4 Road Network Modifications *(continued)*

Corridor		Description	Limits	Rationale
R-35	**Dundas Street**	Lane conversion for transit	Oakville to Winston Churchill Boulevard	Moderate/high ridership. Serves equity deserving and employment areas. Aligns with 2041 RTP recommendations and supports east-west GTA connection (Burlington to Toronto).
R-36		Widen for transit	Winston Churchill Boulevard to The Credit Woodlands, including across Credit River	
R-37		Lane conversion for transit	The Credit Woodlands to Clayhill Road	
R-38		Widen for transit	Clayhill Road to Confederation Parkway	
R-39	**Eglinton Avenue**	Widen for transit	Ninth Line to Winston Churchill Boulevard	High transit ridership corridor. Connects to Transitway and Toronto,
R-40		Lane conversion for transit	Winston Churchill Boulevard to Creekbank Road	
R-41	**Erin Mills Parkway**	Lane conversion for transit	Mississauga-Brampton border to South of QEW	Erin Mills-Southdown is a key corridor for network connectivity. Serves west side of Mississauga with connection to Brampton and Clarkson GO. Aligns with 2041 RTP recommendations.
R-42	**Lakeshore Road**	Lane conversion for transit	Hurontario Street to East Avenue	Key segment for network connectivity. Serves south Mississauga.
R-43	**Mavis Road**	Lane conversion for transit	Mississauga-Brampton border to Burnhamthorpe Road	Moderate/high ridership. Serves equity deserving areas.
R-44	**Southdown Road**	Widen for transit	South of QEW to Clarkson GO	Moderate/high ridership. Serves equity deserving areas.
R-45	**Winston Churchill Boulevard**	Widen for transit	Derry Road to Erin Centre Boulevard;	Moderate/high ridership and key corridor for network connectivity.
R-46		Lane conversion for transit	Erin Centre Boulevard to Unity Gate	
R-47		Widen for transit	Unity Gate to Dundas Street	
R-48		Lane conversion for transit	Dundas Street to South Sheridan Way	
R-49		Widen for transit	South Sheridan Way to Royal Windsor Drive	

Note: Roadworks related to current rapid transit projects (Hurontario LRT and Lakeshore BRT) are not included in the above table.

Figure 6.6 Recommended Road Network



6.3.2 Road Balancing

The intent of road balancing is to make efficient use of existing roadway space. Road balancing may reduce one or more vehicle lanes and repurpose that space for other uses and road users. Potential road balancing or road diet projects were explored throughout Mississauga to identify locations where there are opportunities to shift underutilized road space to other modes and other uses. Candidate locations include projects identified in the City's Active Transportation COVID-19 Recovery Framework and other 4-lane major collector or local streets that provide connections to community destinations.

The road balancing assessment was conducted at the network planning level and considered vehicle capacity in the 2041 network, current and anticipated built form adjacent to the corridor, and plans for active transportation facilities along the corridor. The City of Mississauga already has plans to implement road balancing projects on Glen Erin Drive (between Battleford Road and Britannia Road), Aquitaine Avenue (between Tenth Avenue and Millcreek Drive), and Bloor Street (between Central Parkway and Etobicoke Creek).

Roads where a road balancing project are recommended for consideration are listed below and shown in **Figure 6.6**:

- Battleford Road — Tenth Line to Erin Mills Parkway
- Central Parkway — Mavis Road to Hurontario Street
- Erin Centre Boulevard — Tenth Line to Erin Mills Parkway
- Erindale Station Road — Burnhamthorpe Road to Dundas Street
- Glen Erin Drive — Eglinton Avenue to Dundas Street
- Rathburn Road — Dixie Road to Burhamthorpe Road
- Ridgeway Drive — Burhamthorpe Road to Dundas Street
- The Collegeway — Ridgeway Drive to Winston Churchill Boulevard
- The Collegeway — South Millway to Mississauga Road
- Thomas Street — Ninth Line to Winston Churchill Boulevard

Additional documentation of the road balancing assessment is provided in **Background Report D – Transportation Assessment Technical Report**.

To confirm the preferred road balancing configuration for each road corridor, further design and consultation is required. Factors to be considered in the final selection of road and active transportation configuration and facilities include adjacent land uses, frequency of driveway access, traffic demand (including transit vehicles and trucks), urban design, utilities, and cost.

6.3.3 Rail Grade Separation

Anticipated growth in passenger rail, freight rail, and road traffic at level (at-grade) rail crossing locations increases exposure between trains and road users of all modes, raising safety concerns. A planning-level assessment of the need for grade separation at existing at-grade rail crossings was conducted, that considered existing and future exposure indices, other risk and safety criteria, impacts to adjacent properties and property access, and potential construction cost. Documentation of the assessment is provided in **Background Report E – Grade Separation Review Technical Memo**.

At present, there are 27 at-grade rail crossings in Mississauga, with seven crossings located on corridors with only GO Transit passenger rail service, 12 crossings located on corridors with both GO Transit and freight rail service, and eight crossings on corridors with only freight rail service.

Assessment Methodology

The Transport Canada Grade Separation Assessment Guidelines provides guidance to railway companies and road authorities on how to assess the need for grade separation to eliminate road/rail conflicts at crossing locations. The assessment considers quantitative traffic and safety related criteria (with thresholds) as well as other qualitative criteria.

For this planning-level assessment, criteria such as Annual Average Daily Traffic (AADT) volumes, train volumes, and a cross product of AADT and train volumes (commonly referred to as an 'exposure index') were considered primary indicators. Transport Canada criteria such as queuing, vehicle delay, and level-of-service (LOS) were not considered in this assessment due to availability of data.

Road-rail grade separation is only one approach to eliminating the conflict between train traffic and roadway users. Other alternatives to eliminate conflicts are:

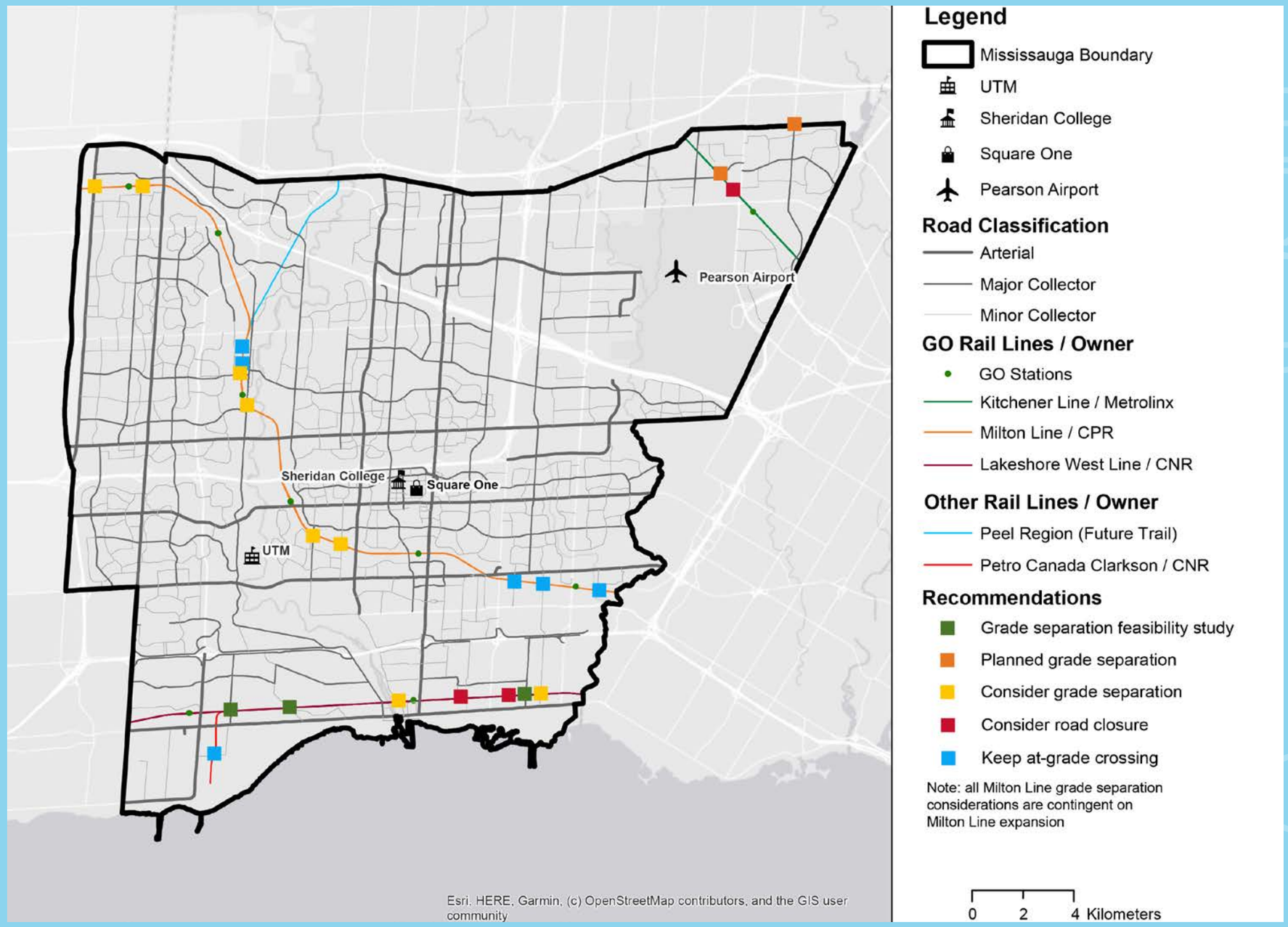
- **Closing the roadway to all road users**. All road users must find an alternative route to cross the rail corridor while rail traffic is unimpeded.
- **Closing the roadway but providing an active transportation bridge or tunnel**. Vehicular road users (including transit) must find an alternative route to cross the rail corridor. Pedestrians and cyclists are accommodated via a bridge or tunnel across the rail corridor. However, bridges or tunnels may be perceived as inconvenient due to stairs or long ramps or may be perceived as unsafe due to poor natural surveillance if not appropriately designed.
- **Closing railway corridor or diverting rail traffic**. Given the far-reaching implications of such a change, this option was not considered.

Recommendations

All at-grade rail crossings along GO Lakeshore West Line and GO Kitchener Line are identified for modification or monitoring due to anticipated passenger rail volumes. Recommendations are described below and shown in **Figure 6.7**.

- GO Lakeshore West Line
  - » Grade separation should be further explored at Clarkson Road, Lorne Park Road, Stavebank Road, and Ogden Avenue locations. These locations have a high cross product from both high train frequencies (approximately 208 daily trains) and moderate traffic volumes. A feasibility study is needed to determine constructability and property/access impacts at each location.
  - » Revus Avenue is recommended for continued monitoring. Revus Avenue carries low traffic volumes and a road closure could be considered as the next step to address potential safety concerns. It is noted that Revus Avenue is the only road crossing within the 2 km span between Hurontario Street and Cawthra Road. If the road is closed, an active transportation structure should be explored to provide pedestrian and cyclist access across the rail corridor.
  - » A traffic study to determine the feasibility of a road closure at Alexandra Avenue should be conducted. The recommended grade separation at Ogden Avenue, located less than 300 m to the east, would maintain connectivity across the rail line for residents in the immediate area.
  - » Haig Boulevard is recommended for continued monitoring due to proposed development in the area that may result in additional traffic diverted to this corridor. Grade separation should be considered as a next step to address potential safety concerns.
- GO Kitchener Line
  - » A road closure should be considered at Scarboro Street. An existing grade-separated crossing on Airport Road is located approximately 350 m to the east. An active transportation structure should be considered to maintain a pedestrian and cycling connection between the neighbourhoods on both sides of the rail corridor.
  - » The future Drew Road extension should be grade separated at the rail line. High train volumes (approximately 176 daily trains) and high future traffic volumes, including truck traffic generated in the industrial areas on both sides of rail line, meet the criteria for grade separation.
- GO Milton Line
  - » If train traffic is maintained at current levels along the Milton Line, no changes are recommended for crossings of the Milton Line. GO rail service on this corridor is planned for expansion – with more frequent service and for more hours of the day – resulting in the need for grade separation at several crossing locations along the corridor. Based on GO expansion projects on other corridors, it is expected that Metrolinx would explore grade separations or road closures as part of a Milton GO expansion study.
  - » Grade separation at crossing locations near Streetsville may be difficult to implement given the surrounding Community Node context and established land uses on both sides of the rail line.

Figure 6.7 Recommendations for Rail Crossings



07

Achieving the Plan

- Aligning Land Use / Growth
- Promoting Sustainable Modes
- Climate Change Mitigation and Adaptation
- Phasing and Costs
- Monitoring the Plan

Achieving the Plan

7.1 Aligning Land Use / Growth

Mississauga's past growth has shaped the transportation system in the city today. Starting in the 1960s, significant new commercial and industrial growth expanded across Mississauga. Development in that era was designed to accommodate the automobile, resulting in patterns of neighbourhoods, shopping areas, and workplaces connected primarily by major corridors that were convenient for the automobile but less attractive for walking, cycling, or transit. Today, Mississauga is working to build a world-class, transit-oriented city that gives all Mississauga residents and visitors the freedom to move. This will require alignment between land use planning and transportation planning to put more trip origin-destination pairs in proximity to high quality active transportation facilities and transit services.

Significant growth is planned in Mississauga over the next two decades, creating an opportunity to better align future land use and transportation planning. Mississauga is strategically focusing that growth in designated growth areas, including Urban Growth Centres, Major Transit Station Areas, Major Nodes, Community Nodes and Neighbourhoods as defined in the Official Plan. Aligning growth with this land use structure will help optimize the use of the City's infrastructure and minimize impacts on the natural environment. The updated Mississauga Official Plan (draft February 2024) identifies each of these growth areas in Schedule 1 City Structure.

Transit-supportive land uses and transit-supportive densities of 300 to 400 people and jobs per hectare (ppj/ha) are envisioned for the Urban Growth Centre, which exceeds the 200 ppj/ha for urban growth centres defined in the Provincial Growth Plan. Major Transit Station Areas (MTSA) are targeted to meet a minimum density of 160 ppj/ha adjacent to LRT or BRT stations and 150 ppj/ha adjacent to GO stations. MTSAs provide areas for strategic growth that prioritize active transportation and are well-connected by transit.

In response to the Provincial government's targets to increase housing supply over the next 10 years, the City of Mississauga has prepared **Growing Mississauga: An Action Plan for New Housing** (February 2023) to help facilitate more housing and identify areas where private sector or senior government assistance is required.

ACTIONS

- **Support policies that advance transit-oriented development.**
- **Encourage infill development and compact land uses in new growth areas.**
- **Conduct Secondary Plan, Transportation Master Plan, or high-level MTSA studies for focused growth areas to provide guidance and coordination on the identification and implementation of well-connected transportation systems to support these growth areas.**
- **Explore opportunities to integrate emerging mobility options in new development areas and in existing development.**

7.2 Promoting Sustainable Modes

Sustainable travel modes include walking, cycling, taking transit, ridesharing, and ridehailing. Electrified bicycles or scooters also enable greater comfort and convenience for choosing these modes. New forms of shared mobility can also encourage more sustainable travel. In shared mobility, users pay a fee to use a shared goods/service for a limited amount of time (e.g., pay per use) without ownership, such as carshare, bikeshare or scootershare. Those that do not own a car are more likely to use a wider range of modes, including more sustainable modes, depending on their destination, time of travel, trip purpose, and access to safe and convenient infrastructure or services at the start, middle, and end of a journey.

Telework, or working from home, was already becoming more popular prior to the COVID-19 pandemic and has since completely changed commuting patterns for many office workers. The 2021 Census reported that 33.6% of the employed labour force in Mississauga indicated "Worked at Home" as their place of work status, compared to only 6.3% in the previous Census in 2016. The increased share of workers that work from home one or more days per week significantly reduces peak period commuting travel. The longer-term impacts of "hybrid" work on peak period commuter travel demand is still somewhat uncertain and it will be difficult to quantitatively measure trips that are not being made. Indications are that MiWay transit ridership has returned to and exceed pre-pandemic ridership levels and road traffic appears to be as busy as before.

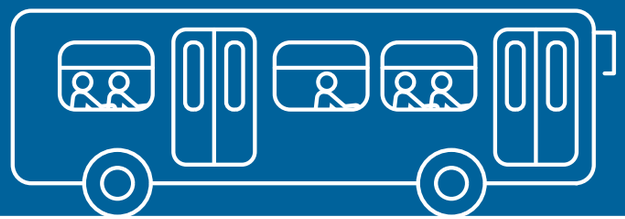
One of the barriers to transportation equity is the cost of owning and operating a car. Sustainable travel modes are often more affordable for the end-user compared to car ownership. Providing sustainable travel options that are convenient, comfortable, accessible, and affordable eliminates many transportation-related barriers to equity.

The City's 2009 Strategic Plan recognized that increasing transit mode share is a key step towards the vision for future Mississauga. At that time, a goal was set to double transit mode share from 11% in 2009 to 22% at the end of the 40-year strategic plan. The Mississauga TMP placed further emphasis on the mode share vision – with a goal that 50% of all trips to, from, and within Mississauga be made by sustainable modes. It was envisioned that more short trips would be made by walking and cycling, and more long trips would be made by transit and other shared vehicles.

The analysis for the TRIP study also identified shifts in mode share where the driving mode is shown to decrease with higher development densities, reflecting real-life observations of travel mode choice. The shift from driving to a sustainable mode is particularly pronounced in downtown Mississauga and other key growth areas, but smaller shifts are also expected across Mississauga where higher development densities will result in a shift towards transit and other sustainable modes. The modelling analysis shows that morning peak period trips starting in Mississauga will be 49% sustainable in 2041, and internal (Mississauga to Mississauga) trips will be over 52% sustainable. The challenge will be shifting more trips made between Mississauga and external areas to sustainable modes. This will require a coordinated effort of transit providers across municipal and regional boundaries.

ACTIONS

- Address connectivity and crossing gaps in the pedestrian network as identified in the Mississauga Pedestrian Master Plan, prioritizing connections to transit.
- Construct new cycling facilities and upgrade existing cycling facilities as identified in the Mississauga Cycling Master Plan.
- Implement transit priority measures to improve transit operations along corridors and at intersections as identified in the Recommended Transit Network.
- Focus additional transit service improvements on providing consistent, frequent service across Mississauga.
- Work with Metrolinx, Brampton Transit, Toronto Transit Commission, and Oakville Transit to provide seamless transit service across municipal boundaries.
- Explore increases to municipal parking fees at key destinations to manage parking demand and support a shift to more sustainable modes.
- Require a TDM Plan for new development, following the City's TDM Strategy and Implementation Plan, in Mississauga's growth areas to promote more efficient use of the transportation system.
- Require new development to provide sites that are barrier-free pedestrian, cycling, and transit connections.
- Collaborate with employers in major employment areas to promote and incentivize sustainable transportation solutions.



7.3 Climate Change Mitigation and Adaptation

Promoting sustainable travel modes will help mitigate transportation-related emissions in support of the **Mississauga Climate Change Action Plan**. Advancements in technology such as alternative fuels, higher fuel efficiencies, and clean technologies will further reduce transportation-related emissions.

New transportation infrastructure should be planned and designed to lessen impacts of climate change and maintain an acceptable level of functionality and service in future extreme weather events. This could include using LID (Low Impact Development) practices such as bioswales, permeable pavement, or infiltration trenches to help manage urban stormwater run-off and using more resilient materials and designs for critical transportation corridors and intersections.

ACTIONS

- Support sustainable transportation modes such as walking, cycling and transit by integrating the future road and transit networks with the City's cycling and pedestrian networks.
- Expand the pedestrian and cycling network to provide better access to safe, comfortable, and convenient facilities for walking and cycling.
- Invest in transit infrastructure and frequent transit service to provide improved access to high-quality transit service.
- Adopt zero emission vehicles for transit and city fleet and develop a strategy to accelerate the adoption of zero emission vehicles in the community.
- Work with industry and businesses to adopt lower-emission vehicles in the goods movement sector.
- Apply LID practices and green infrastructure to manage stormwater run-off.
- When constructing or replacing transportation infrastructure, design for climate impacts such as heat waves, heavy rainfalls, wind storms, and extreme cold.

7.4 Phasing and Costs

TRIP is a 20-year plan for the road and transit program. Phasing of the individual projects in the recommended road and transit networks considered the following:

- Timing of infrastructure projects that are already under construction (e.g., Hazel McCallion LRT)
- Status of environmental assessments for projects where planning and design are already underway.
- Anticipated timelines for adjacent development growth.
- Projects that serve equity-deserving areas or employment areas.
- Estimated capacity and ridership needs from travel demand forecasting.

The recommended projects have been prioritized into three phases:

- Short term (by 2027)
- Medium term (2028 to 2031)
- Long term (2032 to 2041)

A detailed table project costs and phase for the road and transit projects is provided in **Appendix A** along with phasing maps. These costs do not include any studies required for project implementation.

The capital cost to implement the recommended transit and road network infrastructure is presented in **Table 7.1**. The costs shown are total capital costs and do not account for potential funding from external sources such as grants from other levels of government or through development charges. There may also be partnership and cost sharing opportunities for some projects. Examples include working with Peel Region and/or City of Brampton to implement transit infrastructure along Dixie Road, a Regional Road that crosses municipal boundaries, and working with Metrolinx and/or the railway companies for grade separation projects.

The proposed phasing of the recommended projects may change. The City of Mississauga undertakes an on-going process to prioritize transportation infrastructure projects through the annual capital budget and 10-year capital forecast. Through this process, timing for individual projects many be advanced or deferred due to changes in development growth, traffic and ridership volumes, or evolving municipal priorities.

Table 7.1 Phasing and Costs (2024$)(Millions)

Network	Short Term (2027)	Medium Term (2031)	Long Term (2041)	Total Capital Cost
Road	$154.0	$371.3	$274.9	$800.2
Transit	$567.0	$3,158.5	$3,588.0	$7,313.5
Total	**$720.9**	**$3,529.8**	**$3,862.9**	**$8,113.7**

Notes: The Long Term capital cost includes the Argentia Road crossing of Hwy 407. Property costs assume 2022 values.

ACTIONS

- **Plan infrastructure investments in a phased approach to accommodate travel demands of planned growth and intensification.**
- **Work with provincial and federal governments to maximize grant funding opportunities for transit priority infrastructure.**
- **Develop and maintain the City's transit and road networks to provide safe, sustainable connections in, around and through Mississauga.**

7.5 Monitoring the Plan

This **Transit and Road Infrastructure Plan** is intended to be a living document that reflects the transportation needs of Mississauga. As the plan is implemented, it is necessary to regularly review progress and monitor effectiveness in meeting the plan's vision and directions.

7.5.1 Indicators and Measures

In coordination with the Transportation Master Plan Progress Reports, undertaken for the Mississauga TMP, the City may also provide an update of the progress of TRIP.

Indicators that could be used to measure progress for TRIP are described in **Table 7.2** along with the potential source of data.

ACTIONS

- **Support data collection initiatives that assist in the regular monitoring of network performance and transportation goals.**
- **Consider investing in a smart video camera network to provide real-time and persistent data source for traffic volumes, pedestrian and bicycle volumes, curbside activities in high-conflict areas, collisions, and detection of high frequency of near-miss incidents.**

Table 7.2 Monitoring Indicators

Direction	Indicator [Data]
Support the City's Climate Change Action Plan	• Proportion of trips in Mississauga undertaken by sustainable, lower-emission modes. [TTS / Census] • Proportion of infrastructure projects that include LID or green infrastructure. [Public Works] • Proportion of short trips made using active transportation. [TTS] • Car ownership per household. [TTS] • Monitor vehicular traffic volume trends over time
Move people and goods more reliably	• Percent complete of road and transit networks. [Capital Program] • MiWay transit ridership. [MiWay] • Average peak period travel times. [Travel Demand Model] • Average truck travel times. [Travel Surveys]
Implement more Transit Priority Corridors	• Percent complete of transit priority corridors. [Capital Program]
Expand infrastructure and services where needed to ensure equitable access	• MiWay transit service coverage (percentage of residents and jobs within 400 m of transit routes) [MiWay] • Proportion of accessible transit stops. [MiWay]
Support Mississauga's Vision Zero initiative	• Deaths and serious injuries from transportation per capita. [Peel Regional Police]
Provide a connected, integrated transportation system	• Average number of jobs within 30 minutes by transit for Mississauga residents. [Travel Demand Model] • Average commuting travel time. [Travel Demand Model / Travel Surveys] • Number of connecting riders between MiWay and GO Transit at transit stations. [MiWay / Metrolinx]

TTS = Transportation Tomorrow Survey

7.5.2 Plan Updates

The **Transit and Road Infrastructure Plan** is one of several plans that work together with the Mississauga Transportation Master Plan and the Mississauga Official Plan to direct implementation of the transportation system and growth in the City of Mississauga.

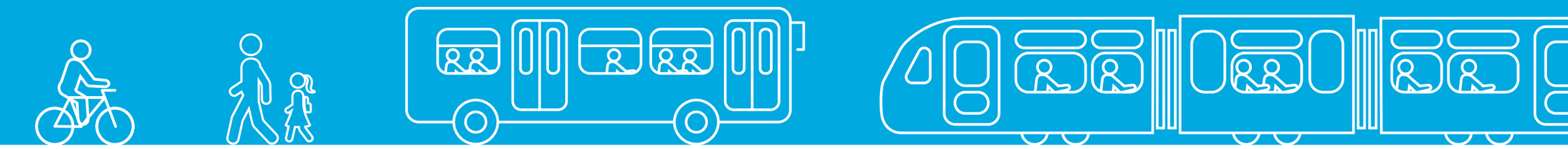
Regular reviews to monitor the plan will provide an assessment of the plan's effectiveness in meeting the vision and goals. The review process will also provide an opportunity to review the assumptions that went into the plan and consider the need for an update to address major changes in policy context or strategic priorities.

ACTIONS

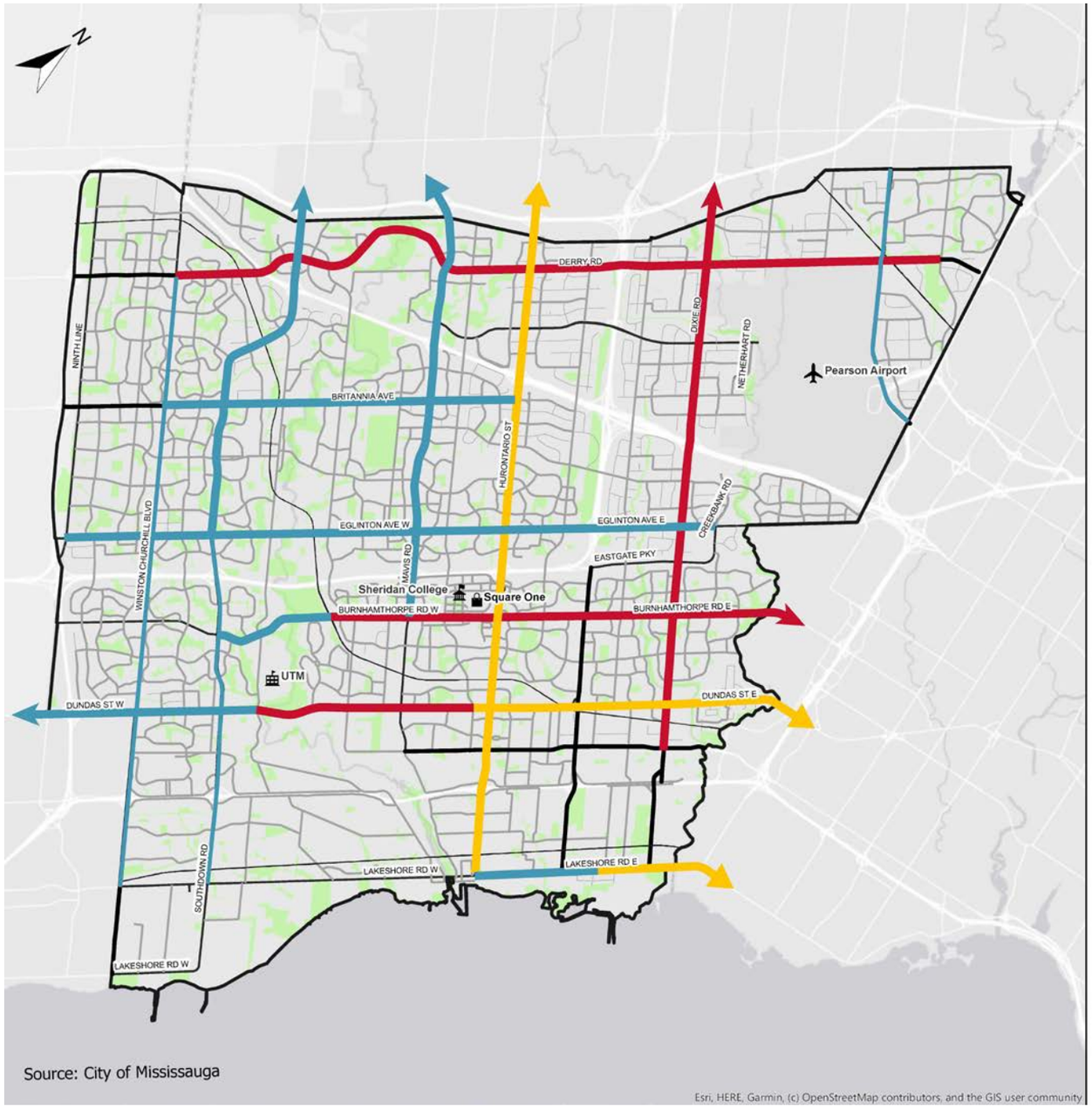
- Update relevant schedules of the Official Plan to incorporate the recommended road and transit networks.
- Undertake regular reviews (typically every 5 years in alignment with the Census and Transportation Tomorrow Survey data) of the MTMP and TRIP to determine the need for a full update.

Appendix A

Capital Cost and Phasing



Transit Network — Recommended Phasing



Legend

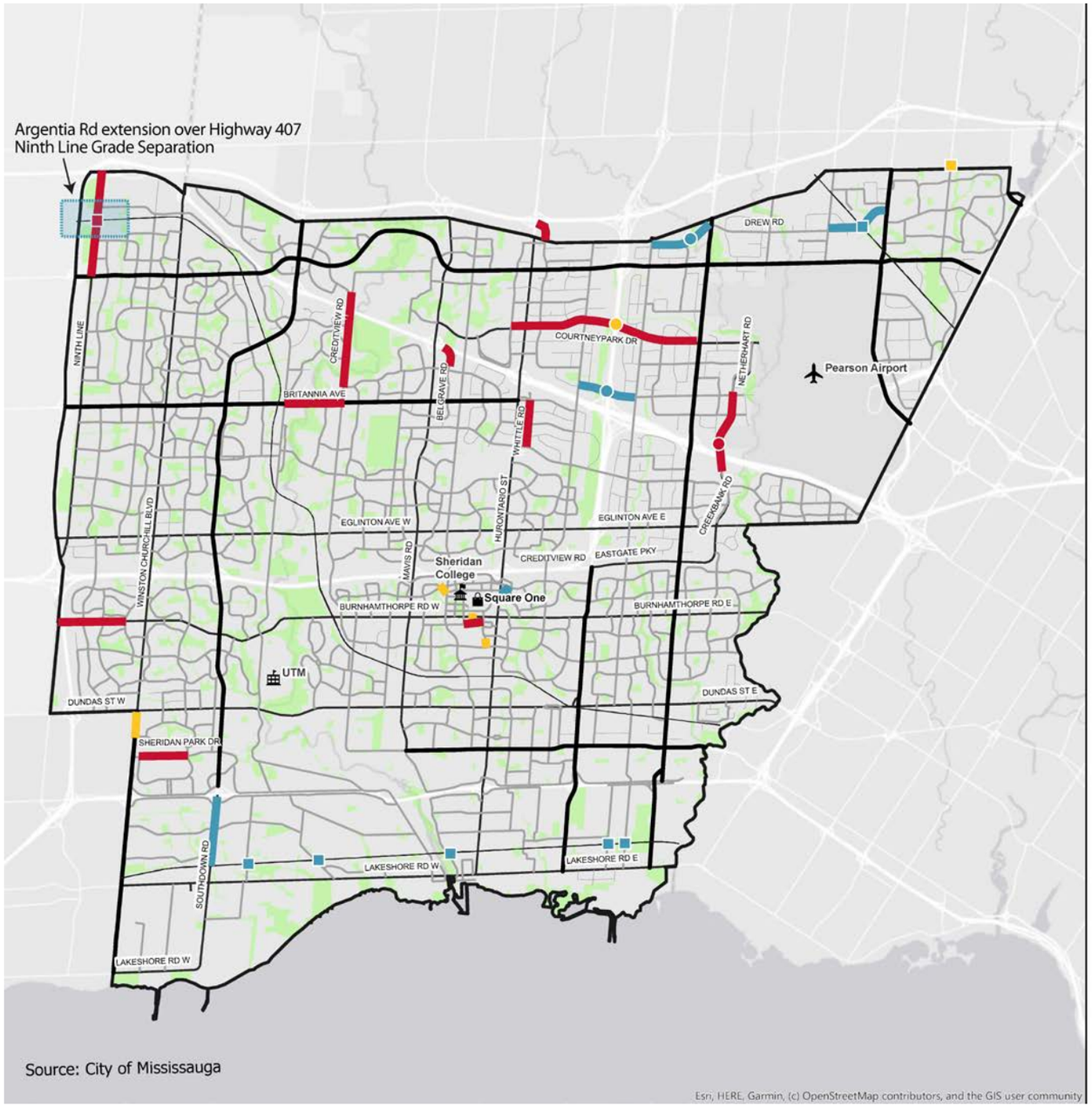
- Mississauga Boundary
- UTM
- Square One
- Pearson Airport
- Sheridan College
- Parks

Road Classification

- Regional Road (Arterial)
- Arterial
- Collector
- Short term transit projects
- Medium term transit projects
- Long term transit projects
- Transit Priority 1 (Higher Order Transit)
- Transit Priority 2 (Transit Lanes)

0 2 4 Kilometers

Road Network — Recommended Phasing



Legend

- Mississauga Boundary
- UTM
- Square One
- Pearson Airport
- Sheridan College
- Parks

Road Classification

- Regional Road (Arterial)
- Arterial
- Collector
- Short term road projects
- Medium term road projects
- Long term road projects
- Road-road grade separation
- Rail-road grade separation
- Protection area

0 2 4 Kilometers

Capital Cost Estimates (2024$) (in millions)

Transit Network

ID #	CORRIDOR	FROM	TO	TRANSIT PRIORITY TYPE	IMP. LTH. (KM)	EX. LN.	FUT. LN. (w/Bus Lane)	ADDIT LANE KM.	2024$ TOTAL COSTS (millions)	PHASING			MCEA Schedule / TPAP
										2027	by 2031	by 2041	
	Base Transit Projects - Committed Funding / Capital Plan Projects												
T-1	Transitway	(No Change)		TP 1									n/a
T-2	Dundas Street	Confederation Parkway	Toronto Boundary	TP 1	5.5	4-6	6		489.69	Short			TPAP
T-3	Hurontario Street	Hazel McCallion LRT (under construction)		TP 1									TPAP
T-4	Lakeshore Road	Cawthra Road	Etobicoke Creek	TP 1	2.4	4	6		75.01	Short			TPAP
	Subtotal Base Transit Projects				**7.9**				**564.70**	**564.70**	**0.00**	**0.00**	
	Recommended Transit Projects												
	Transit 1												
T-5a	Britannia Road West	Winston Churchill Boulevard	Creditview Road	TP 1	4.10	4	6	8.2	278.39			Long	TPAP
T-5b	Britannia Road West	Creditview Road	Hurontario Street	TP 1	4.10	6	6	0	278.39			Long	
T-6a	Burnhamthorpe Road	Hurontario Street	East border	TP 1	6.30	4	6	12.6	427.77		Medium		TPAP
T-6b	Burnhamthorpe Road	Erindale GO Station	Hurontario Street	TP 1	3.90	6	6	0	264.81		Medium		
T-6c	Burnhamthorpe Road	Erin Mills Parkway	Erindale GO Station	TP 1	2.85	4	6	5.7	193.52			Long	
T-7	Derry Road	Winston Churchill Boulevard	Goreway Drive	TP 1	18.70	6	6	0	1269.73		Medium		TPAP
T-8	Dixie Road	Brampton border	Queensway	TP 1	12.50	6	6	0	848.75		Medium		TPAP
T-9a	Dundas Street	West border	Winston Churchill Boulevard	TP 1	2.00	6	6	0	135.80			Long	TPAP
T-9b	Dundas Street	Winston Churchill Boulevard	Mississauga Road	TP 1	2.85	4	6	5.7	193.52			Long	
T-9c	Dundas Street	Mississauga Road	The Credit Woodlands	TP 1	1.40	4	6	2.8	95.06		Medium		
T-9d	Dundas Street	The Credit Woodlands	Clayhill Road	TP 1	2.70	6	6	0	183.33		Medium		
T-9e	Dundas Street	Clayhill Road	Confederation Parkway	TP 1	0.95	4	6	1.9	64.51		Medium		
T-10a	Eglinton Avenue	Ninth Line	Winston Churchill Boulevard	TP 1	2.00	4	6	4	135.80			Long	TPAP
T-10b	Eglinton Avenue	Winston Churchill Boulevard	Creekbank Road	TP 1	13.20	6	6	0	896.28			Long	
T-11	Erin Mills Parkway	North border	Eglinton Avenue	TP 1	8.20	6	6	0	556.78			Long	TPAP
T-12	Lakeshore Road	Hurontario Street	East Avenue	TP 1	2.40	4	4	0	162.96			Long	TPAP
T-13	Mavis Road	North border	Burnhamthorpe Road	TP 1	9.50	6	6	0	645.05			Long	TPAP
	Transit 2												
T-14	Airport Road	Mississauga-Brampton border	Mississauga-Toronto border	TP 2	6.25	6	6	0	14.48			Long	Schedule C (Exempt if no physical construction required)
T-15a	Erin Mills Parkway	Eglinton Avenue	South of QEW	TP 2	6.10	6	6	0	3.25			Long	Schedule C (Screen for TPAP)
T-15b	Southdown Road (EMP)	South of QEW	Clarkson GO	TP 2	1.70	4	6	3.4	11.47			Long	
T-15c	Southdown Road (EMP)	Clarkson GO	Lakeshore Road	TP 2	0.40	4	4	0	0.00			Long	
T-16a	Winston Churchill Boulevard	Derry Road	Erin Centre Boulevard	TP 2	5.50	4	6	11	37.09			Long	Schedule C (Screen for TPAP)
T-16b	Winston Churchill Boulevard	Erin Centre Boulevard	Highway 403/Transitway	TP 2	1.50	6	6	0	0.80			Long	
T-16c	Winston Churchill Boulevard	Highway 403/Transitway	Unity Gate	TP 2	0.70	4+	4+	0	0.00			Long	
T-16d	Winston Churchill Boulevard	Unity Gate	Dundas Street	TP 2	3.20	4	6	6.4	21.58			Long	
T-16e	Winston Churchill Boulevard	Dundas Street	North Sheridan Way	TP 2	1.50	6	6	0	0.80			Long	
T-16f	Winston Churchill Boulevard	North Sheridan Way	South Sheridan Way	TP 2	0.78	4+	4+	0	0.00			Long	
T-16g	Winston Churchill Boulevard	South Sheridan Way	Royal Windsor Drive	TP 2	2.60	4	6	5.2	17.54			Long	
	Transit 3												
T-17 to T-32	Various Locations (transit priority improvements at approx 30 intersections)			TP 3					11.31	Short	Medium	Long	Exempt
	Subtotal Recommended Transit Projects								**6,748.75**	**2.26**	**3,158.48**	**3,588.01**	
Total Transit Projects									**7,313.46**	**566.97**	**3,158.48**	**3,588.01**	

Capital Cost Estimates (2024$) (in millions)

Road Network

ID #	MAJOR ROADWAY SECTIONS	FROM	TO	PROJECT TYPE	IMP. LTH. (KM)	EX. LN.	FUT. LN.	ADDIT LANE KM.	2024$ TOTAL COSTS (millions)	PHASING			MCEA Schedule
										2027	by 2031	by 2041	
	Base Road Projects - Committed Funding / Capital Plan Projects												
R-1	Burnhamthorpe Road	Ninth Line	Loyalist		1.6	2	4	3.2	13.41		Medium		Schedule C
R-2a	Courtneypark Drive	Kennedy Road	Dixie Road		2.7	4	6	5.4	38.87		Medium		Schedule C
R-2b	Courtneypark Drive and Highway 410 Interchange				-				10.77	Short			Schedule C
R-3	Creditview Road	Bancroft Road	Old Creditview Road		2.2	2	4	4.4	41.15		Medium		Schedule C
R-4	Goreway Drive	CNR			-				43.95	Short			Schedule C
R-5	Kariya Drive	South of Elm Drive	Central Parkway West		0.15	0	2	0.3	2.13	Short			Schedule B
R-6	Ninth Line	Eglinton Avenue	Derry Road		6.15	2	4	12.3	58.44	Short			Schedule C
R-7	Sheridan Park Drive	West Leg Speakman Drive	East Leg Speakman Drive		0.9	0	2	1.8	4.14		Medium		Schedule C
R-8	Square One Drive W	Confederation Parkway	Rathburn Road		0.26	0	2	0.52	25.86	Short			Schedule C
R-9	The Exchange	Burnhamthorpe Road	Webb Drive		0.26	0	2	0.52	12.81	Short			Schedule C
R-10	Webb Drive	Duke of York Boulevard	Kariya Drive		0.3	0	2	0.6	17.07		Medium		Schedule C
R-11	Winston Churchill Boulevard (RR 19)	Dundas Street	South Sheridan Way						n/a				
	Subtotal Base Road Projects				**14.52**			**29.04**	**268.60**	**153.96**	**114.64**	**0.00**	
	Recommended Road Projects												
	Capacity and Connectivity - Growth Areas												
R-12	Ninth Line	Derry Road	Highway 401	Widen 2 to 4	2.45	2	4	4.90	12.92		Medium		Schedule C
R-13	Ninth Line	CPR		Grade Separation	-	-	-	-	43.95		Medium		Schedule B
R-14	Square One Drive E	Hurontario Street	Rathburn Road	New 2-lane	0.25	0	2	0.50	26.60			Long	Schedule C
	Improving Access to Employment / Industrial Areas and Goods Movement												
R-15a	Belgrave Road Ramp Extension	Mavis Road	Belgrave Road (existing north	New 4-lane	0.23	0	4	0.74	9.09		Medium		Schedule C
R-15b	Belgrave Road	Belgrave Road	Cantay	Widen 2 to 4	0.37	2	4	0.74	3.78		Medium		Schedule C
R-16	Courtneypark Drive	Maritz Drive	Kennedy Road	Widen 4 to 6	1.73	4	6	2.20	12.43		Medium		Schedule C
R-17	Creekbank Road	Highway 401	Britannia Road	New 4-lane	1.60	0	4	6.40	55.63		Medium		
R-18a	Creekbank Road	Creekbank Road	south of Highway 401	New 4-lane	0.30	0	4	1.20	1.59		Medium		Schedule C
R-18b	Creekbank Road	Matheson Boulevard	North Limit of Creekbank Rd	Widen 2 to 4	0.30	2	4	0.60	1.94		Medium		
R-19	Drew Road	Dixie Road	Tomken Road	New 4-lane	1.50	0	4	6.00	16.61			Long	
R-20a	Drew Road	Torbram Road	660m east of Torbram Road	Widen 2 to 4	0.66	2	4	1.32	3.56			Long	Schedule C
R-20b	Drew Road	660m east of Torbram Road	530m west of Airport Road	New 4-lane	0.40	0	4	1.60	4.73			Long	
R-21	Drew Road	CNR		Grade Separation	-	-	-	-	43.95			Long	
R-22	Edwards Boulevard	Topflight Drive	Hurontario Street	New 2-lane	0.50	0	2	1.00	12.08		Medium		Schedule C
R-23	Whittle Road	Britannia Road	Matheson Boulevard	Widen 2 to 4	1.10	2	4	2.20	6.24		Medium		Schedule C
	Crossing and Major Barriers												
R-24	Argentia Road Future Extension	Tenth Line	Highway 407	New 2-lane	1.80	0	2	3.60	33.98			Long	Schedule C
R-25	Britannia Road East Extension	Kennedy Road	Tomken Road	New 4-lane	1.00	0	4	4.00	48.51			Long	Schedule C
R-26	Grade Separations (5 x Lakeshore West Line)			Grade Separation	-	-	-	-	194.00		Medium	Long	Schedule B
	Subtotal Recommended Road Projects				**14.19**			**37.00**	**531.60**	**0.00**	**256.67**	**274.94**	
Total Road Network									**800.20**	**153.96**	**371.30**	**274.94**	

TOTAL ROAD AND TRANSIT	**8,113.66**	**720.92**	**3,529.78**	**3,862.95**

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