APPENDIX D

NETWORK ASSESSMENT REPORT

MISSISSAUGA

Pedestrian Master Plan

PREPARED BY

URBAN SYSTEMS

CONTENTS


MCS

1.0 INTRODUCTION

The City of Mississauga is located in Southern Ontario within the Greater Toronto and Hamilton Area (GTHA) with a growing population of over 720,000. Transportation in Mississauga is at an exciting turning point with visionary policy that supports a more walkable city. The City's 2019 Transportation Master Plan (TMP) prioritizes a city where "everyone and everything will have the freedom to move safely, easily and efficiently to anywhere at any time." At the forefront of this vision is moving away from single occupancy vehicle use towards more sustainable, equitable and accessible modes of travel such as transit, cycling and walking.

Goals of the TMP include safe streets with zero fatalities, an integrated and inclusive transportation system, attractive and efficient connectivity between people and places and a system that is healthy for its users and the planet.

The City is committed to ensuring that the multi-modal transportation options in Mississauga support people of all ages and abilities. An objective of the TMP is that half of trips to, from and within Mississauga are taken by sustainable modes, which are identified as walking, cycling, transit, ridesharing and ridehailing.

The policies and directions outlined in the TMP support a more walkable city and development of the Pedestrian Master Plan will serve as a road map for achieving the visions and goals of the City.

> Our definition of pedestrians and walking includes people walking for a variety of trip purposes, including trips for transportation (travelling to school, work, transit and to run errands). It also includes recreational trips, including people walking dogs, people jogging and getting exercise. It is important to note that our definition of pedestrians and walking includes people using mobility devices such as wheelchairs, walkers and strollers.

Walking is the most fundamental and sustainable form of transportation and nearly every journey begins and ends by foot. Mississauga has a significant opportunity to encourage more walking. There are many plans, policies, services and facilities already in place that support a walkable city. The city is well positioned to be a walkable community, as its relatively high population density, grid street framework (arterials), high transit ridership, extensive sidewalk and multi-use trail networks, combine to provide excellent opportunities for residents to incorporate walking into their everyday lives.

The Pedestrian Master Plan aims to improve the pedestrian network, infrastructure, policies, programs and environment so that people of all ages and abilities have the freedom to move freely and comfortably as a pedestrian.

> The **pedestrian network**, as defined in the TMP, includes infrastructure elements used by pedestrians such as sidewalks, crossings and crosswalks at intersections and elsewhere, walkways between roads and trails.

1.1 STUDY PURPOSE

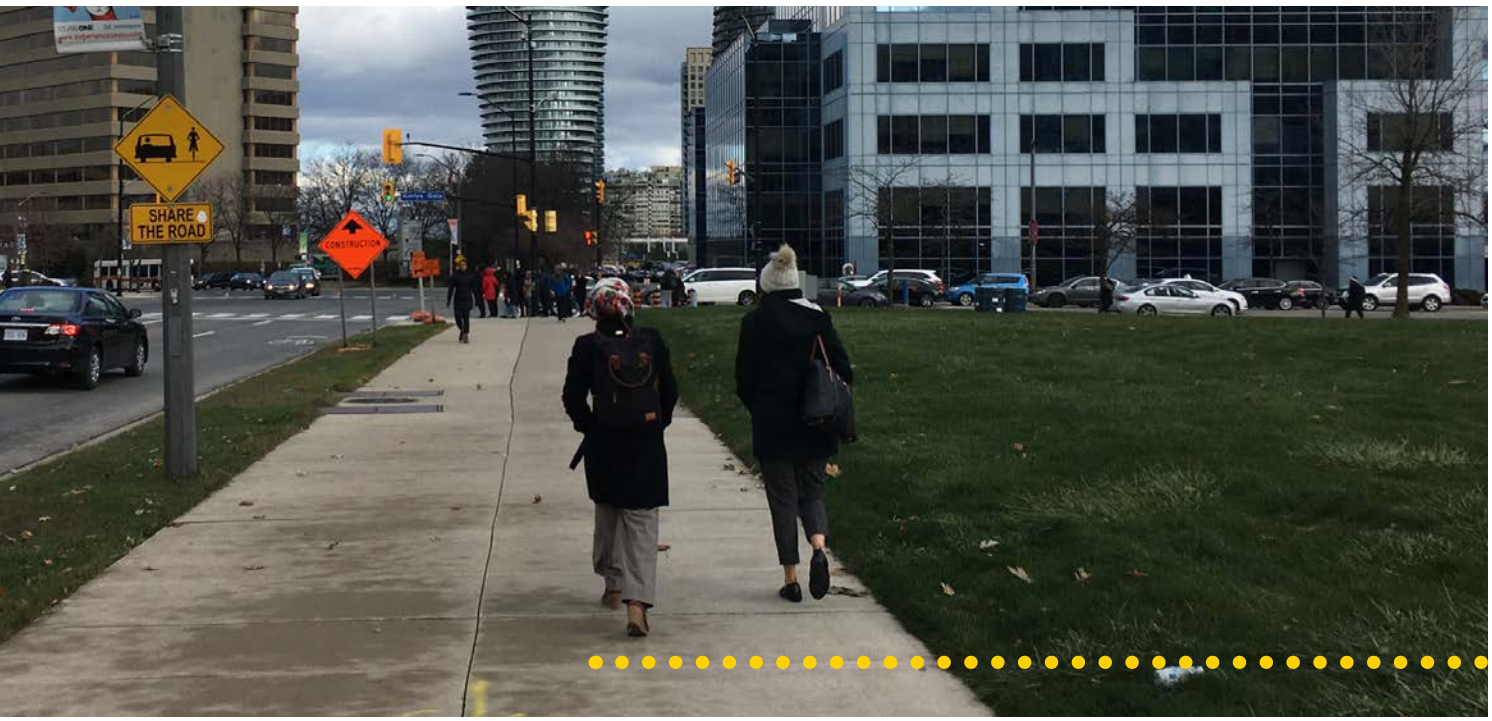
The Pedestrian Master Plan is intended to build off the policy direction from the TMP, Official Plan and other municipal planning documents. The development of the Pedestrian Master Plan is an action that is outlined in the TMP and it recognizes that investments in sidewalks, crossings and walkways needs to be well planned and consistent with the City's overall aims for transportation.

The process of developing a Pedestrian Master Plan presents an opportunity to review all related policies, plans, guidelines and services and to align them with the needs of current and future generations. This comprehensive Pedestrian Master Plan will maximize opportunities to enhance walking within growth and development areas, integrate walking with transit, enhance pedestrian safety and fill in gaps in the pedestrian network. It will also help to ensure that all people of all ages and abilities have access to their community and can feel a sense of belonging. The goal of this plan is to identify and prioritize infrastructure projects and policies that will provide a connected network of pedestrian infrastructure for all users.

The Pedestrian Master Plan will guide the development of safe and convenient walking options for people of all ages and abilities over the next 20 years. It will focus on creating a network that is safe and accessible based on best practices in active transportation. The plan will establish a vision and goals along with corresponding strategies and actions for improving pedestrian policies, standards, infrastructure and programs.

1.2 STUDY PROCESS

The Pedestrian Master Plan is being developed over a 14–month period. This document is a summary of the first phase of the project, focusing on understanding and accessing the existing network and identifying recommendations for the future pedestrian network.



1.3 VISION AND GOALS

A vision and goals have been developed for the Pedestrian Master Plan that shape the overall directions for the City for improving walking and the pedestrian environment. The vision and goals will serve as the basis from which all sidewalk and trail improvements and investments are identified and prioritized.

Vision

The vision for the Pedestrian Master Plan focuses on the key themes identified in overarching City policy documents including the TMP and Cycling Master Plan. These themes include connectivity, accessibility, livability and heath. The vision for the Pedestrian Master Plan is:

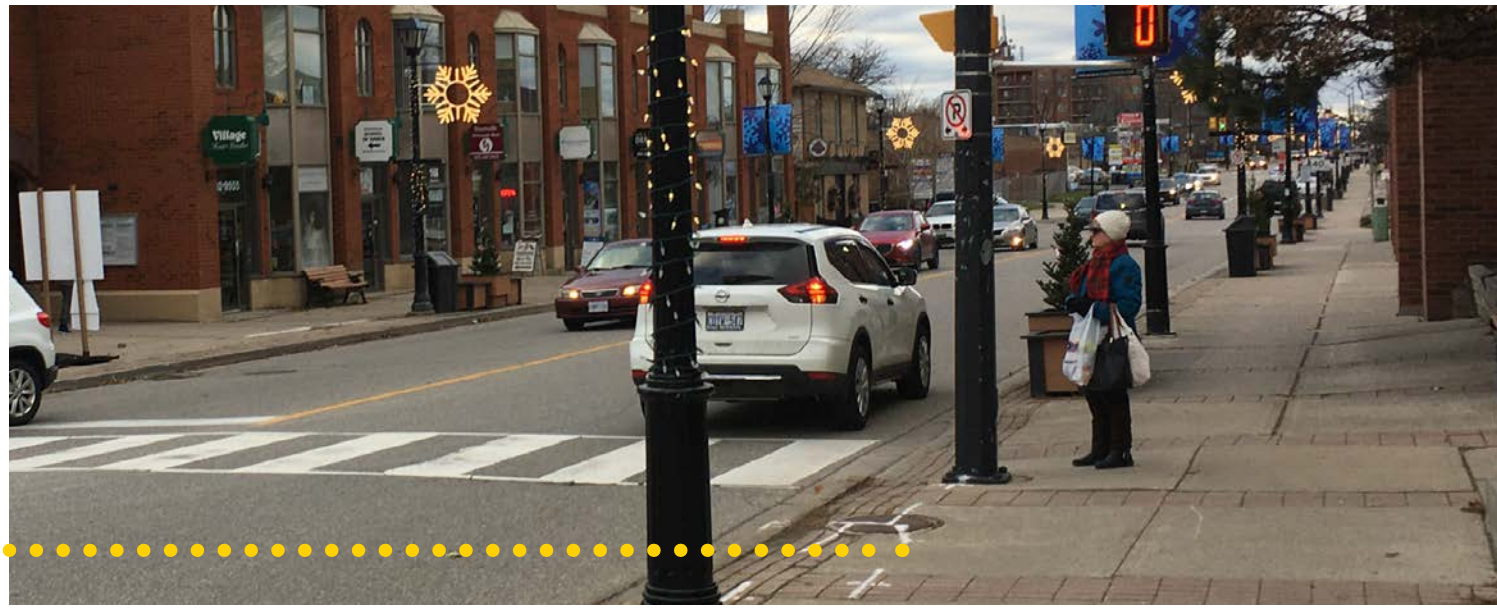
> *People in Mississauga will cwalk knowing they have great places to walk and access to sidewalks, trails and crossings that are safe, connected and accessible, enhancing the overall health, vibrancy and quality of life in the City.*

Goals

Four supporting goals were developed to provide direction on how to achieve the vision. These goals are intended to be both achievable and measurable to ensure the successful implementation of the Pedestrian Master Plan.

The goals of the Pedestrian Master Plan are:

- Make walking safer and more comfortable and work towards achieving Vision Zero.
- Build sidewalks and trails that are connected and accessible.
- Encourage walking as part of an active and healthy lifestyle.
- Increase the number of walking trips in Mississauga.




Credit River
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2.0 SETTING THE CONTEXT

2.1 BENEFITS OF WALKING

Walking is the most common form of transportation, as every trip begins and ends by foot. The City recognizes that an increase in trips made by walking will result in a more balanced transportation system that encourages healthy and active living. It also creates a more livable community and results in a cost effective and efficient solution in terms of the community's infrastructure investments. Supporting walking is associated with several benefits including health, economic, safety, social and environmental.

Health

There are several health benefits associated with increased physical activity. Even at a moderate intensity, physical activity reduces the risk of numerous chronic diseases. Physical activity has also been proven to improve mental wellness and prevents weight gain and obesity. Walking is the most common form of moderate intensity physical activity and evidence has found links between local investments in active transportation and increased rates of physical activity.

Economic

Promoting walking can contribute to the development of a healthy and diverse local economy. A walk-friendly atmosphere can attract more visitors to neighbourhoods, who will in turn be patrons of local services and amenities. Having options that support residents to walk in their neighbourhoods can decrease congestion increasing the attractiveness of the neighbourhoods for both locals and visitors. Decreased congestion also helps make the movement of goods and transit more efficient. Additionally, walking can reduce transportation costs for households and reduce infrastructure costs to the City.

Safety

Walkable environments contribute to a safer transportation system by making walking more visible and common. This results in a reduced risk of collisions. Streets designed for slower vehicle speeds feel safer for people walking. Studies have shown that slower motor vehicle speeds exponentially increase survival rates for pedestrians involved in collisions with vehicles. In October 2019, Mississauga City Council approved amendments to the Traffic By-Law that will gradually lower speeds on residential streets from 50 to 40 km/h. To-date, 11 neighbourhoods have received 40 km/h signage at the entry and exit points.

Social

High levels of walking in a community is often considered a good indicator of sustainability and liveability. Walking can increase social interactions, strengthen social connections and help to reduce social isolation. Building safe and comfortable walking facilities can provide affordable and accessible transportation choices, transportation alternatives for youth and older adults who may not have access to an automobile. For youth, this also encourages sustainable travel patterns at an early age that can continue later in life.

Environmental

Walking helps to reduce vehicle trips, congestion, air pollution and GHG emissions. Promoting walking also helps with efforts towards climate change mitigation while supporting the protection and improvement of the natural environment.

2.2 COMMUNITY PROFILE

Mississauga is a dynamic and successful city located in Southern Ontario within the GTHA with a growing population of over 720,000. Forecasted growth projects a population increase of 22% and employment growth by 23% by 2041, which will result in a substantial increase in transportation demands over the next twenty plus years[1]. This presents both opportunities and challenges when it comes to responding to increased transportation demands in a city that has an existing and established right-of-way. As directed by the Official Plan, transit, cycling and pedestrian modes are at the forefront of transportation priorities in future growth planning. The majority of roads in Mississauga are owned and controlled by the municipality with the exception of regional roads and provincial highways.

Residents of Mississauga have access to a wide range of jobs and amenities within and outside the city. It is known that nearly twice as many people commute into Mississauga each day than commute out and that there are more jobs in Mississauga per capita of any municipality in the GTHA. There are several regional destinations and amenities in the city, including major employment hubs, post secondary institutions, Square One and Pearson Airport

The City of Mississauga consists of several neighbourhoods and is broken down into 56 character areas. These neighbourhoods are characterized by numerous schools, parks and commercial areas (Figure 1).

1 Mississauga Transportation Master Plan, May 2019

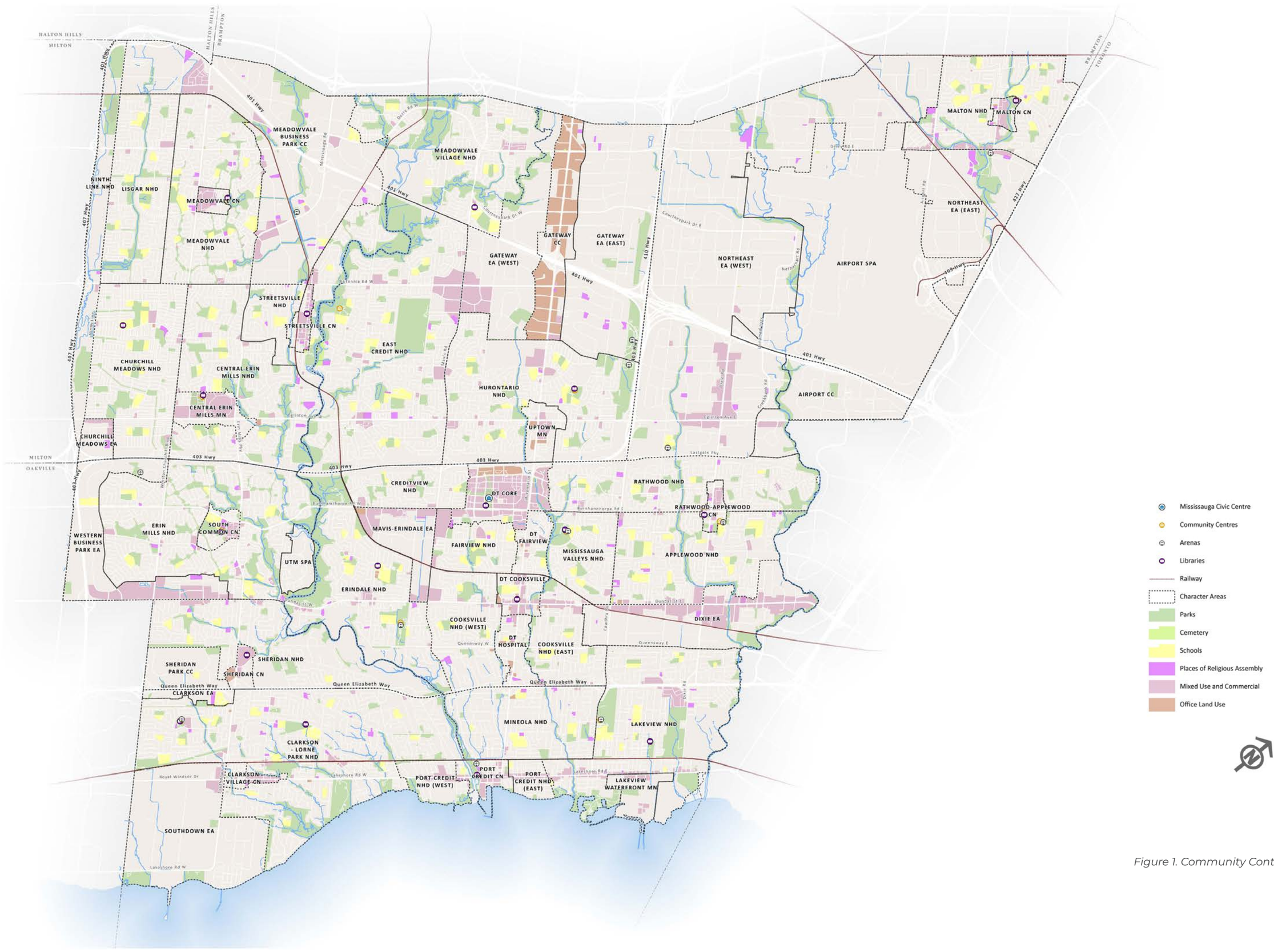


Figure 1. Community Context

Land Use

The transportation network has played a key role in shaping the land use patterns and development of the City of Mississauga. Density, land use mix and destinations are often found adjacent to major roadways. Major roadways also serve as important transit routes.

The city is known as being a hub for employment with concentrations of employment and institutional land use throughout the city, including in the northeast around the airport, Meadowvale, Sheridan Park and Southdown. There are also well-established residential neighbourhoods throughout the city, these quite areas often have circuitous road networks that can make active transportation and transit service challenging. Throughout the city there is an abundance of parks, trails and natural areas that provide numerous hiking and biking opportunities.

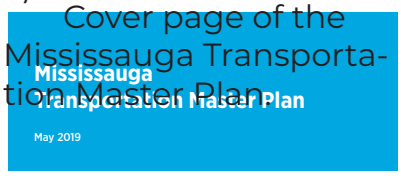
As outlined in the City's Official Plan, most future growth in the city is occurring within urban areas, along major roads and in areas with access to transit. This includes the Downtown Core which is designated to have the greatest population and employment growth in the city. The Official Plan outlines a City Structure with planning policies that guide the development in these areas. More detail about these areas is discussed in Section 3.1.3 below.

Climate Emergency

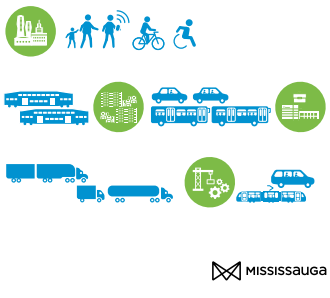
Transportation is a major source of greenhouse gas emissions in Mississauga, accounting for 32% of emissions in the city and contributing to climate change. In 2019, City Council passed a motion declaring a climate emergency in Mississauga. In December 2019, the Council approved the first Climate Action Plan which focuses on mitigating and adapting to climate change. One of the action pathways identified in the plan is low emissions mobility and transportation, with supporting actions including empowering low carbon and alternative modes of transportation, including walking.

2.3 RELATED POGRAMS AND POLICIES

The Pedestrian Master Plan will be informed by many of the city's and the region's key planning documents and guidelines that contain active transportation related policies, plans and goals. Many of these documents include broader aspirations for growth and transportation and provide specific directions on how walking can become an integral part of Mississauga's transportation system.



Cover page of the Mississauga Transportation Master Plan



Some of the plans and policies currently being reviewed as part of this project include:

- City Policies
  - Closure of Walkways (#10-08-01)
  - Pedestrian Crosswalks (#10-04-02)
  - Sidewalk Requirements (#10-07-01)
  - Construction of Concrete Walkways (#10-08-02)
- Mississauga Official Plan
- Mississauga Strategic Plan
- Mississauga Transportation Master Plan
  - Vision Zero
- Downtown 21 Master Plan
- Living Green Master Plan
- Inspiration Lakeview
- Inspiration Port Credit
- Mississauga TDM Strategy and Implementation Plan
- Mississauga Cycling Master Plan
- MiWay 5 Plan
- Hurontario LRT
- Canada Walks/Walk Friendly Community
- Provincial Policy Statement
- AODA
- Ontario Traffic Manual – Book 12 – Traffic Signals
- Ontario Traffic Manual – Book 15 – Pedestrian Crossing Treatments
- Regional Transportation Plan
- Peel Region Sustainable Transportation Strategy (in progress)
- Region of Peel Official Plan
- Region of Peel Accessible Transportation Master Plan (in progress)

3.0 BEING A PEDESTRIAN IN MISSISSAUGA

The city already has an extensive network of sidewalks and off-street shared use trails and pathways and by making future improvements, people of all ages and abilities will be provided with safe and convenient facilities for walking. It includes a summary of the GIS analysis conducted to understand which areas in the community have the greatest potential and need for more pedestrian infrastructure to promote higher rates of walking.

3.1 OPPORTUNITIES FOR WALKING

This section outlines some of the opportunities to enhance the pedestrian environment and encourage more walking in the City of Mississauga.

Opportunities

- Attractive residential and mix-used areas
- Continued population and employment growth are expected to occur along major roads, in urban areas and at key nodes close to transit
- A range of amenities including important employment destinations but also access to waterfront, river valleys, parks and trails.
- Traffic congestion is identified as an issue on some roadways in the city and people may be looking for alternative travel options to get around the city that avoids delay for short trips.
- The City is looking for ways to re-think the transportation network and providing more pedestrian infrastructure, policies and programs that promote walking and other forms of active and sustainable transportation (cycling and transit).
- Making improvements to the transportation network is seen as an opportunity to provide people with more travel options and enhance quality of life.
- Projections show a change in demographics that will see a larger proportion of youth and older adult populations. These populations are typically relying less on motor vehicles.

Challenges and Barriers

- Mississauga is a community that covers a large geographic area; pedestrian activity is likely to be the highest in higher density mixed use areas and less desirable in single purpose areas.
- The city is made up of a grid network of major arterials while local road networks are often curvy making for longer trips and inhibiting walking.
- Motor vehicle travel is the most common mode of transportation in

the city. Approximately 3% of trips are made by foot. It has also been documented that out of the 32,000 Mississaugans that live within 1km of where they work, only 2,000 choose to walk[1].

- Snow and ice in the winter months can make walking year–round challenging for all residents.
- In some locations there are missing sidewalks, or existing sidewalks may be narrow or in poor condition.
- Pedestrian facilities are not always designed to be accessible for all users.
- Funding levels need to match the desire to see a shift in travel patterns and an increase in travel options.
- The walking environment is not always a pleasant place to be, in some cases walking adjacent to roadways and crossing intersections may feel uncomfortable and unsafe. There may also be concerns over personal safety.
- Collisions involving a motor vehicle driver and a pedestrian occur at locations throughout the city. Figure 2 shows the locations of recorded pedestrian collisions that occurred between 2014 and 2018.

In response to the COVID-19 global pandemic, cities have worked to temporarily reallocate road space to better accommodate people walking and cycling while being physically distant. In July 2020, the City of Mississauga moved forward with an Active Transportation COVID-19 Recovery Framework. The Framework identifies short and longer-term options for walking and cycling within the City. Some of these options included, temporary road closures, limiting traffic on residential streets to local traffic only and reallocating motor vehicle travel and parking lanes for active transportation users.

The COVID-19 pandemic has also changed travel patterns within communities. For example, more people are working from home which is changing commute and travel times and fewer people are taking transit as a mode of travel. The City is working to monitor the ongoing impacts of COVID-19 on transportation patterns and trends within Mississauga.

3.1.1 Walking Potential

An analysis was conducted to identify areas with the greatest opportunity to increase the number of walking trips. This analysis was based on several factors including road network connectivity, road network density, land use mix, population and employment density and topography. The analysis found that the areas with the highest potential include some of the City's Downtown character areas, Major Nodes and Community Nodes (Meadowvale, Streetsville, South Common, Sheridan, Port Credit, Rathwood–Applewood and Malton) and the Churchill Meadows neighbourhood (Figure 3).

1 Mississauga Transportation Master Plan, May 2019

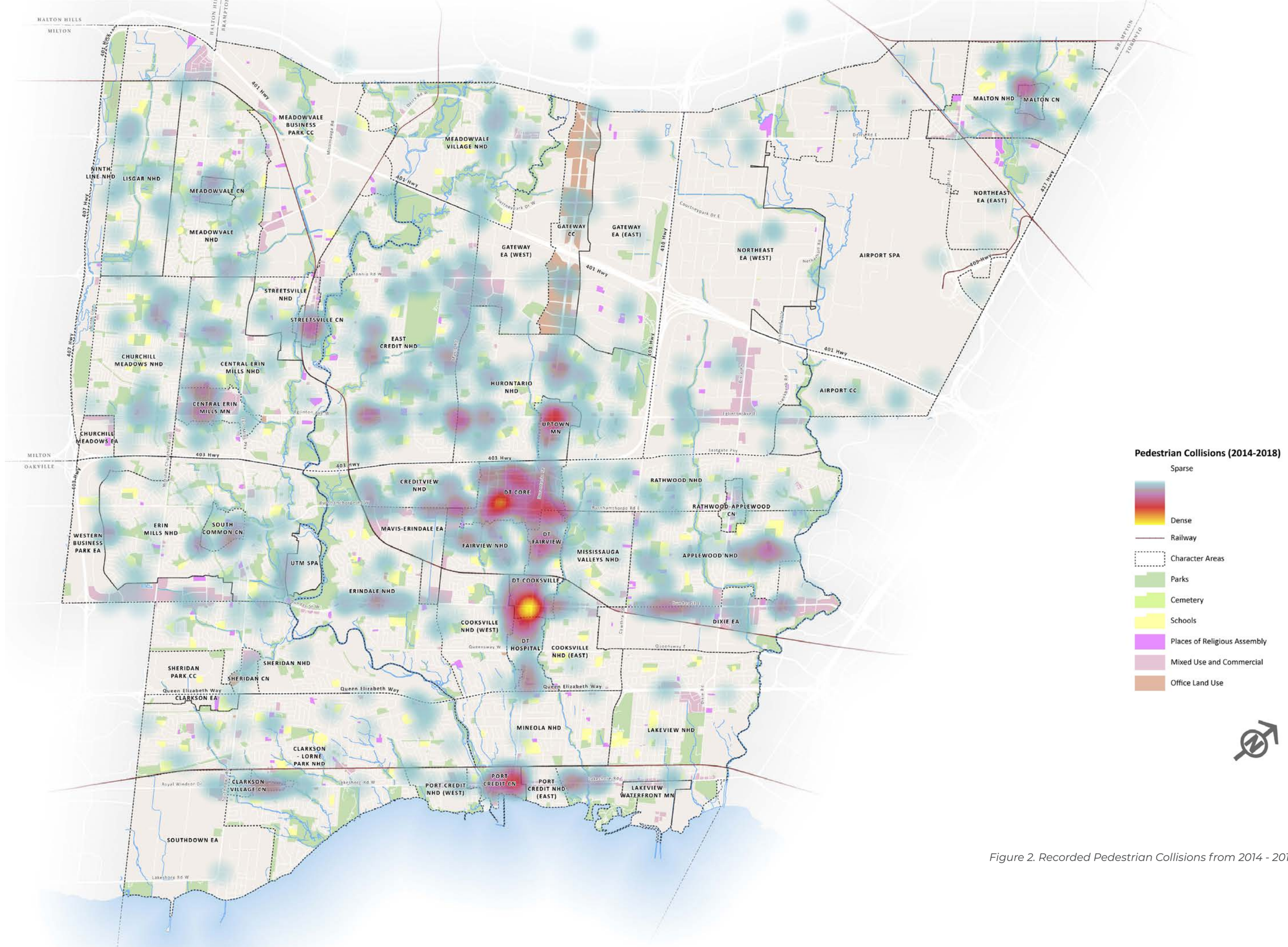


Figure 2. Recorded Pedestrian Collisions from 2014 - 2018

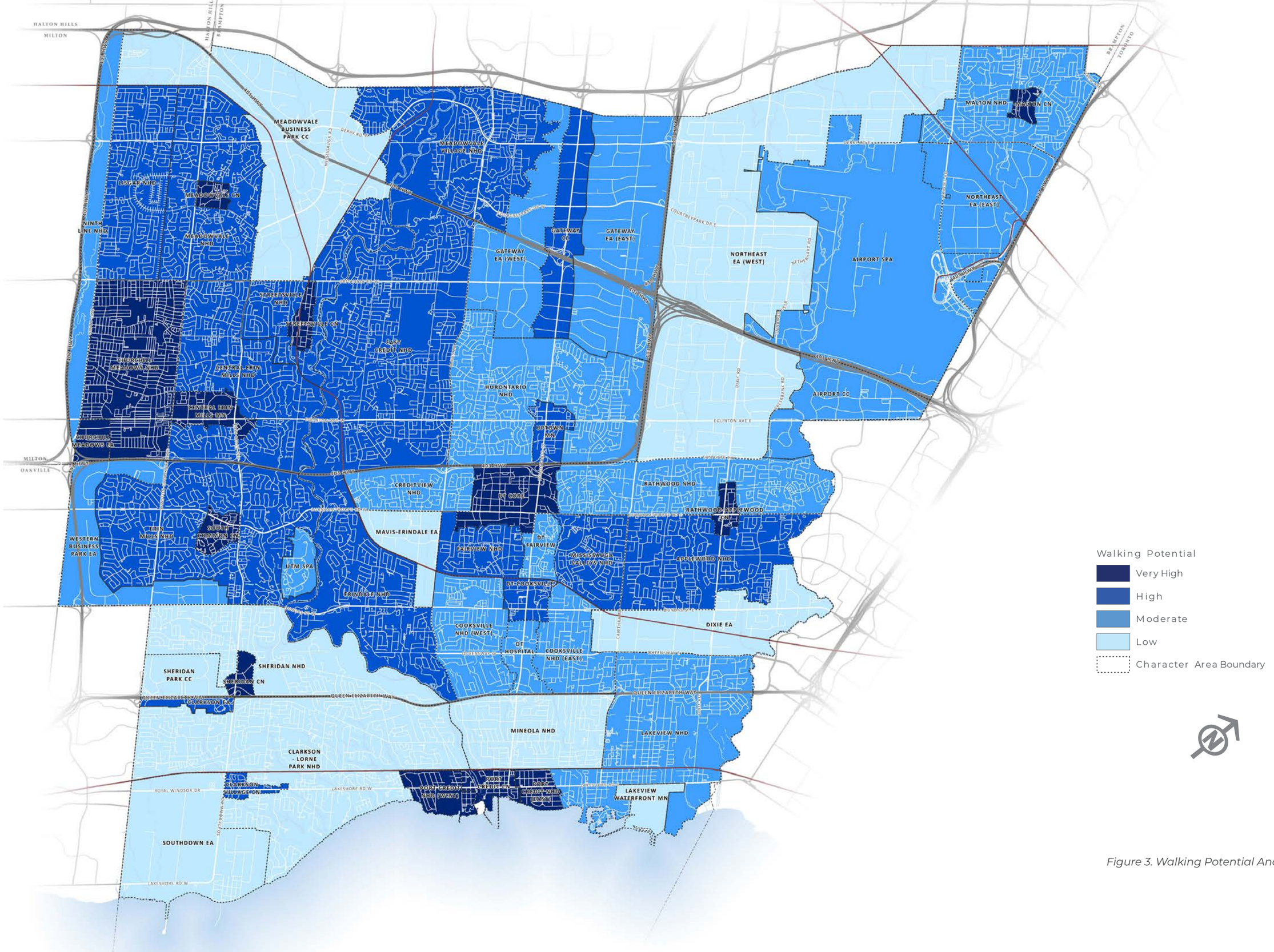


Figure 3. Walking Potential Analysis

3.1.2 Equity

The results of this analysis identify under-served areas in the city where there is opportunity to strategically invest in areas that have high demand today, the greatest potential to increase the number of trips made by foot and where there are higher concentrations of people who are more dependent on active transportation for moving around. Five indicators were used to examine equity across neighbourhoods, including the percentage of youth populations, older adult populations, immigrant populations, aboriginal populations and low-income populations. It is important to note that there are several different methodologies to look at neighbouhood need. The Region of Peel has a neighbourhood information tool (https://www.peelregion.ca/planning-maps/nit/) that looks at neighbourhoods based on wellbeing. Looking at several different indicators, including demographics, economic opportunity, resident engagement & community belonging, safety and health and physical environment. The data used is from the 2016 Statistics Canada Census. Statistics Canada Census Data from 2016 was used to conduct the equity analysis presented in the Pedestrian Master Plan. Census Data is based on place of residents and does not capture where individuals are travelling. Additionally there are other marginalized groups that have not been included in this analysis, such as the 2SLGBTQ+ community, persons experiencing addiction and persons experiencing homelessness.

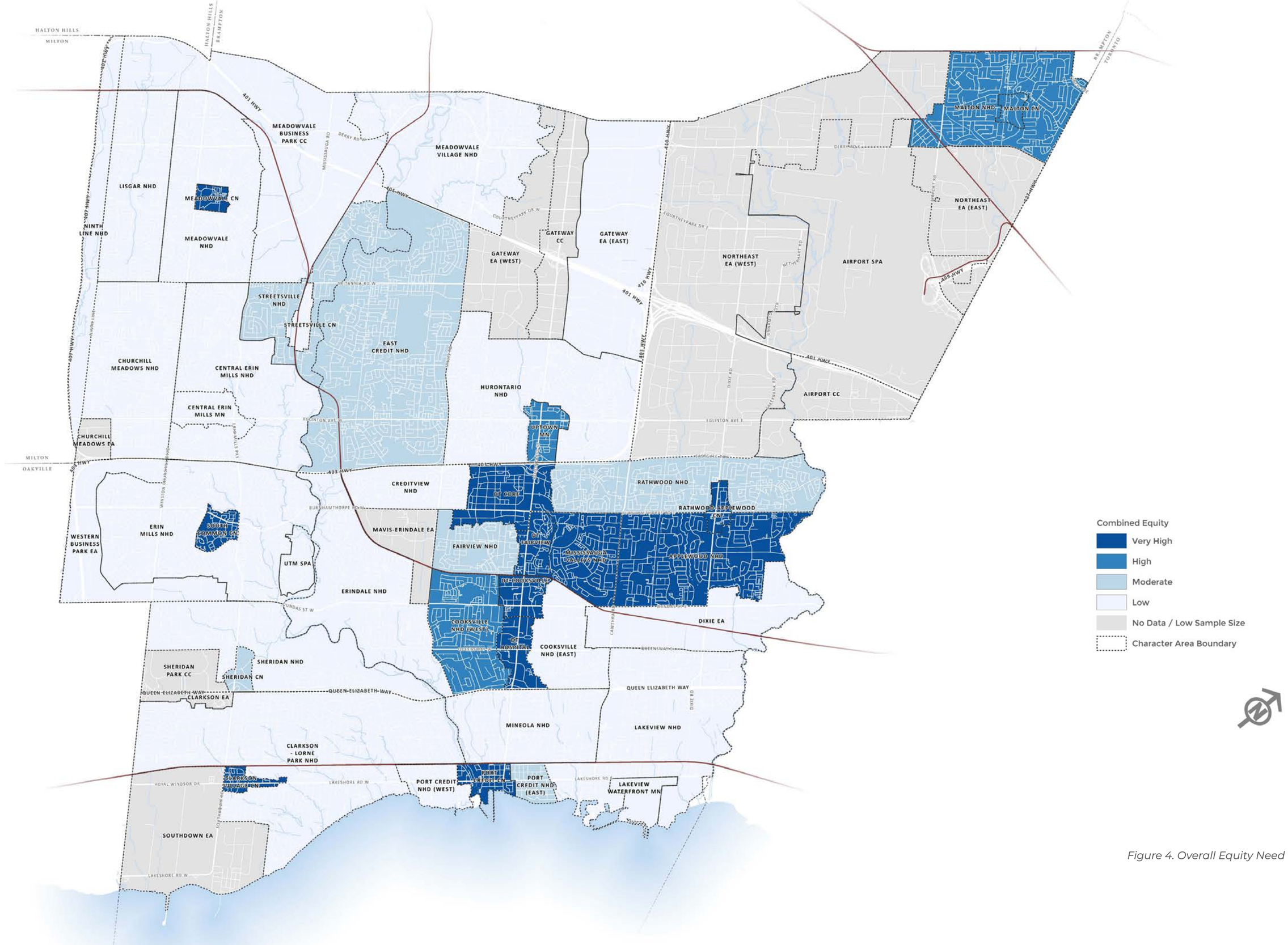
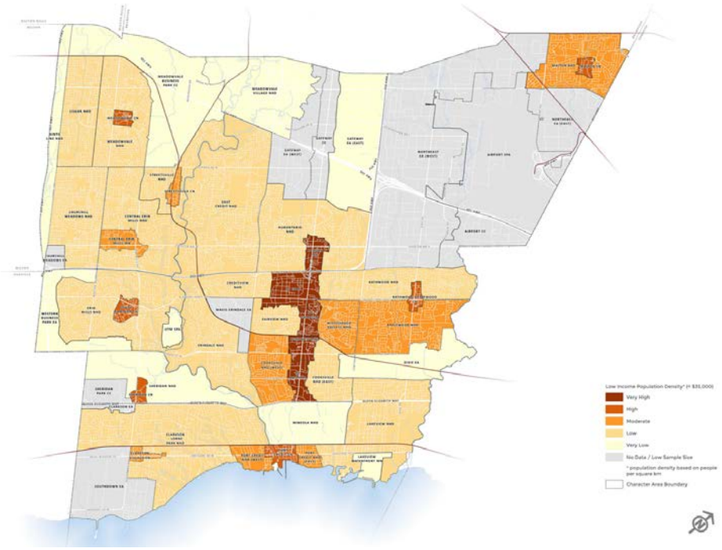
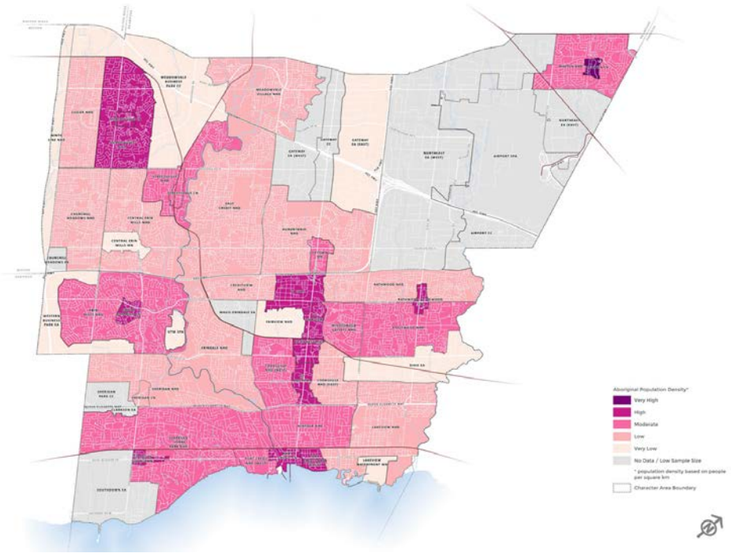


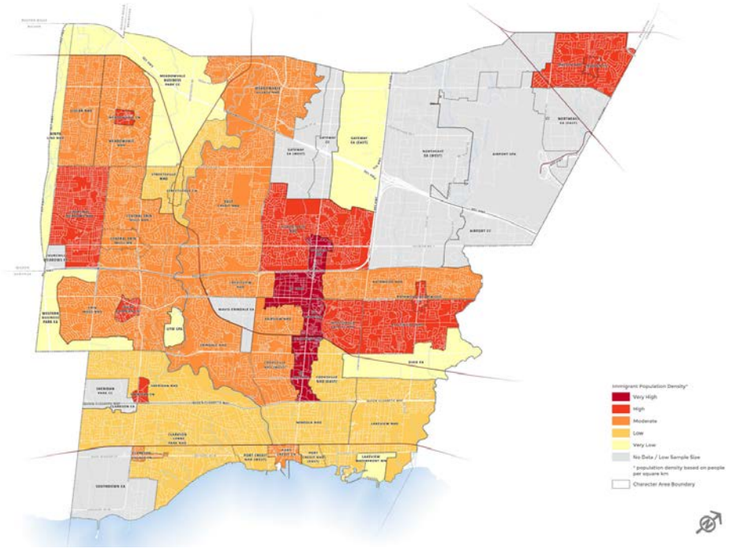
Figure 4. Overall Equity Need



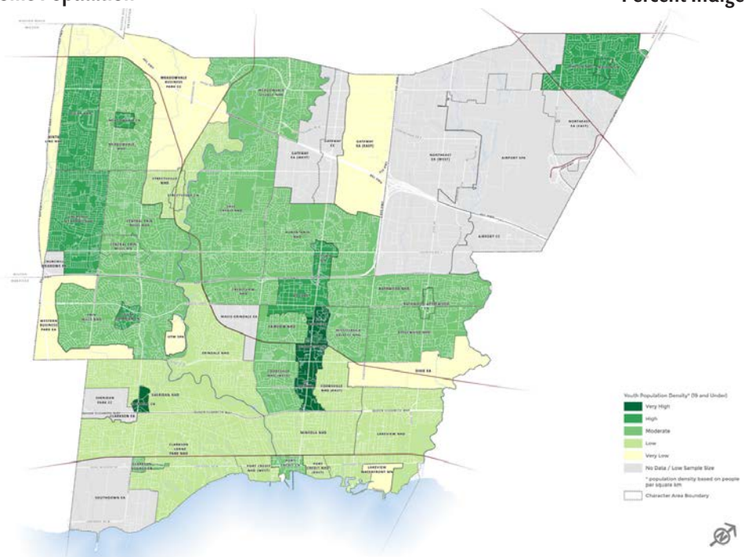
Percent Low Income Population



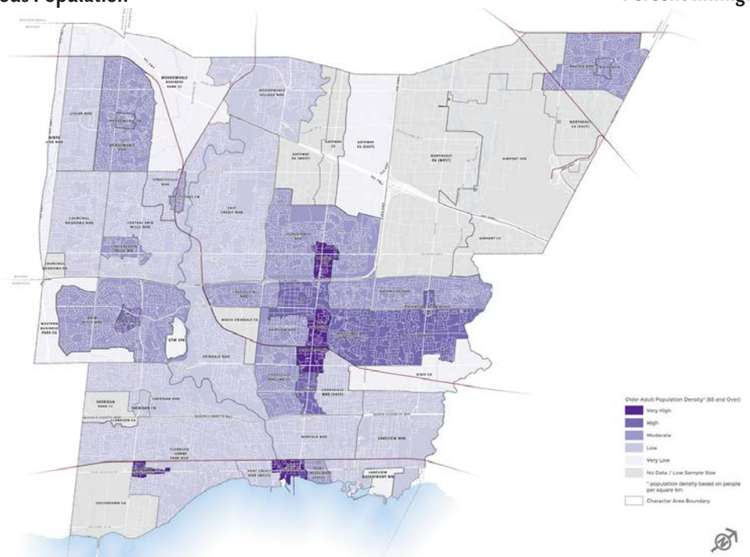
Percent Indigenous Population



Percent Immigrant Population



Percent Youth Population



Percent Older Adult Population

Figure 5. Equity Analysis

3.1.3 Areas of Future Growth

The City's Official Plan provides direction on where population and employment growth and densification will occur within the Urban System Framework. As touched on above, the Official Plan recognizes that most future growth in the city will be occurring within urban areas, along major roads and where it is easy to access transit (Figure 6).

The Official Plan identifies a City Structure that recognizes that various areas of the city perform different functions. The City Structure plays a critical role in accommodating residential and employment development and growth. It is specifically noted in the City's planning documents that these areas are expected to be pedestrian friendly, recognizing the important relationship between land use and walking. Growth and intensification are planned to occur within:

- Downtown
- Major Nodes and Community Nodes
- Intensification Corridors (Dundas Street and Hurontario Street)
- Within proximity of major transit stations and routes

In addition to the areas noted above, growth is also planned within Corporate Centres. Corporate Centres are identified as intensification areas; however, development will only include employment. There is no residential use of new major retail developments planned for Corporate Areas. The current Official Plan notes that while arterial roads and roads in employment areas will continue to prioritize motor vehicle travel and goods movement, areas where growth and intensification are planned will prioritize active and sustainable modes, walking, cycling and transit.

The City has recently launched a process to update the Official Plan, and recommendations from the Pedestrian Master Plan will be incorporated into the update.

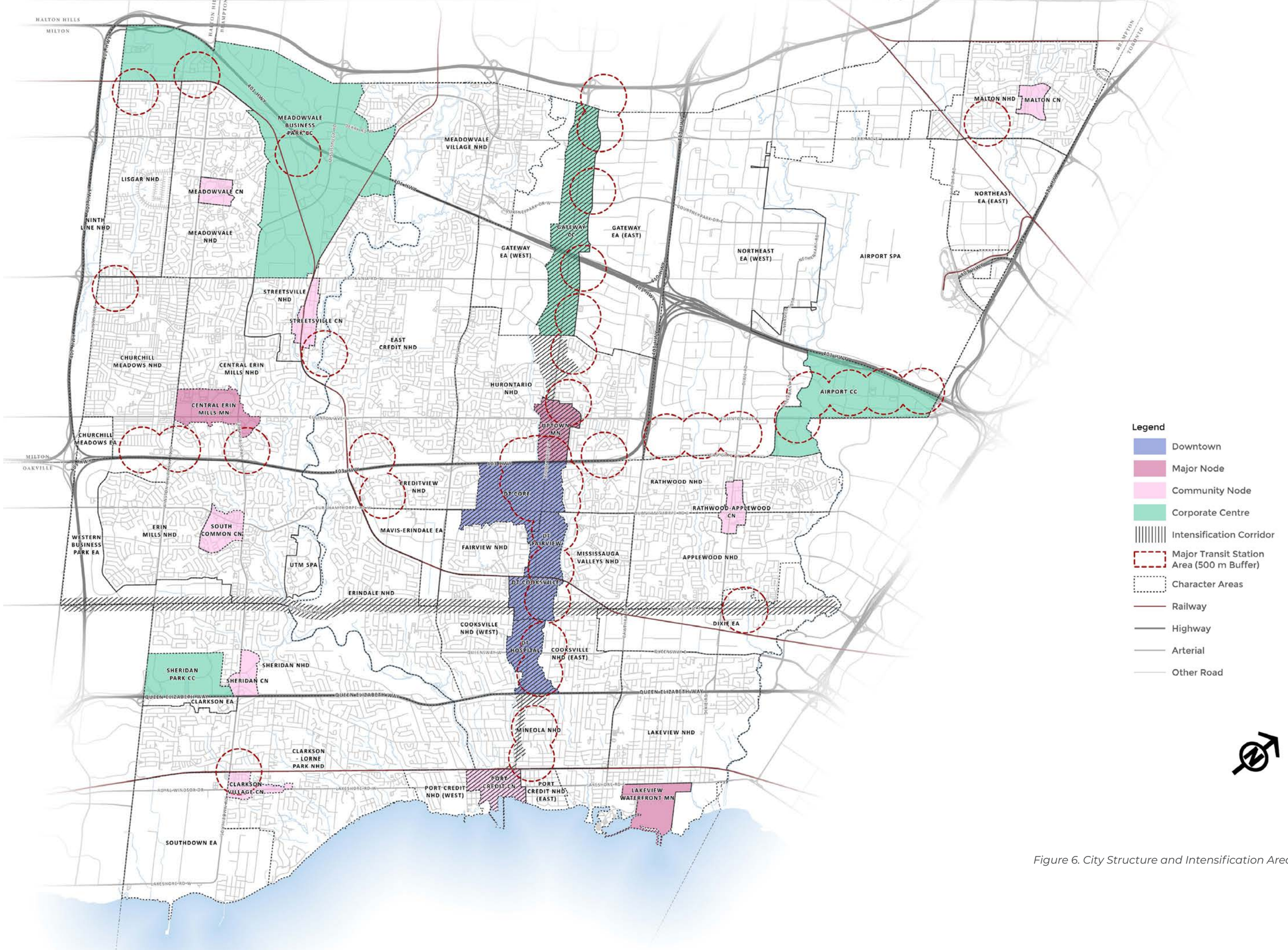


Figure 6. City Structure and Intensification Areas

Downtown

Mississauga's Downtown Core is central within the city; it is the area with the highest density and the greatest mix of land uses. It is home to high density residential, office buildings, retail, post-secondary institutions, parks, municipal hall, libraries and other important destinations. It is important to note that walking potential within downtown areas, including within Mississauga, is high.

Major Nodes and Community Nodes

Major and Community Nodes function as hubs of mixed land use, including residential, commercial and employment destinations. They are smaller in scale than downtown and include services that focus on the needs of the nearby neighbourhood. These services include community centres, libraries and community retail. They also tend to be serviced by transit. The major difference between Major Nodes and Community Nodes is the density of population, employment and services.

Corridors and Intensification Corridors

The Official Plan and the TMP highlight the importance of the city's grid network of major roadways. These major corridors play an important role for transportation and they are often destinations themselves and places where higher densities of people live and work.

Intensification corridors, identified in the Official Plan as Dundas Street, Hurontario Street and Lakeshore Road within Port Credit and the land 200 to 300 metres adjacent, have potential for higher density mixed use development. Transit service along these corridors is typically high.

Major Transit Stops and Stations

Typically, major transit stops and stations are found along corridors or in areas with higher density and mix of land uses. Major transit stops generally have high-frequency transit service and/or accommodate several different routes. The City recognizes the importance of ensuring people walking can access transit easily and that switching between modes should be easy and well integrated. This means ensuring that streets that are adjacent to transit corridors and withing 500 metres of major transit stations have connected pedestrian facilities. Figure 6 shows the location of existing transit routes and stops, including BRT, MiWay, GO and future LRT stations within the city. Pedestrian access to transit is critical, as in many cases, transit trips begin and end by foot. Pedestrian infrastructure is required to make transit stops accessible for all users and ensures that all users can access stops and stations. The City is currently working to identify transit stops in the city that are currently not accessible. There are approximately 3,400 transit stops in the city and over 100 spots have been flagged as not having a pedestrian facility that provides access to the stop.

Areas of future growth are pedestrian priority areas where there are enhanced opportunities for walking and it should be supported and seen as viable and convenient forms of transportation. This is a principle used for both identifying future pedestrian infrastructure and prioritizing implementation. More details about the existing pedestrian network within areas of future growth can be found in Section 3.3.1.

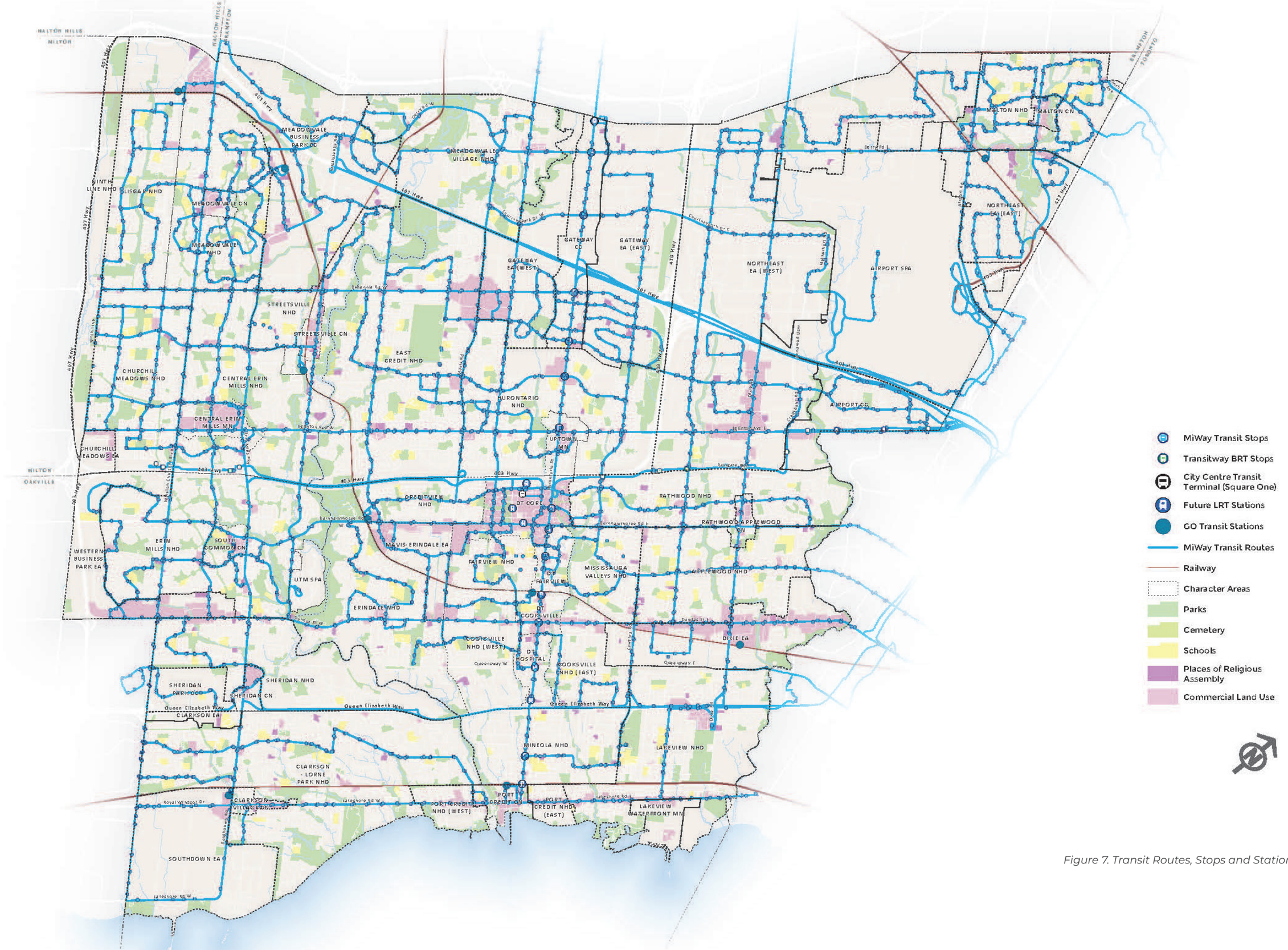


Figure 7. Transit Routes, Stops and Stations

3.2 TRAVEL PATTERNS

Understanding the existing conditions for walking and sustainable travel in the city today sets the context for the Pedestrian Master Plan. This section is a summary of the information gathered as part of the Transportation Tomorrow Survey (2016) as well as Canadian Census data (2016).

Transportation Tomorrow Survey

The Transportation Tomorrow Survey is a comprehensive travel survey conducted in southern Ontario every five years through a cooperative effort by provincial and local government agencies. The survey is completed voluntarily via telephone and online. The 2016 results show that majority of residents in Mississauga travel by automobile as a driver or passenger (Figure 8).

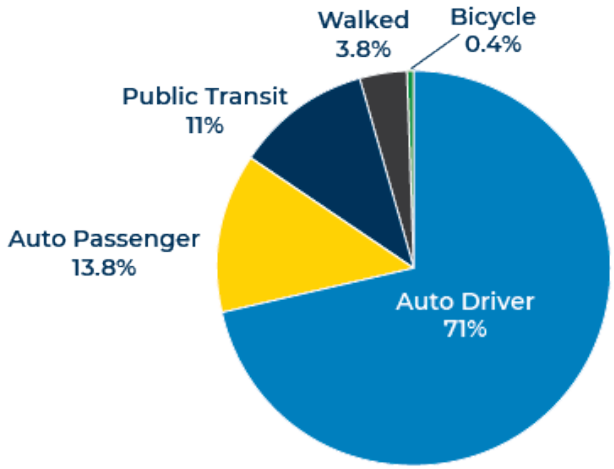


Figure 8. Mississauga Mode Share - All Trips (Source: 2016 Transportation Tomorrow Survey)

The 2016 results also show that when people walk, they are often travelling to or from home (52%) or school (26%). Trips to work make up 7% of walking trips. Almost all (99%) of walking trips that originate in Mississauga stay in Mississauga. Most walking trips are short; 59% of trips are less than 1 kilometre (59%) with 97% of walking trips being less than 3 kilometres. This is based on all trips originating within the City of Mississauga.

Census Data

According to Statistics Canada's 2016 Census, approximately 3% of all commute trips to work or school in Mississauga are made by walking. It should be noted that Census data only includes commute trips and does not include trips for other purposes, such as exercise, social purposes or to spend time with family or friends. This percentage has remained steady over the past several years. It is also important to note that 18% of trips are made by transit, this is important as several transit trips begin and end by foot.

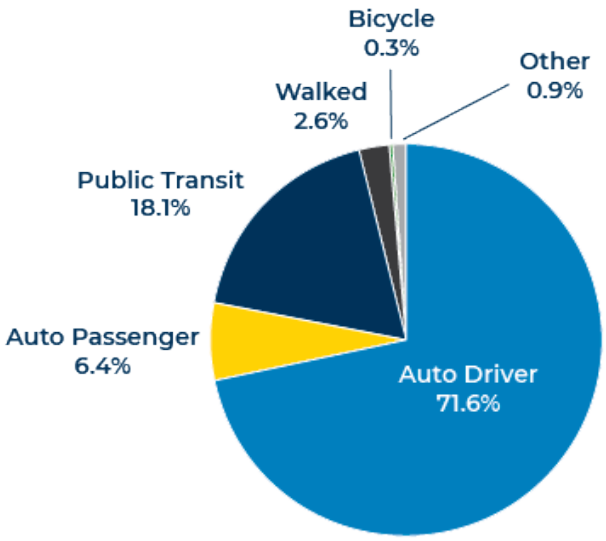


Figure 9. Mississauga Commute Mode Share (Source: 2016 Journey to Work - Statistics Canada)

When comparing Mississauga's walking mode share to those of neighbouring communities and other cities with a population greater than 500,000, Mississauga is currently at the lower end, as seen in Figure 10.

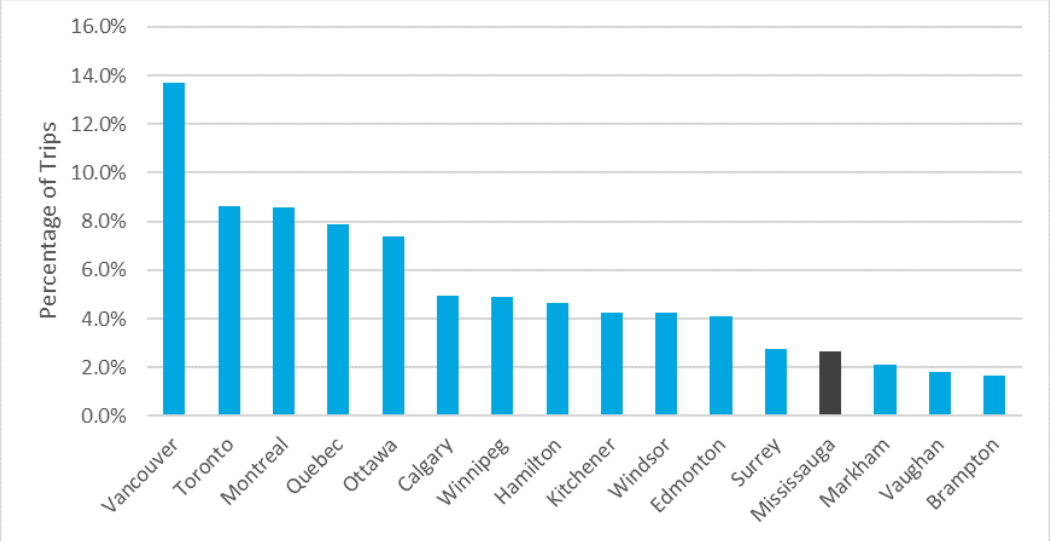


Figure 10. Walking Mode Share in Other Municipalities (Source: 2016 Journey to Work - Statistics Canada)

The map below (Figure 11) shows the proportion of people walking to school and work can vary by Character Area.

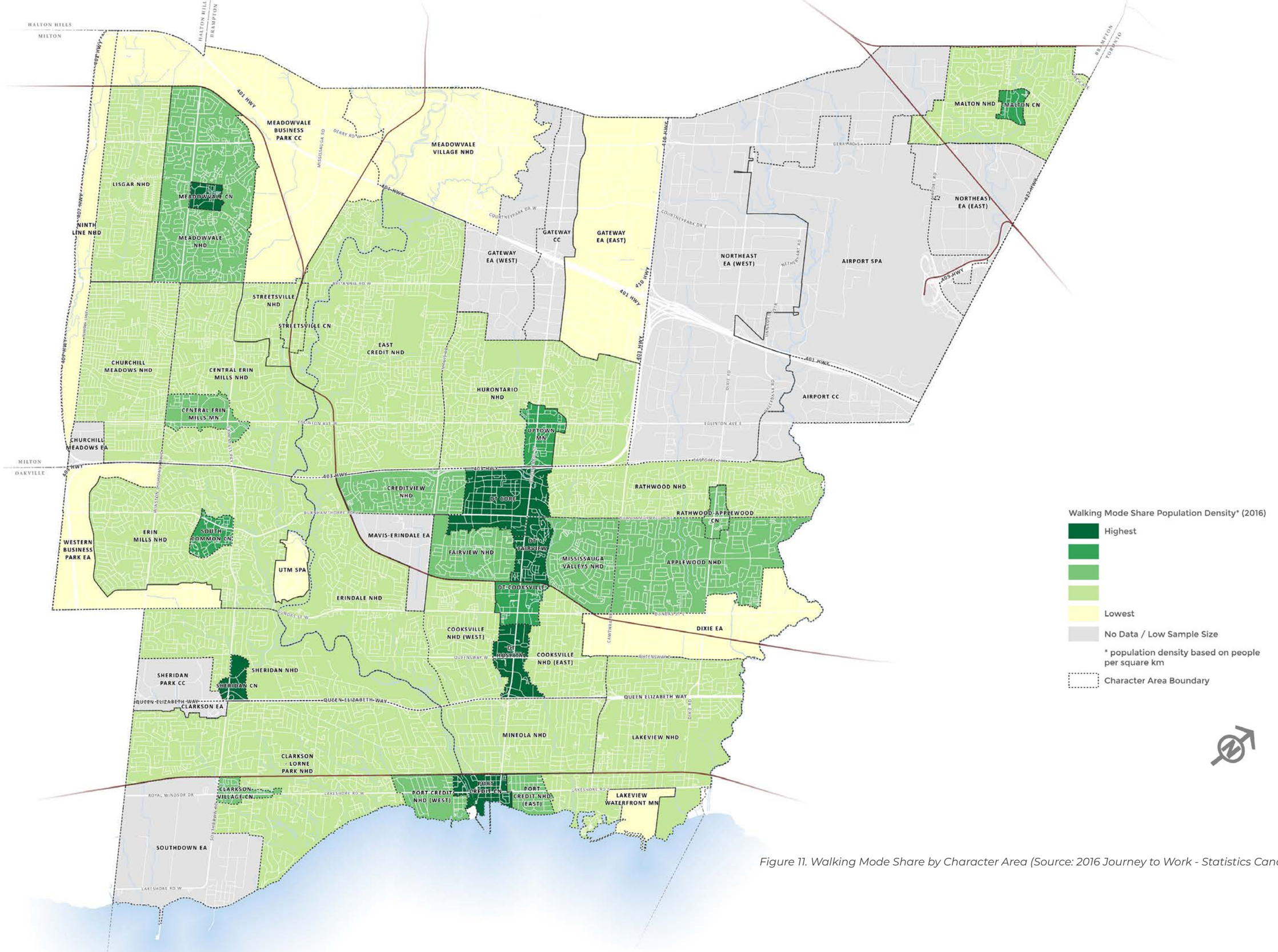


Figure 11. Walking Mode Share by Character Area (Source: 2016 Journey to Work - Statistics Canada)

3.3 NETWORK ASSESSMENT

3.3.1 Existing Pedestrian Network

As noted, walking is the most common form of transportation, as every trip begins and ends by foot. When a suitable network exists within a community – such as having a complete and connected sidewalk network, safe crossings and major destination close to where people live – walking can be a practical and attractive form of transportation for almost all short trips throughout the year. The city has an extensive network of walking facilities including sidewalks and trails. The city has approximately 2,400 km of sidewalks. There are also over 200 km of multi-use trails, 252 km of pedestrian trails and 24 km of engineered walkways (Figure 12).

Sidewalks are typically located parallel to a roadway. Based on current design standards they are concrete and 1.5 metres wide, expect in areas where higher pedestrian activity is expected, such as downtown.

Multi-use trails are shared by pedestrians and cyclists. They can be paved or unpaved and may be located parallel to a roadway or through natural areas.

Pedestrian trails are typically pedestrian only. They can be paved and unpaved and located within park space or around schools.

Engineered Walkways are short segments of paved trails that provide connections and are typically located between roadways, buildings and amenities.

The City has been working to expand and improve conditions for walking around Mississauga, through new sidewalk and trail infrastructure, the installation of new curb cuts and creating inviting pedestrian areas which includes the installation of amenities. However, there are still opportunities to fill in network gaps and enhance the environment for walking to help encourage more trips by walking within the city. The following section summarize the existing conditions for walking in the city.

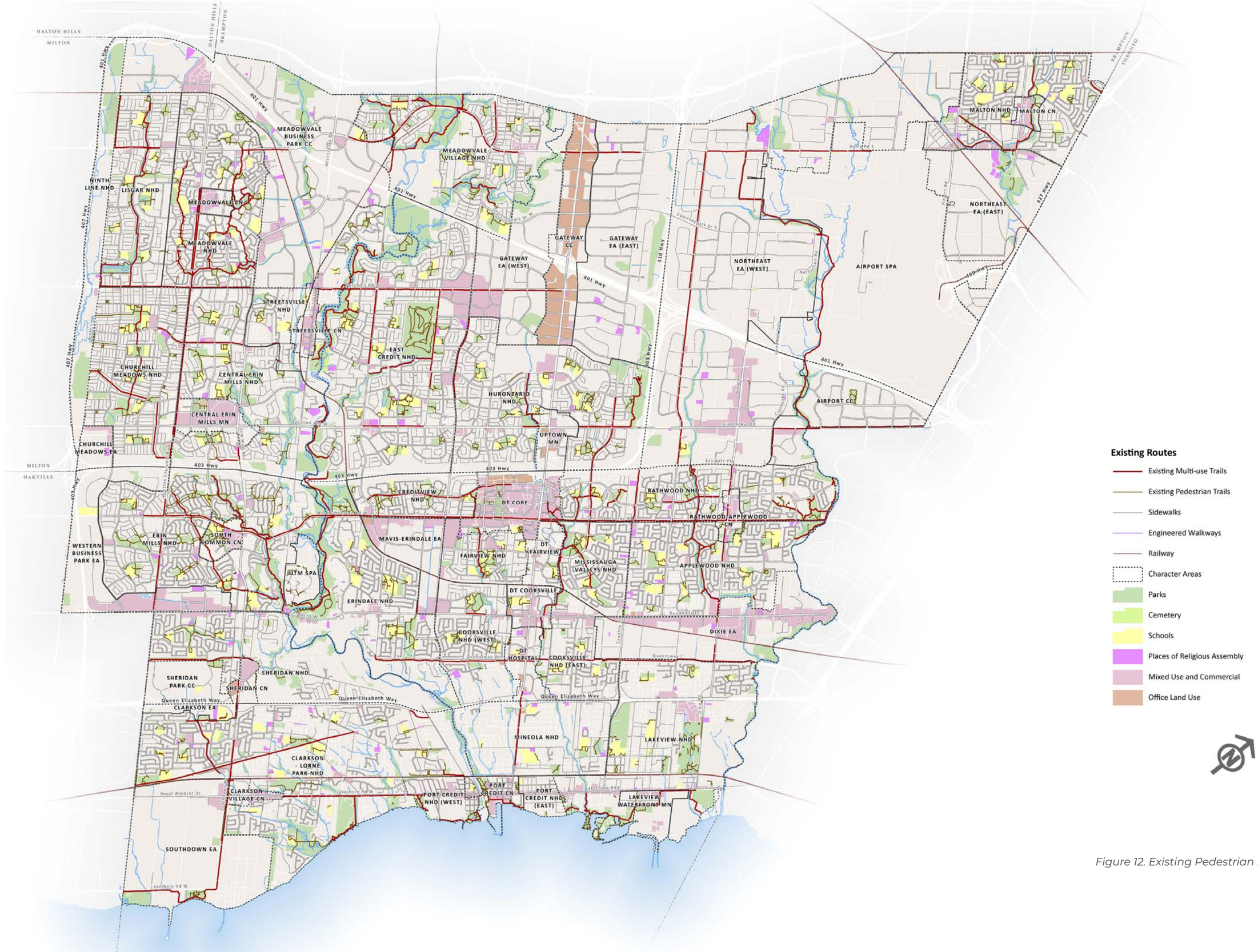


Figure 12. Existing Pedestrian Network

Sidewalks

Sidewalks form the backbone of a well-connected walking network. There are approximately 2,400 km of sidewalks within the city. Sidewalks are located on one or both sides of most City operated streets within the city (84%). A large percentage of arterial and collector streets (94%) have sidewalks on one or both sides of the street. In addition, 79% of local streets have sidewalks on one or both sides.

There are several corridors located within the city that are under the jurisdiction of the Region of Peel. Nearly 60% of Regional streets have sidewalk or pedestrian facilities on both sides of the street. Approximately 30% have sidewalks on one side of the street and about 10% have no sidewalk or pedestrian facilities on either side of the street.

Many of the streets without sidewalks are in residential communities. There are clusters of areas without sidewalks in Mineola, Clarkson-Lorne Park and Streetsville. It is important to note that this map does not address the quality or width of existing sidewalks.

Sidewalk Requirements

Sidewalk requirements are typically determined based on road classification. The policy titled Sidewalk Requirements (10-07-01) and the Transportation Work Standards provide guidance on where sidewalks should be located. The guidance provided is summarized in Table 1. Sidewalks are typically concrete and built to a width of 1.5 metres. Curb ramps are required at each intersection or pedestrian road crossing. If sidewalks are only required on one side of the street they should be located on the same side as the street lighting.

Tactile surface indicators must be installed where required in accordance with the Accessibility for Ontarians with Disabilities Act.

Table 1. Sidewalk Requirements in Mississauga by Road Classification

ROAD CLASS	SIDEWALKS REQUIRED
Arterial	2 sides
Major Collector	2 sides
Major Collector (Scenic)	1 side
Minor Collector	2 sides
Minor Collector (Scenic)	1 side
Local	1 side unless part of a residential subdivision then 2 sides are required
Cul-de-sac	• No sidewalks required • 1 side only if serving developments other than single family or semi-detached dwellings or where the sidewalk will form part of the walkway system

Multi-use and Pedestrian Trails

Multi-use trails are located throughout the city. Multi-use trails are physically separated from the roadway and are shared by pedestrians, cyclists and other active transportation users such as people pushing strollers or using walkers, rollerblades, skateboards, wheelchairs or other non-motorized modes of transportation. These trails can be paved, typically asphalt or unpaved, typically crushed gravel or dirt.

Boulevard multi-use trails are located parallel to a roadway but are separated from motor vehicles by a curb or another type of physical separation. Off-road multi-use trails are paved facilities that are not located adjacent to a roadway. They are typically located through green corridors

Pedestrian trails are paved or unpaved trails that are typically located within parks and schools. Figure 13 is a map of the existing multi-use and pedestrian trails within the city.

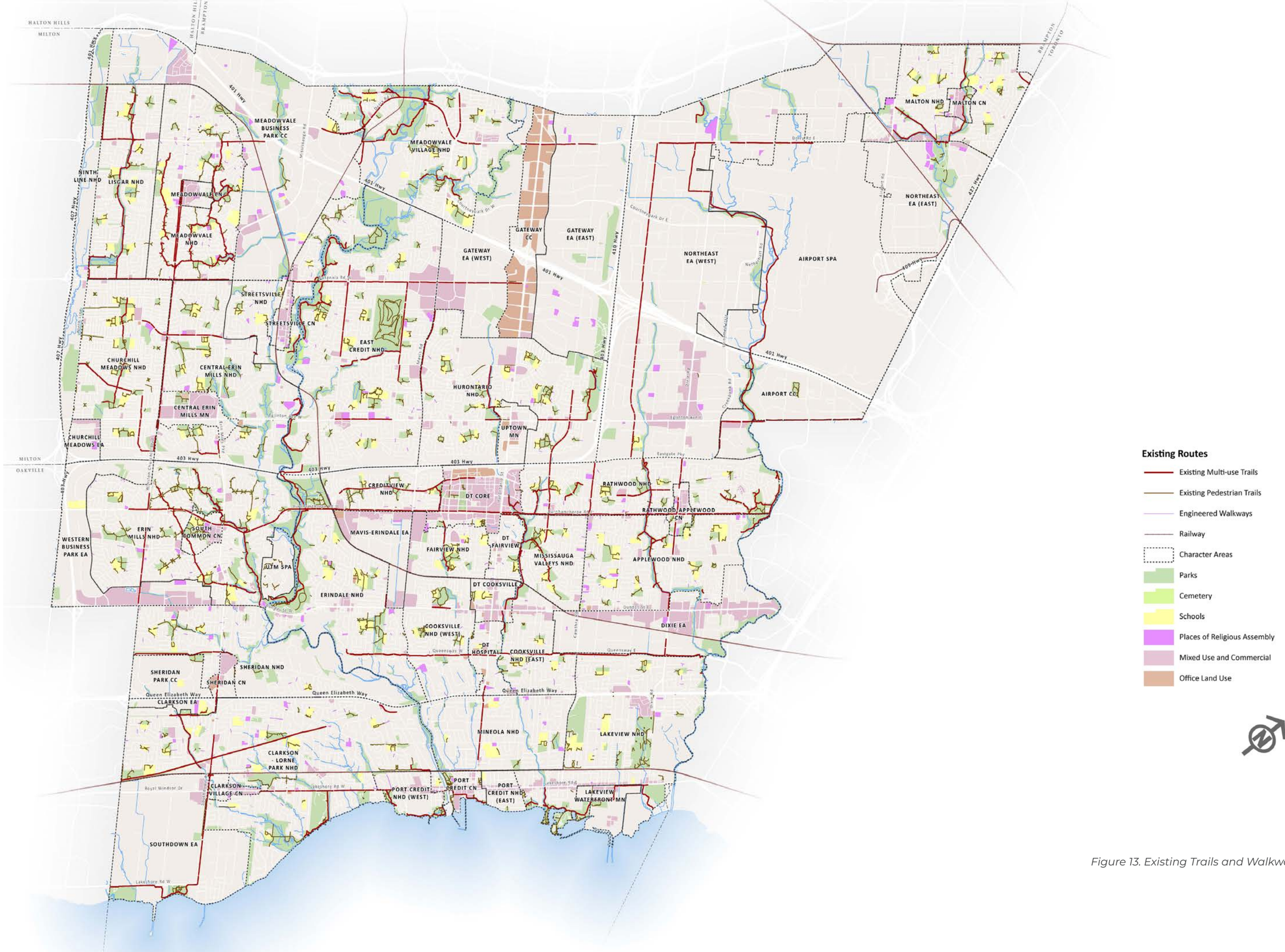


Figure 13. Existing Trails and Walkways

Walkways

Throughout the city there approximately 24 km of walkways. Walkways are intended to enhance pedestrian connections to parks and other neighbourhood centres of activity. They are intended to help reduce pedestrian travel time creating connections between roadways, buildings and amenities. They will often be located at the end of a cul-de-sacs. The walkways are typically located on City owned right-of-way. The construction standards of concrete walkways are guided by policy number 10-08-02 and Transportation Work Standards No.2240.05. Walkways must be 3.0 metres wide, with curb cuts at streets and the facility must be compliant with the Accessibility for Ontarians with Disabilities Act (AODA). In some locations, lighting, the use of bollards or maze gates and signage may be required. Developers must notify owners and future owners of lots adjacent to the walkway of the presence of the walkway.

The City has a policy (Closure of Walkway Policy) that defines conditions and administrative procedure allowing to close a walkway. Walkways are short segments of paved trails that provide connections that are typically located between roadways, buildings and amenities.

The document outlines the conditions for request for the walkway closure and description of the related administrative process. The City will consider the closure of a walkway when it can be determined not to be an integral part of a pedestrian linkage.

In locations throughout Mississauga, the City has designated easements through properties and developments. There are various examples where mid-block pedestrian connections and cut throughs have been provided between developments and streets as part of the public right of-way to help facilitate walking. These pathways provide street-to-street connections and add to the walkability of neighbourhoods by shortening walking distances and providing important connections to destinations. The City can continue to protect existing easements and ensure new connections are considered through development planning.

Presence of Pedestrian Facilities

The following map (Figure 14) illustrates the presence of pedestrian facilities that are located adjacent to roadways throughout the city. The map shows the locations where there are pedestrian facilities on both sides of a roadway, on one side and where there are no pedestrian facilities. Pedestrian facilities include sidewalks, multi-use trails and pedestrian trails.

Below, Table 2 outlines the percentage of roads (based on classification) under the City's jurisdiction with pedestrian facilities on one, both or neither side of the roadway. As seen in Table 2, most of the city's busiest roadways (arterials, collectors and minor collectors) have pedestrian facilities on both sides of the street, though there are locations where there are no facilities on either side of the street or where there are only sidewalks on one side. This can create connectivity and accessibility challenges.

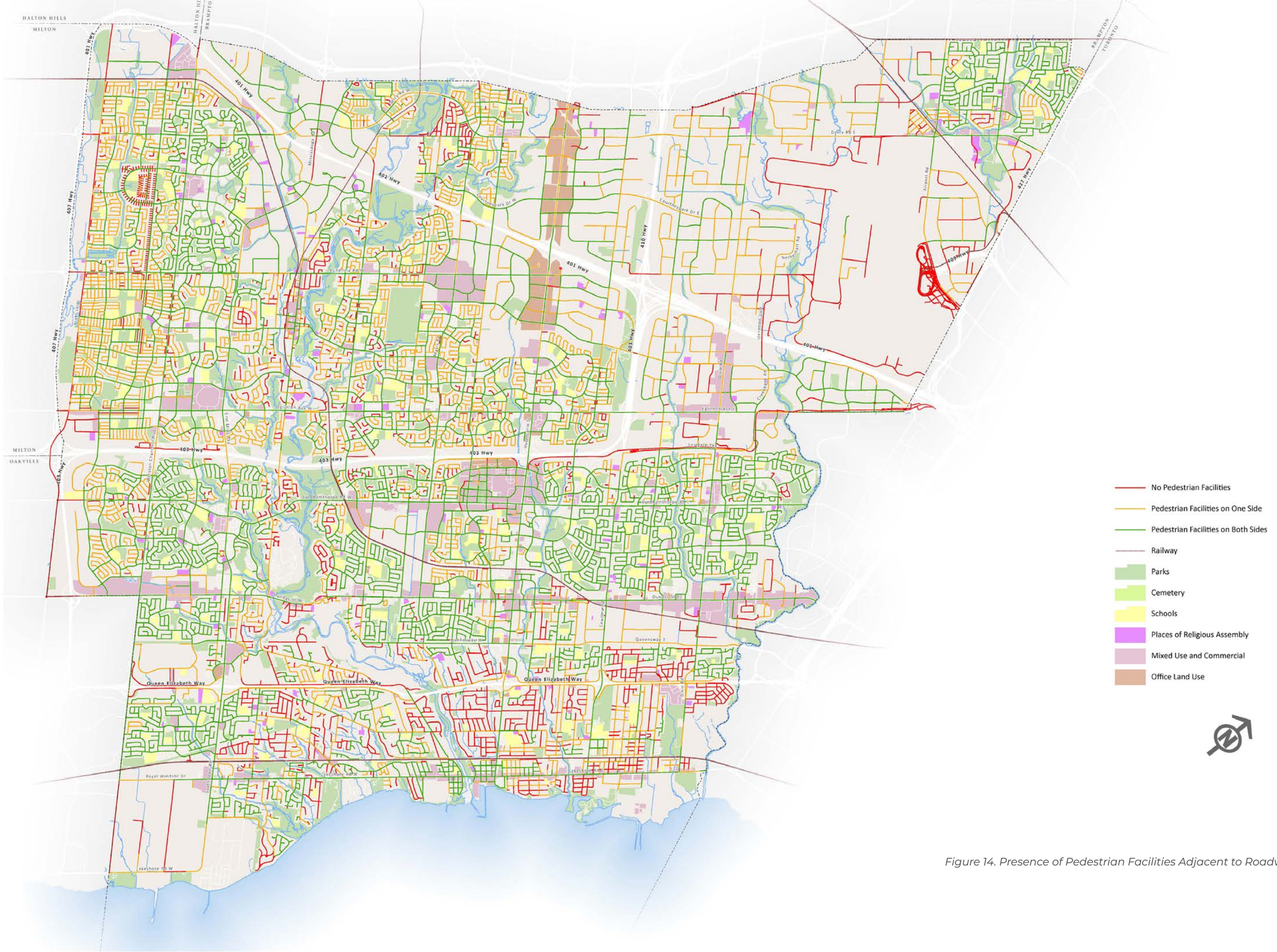


Figure 14. Presence of Pedestrian Facilities Adjacent to Roadways

Table 2. Percentage of Streets (by kilometre) with Pedestrian Facilities by Road Classification (Excludes all non municipal roads)

ROAD CLASSIFICATION	NO FACILITY	FACILITIES ON ONE SIDE	FACILITIES ON BOTH SIDES	TOTAL
Arterial	9%	18%	73%	100%
Major Collector	6%	23%	71%	100%
Major Collector (Scenic)	10%	51%	39%	100%
Minor Collector	5%	18%	77%	100%
Minor Collector (Scenic)	0%	100%	0%	100%
Local	21%	45%	34%	100%

It is also important to understand the presence of pedestrian facilities by character areas and corridors. As noted previously, there is an important relationship between character areas and corridors designated as areas of future growth and the need for connected and safe pedestrian infrastructure. Growth areas are planned and designed to promote walking and active transportation therefore, ensuring pedestrian infrastructure is provided is critical. Table 3 shows the presence of pedestrian facilities adjacent to streets within each of the different character areas. It shows that most streets in downtown, Major Nodes and Community Nodes have sidewalks on both sides of the street.

Table 3. Percentage of Streets (by kilometre) with Pedestrian Facilities by City Structure (Excludes all non-municipal roads)

CHARACTER AREA	NO FACILITY	FACILITIES ON ONE SIDE	FACILITIES ON BOTH SIDES	TOTAL
Downtown*	5%	18%	77%	100%
Major Nodes*	4%	21%	76%	100%
Community Nodes*	4%	20%	75%	100%
Neighbourhoods	16%	35%	49%	100%
Corporate Centres	8%	29%	63%	100%
Employment Areas	17%	48%	35%	100%
Special Purpose Areas	40%	37%	23%	100%

⋆Areas of Future Growth

Ensuring people walking have facilities that provide access to transit stops and stations is another important consideration. Table 4 shows the percentage of streets that are located within intensification corridors that have pedestrian facilities on one or both sides of the street. The percentage of streets with pedestrian facilities on both sides is quite high. However, when we look at streets within 500 metres of major transit stations (seen in Figure 6) nearly half of all streets have pedestrian facilities on only one side of the street or no pedestrian facilities at all. This can make accessing transit in these areas challenging.

Table 4. Percentage of Streets (by kilometre) with Pedestrian Facilities within Proximity to Transit (Excludes all non municipal roads)

AREA	NO FACILITY	FACILITIES ON ONE SIDE	FACILITIES ON BOTH SIDES	TOTAL
Intensification Corridor	7%	20%	73%	100%
Major Transit Station Area (500 metre buffer)	12%	34%	53%	100%

Barriers and Crossings

Crossing treatments allow people walking to confidently and safely cross streets and play an important role in creating facilities that are accessible for people of all abilities. There are over 750 locations within the City that have signalized crossings. These include both intersection and mid-block crossings.

Crossings can act as significant physical barriers to walking within a community. Physical barriers in Mississauga's pedestrian network include highways, waterways and rail lines.There are several bridges and over/underpasses in the City which accommodate pedestrians and other modes of active transportation crossing some of these physical barriers. Figure 15 shows the locations of signalized crossings in the City and the location of grade separated crossings.

Despite the number of signalized and grade separated crossings in the City, there are sever allocations where there is a pedestrian facility, such as a multi-use trail or a pedestrian trail, that intersect with a road and there is no controlled crossing. These locations can be seen in Figure 16. These are locations where there is no traffic signal, stop control for motor vehicle or pedestrian crossover (PXO).

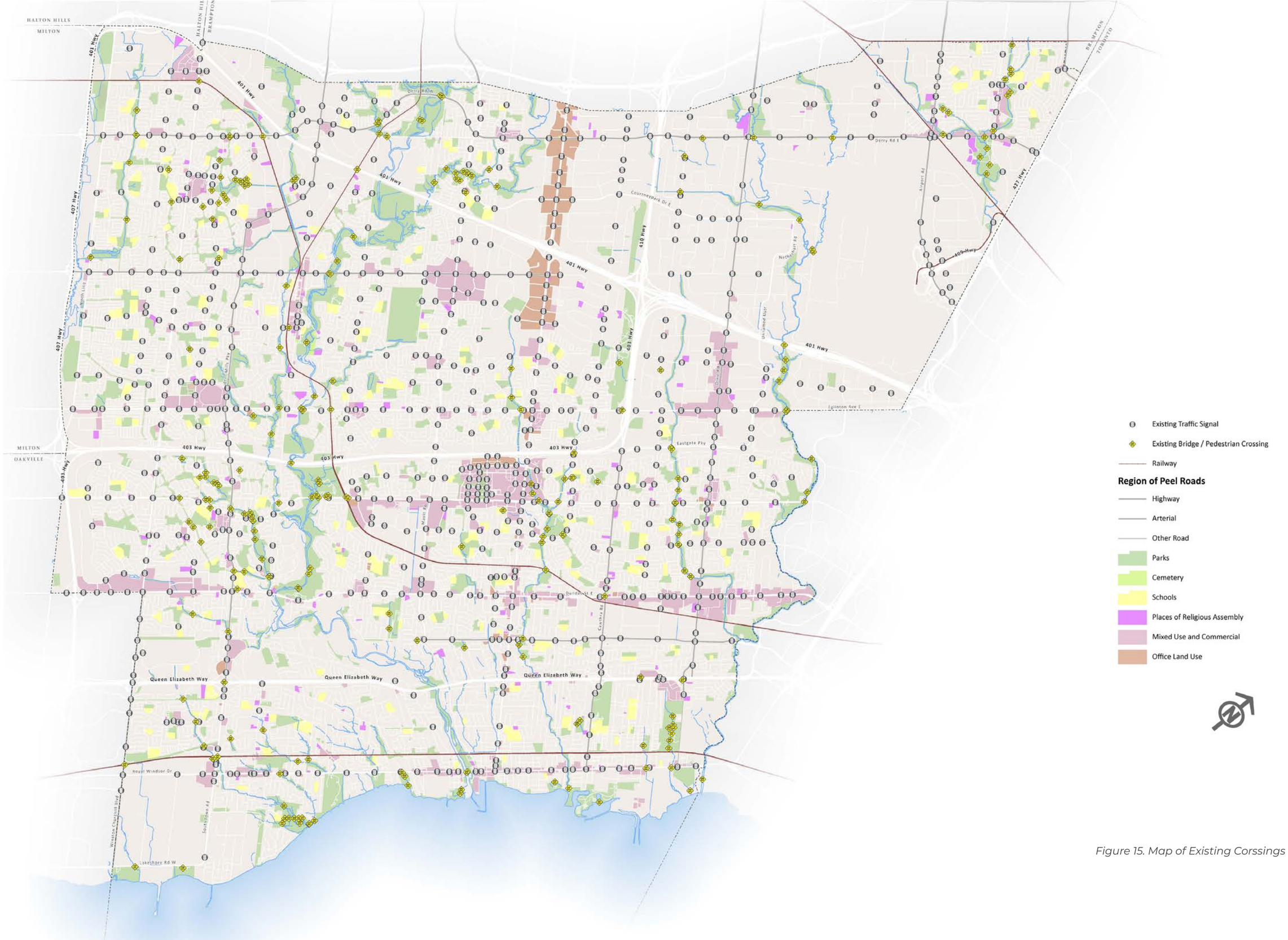


Figure 15. Map of Existing Corssings

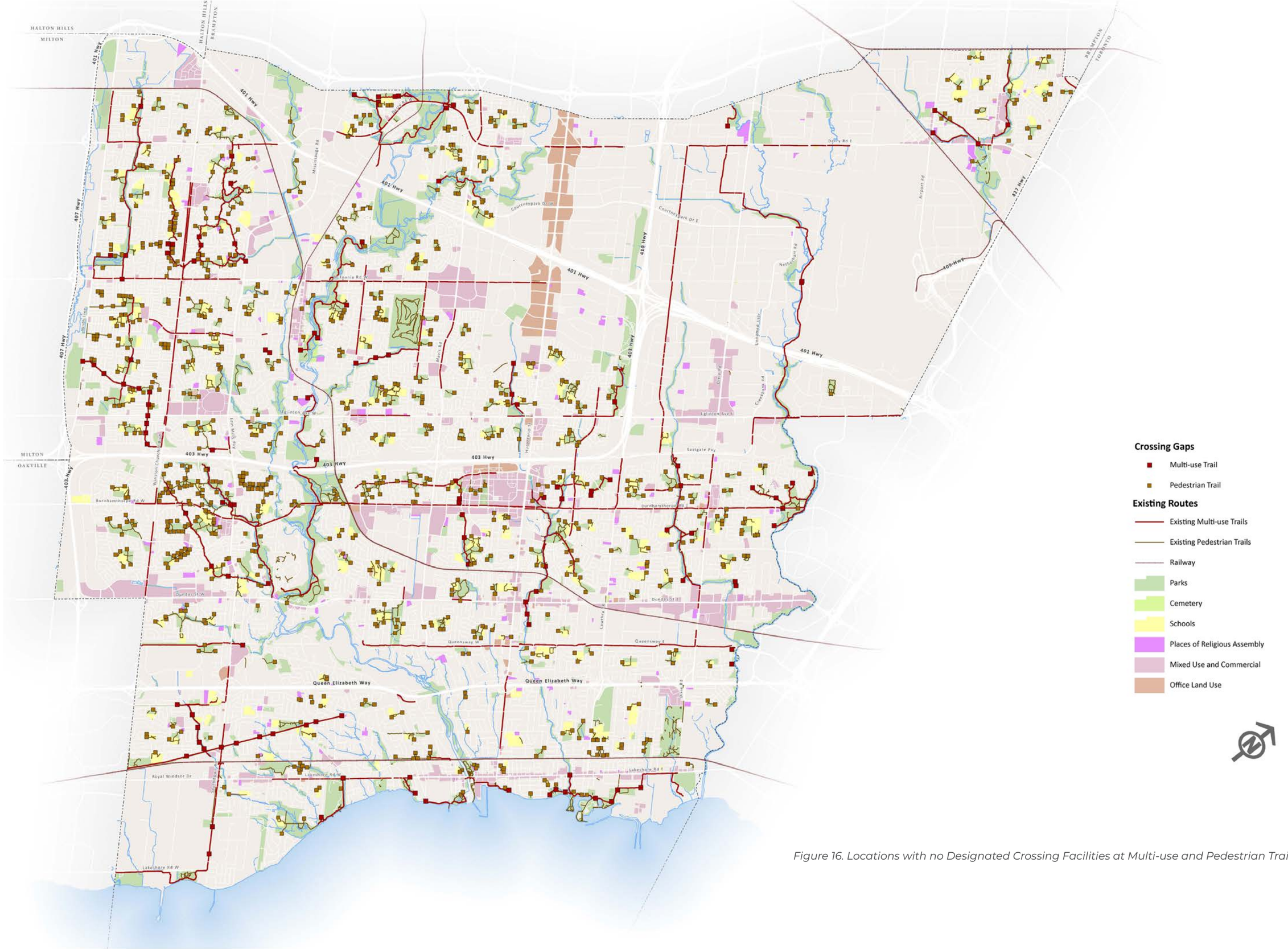


Figure 16. Locations with no Designated Crossing Facilities at Multi-use and Pedestrian Trails

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Pedestrian Master Plan