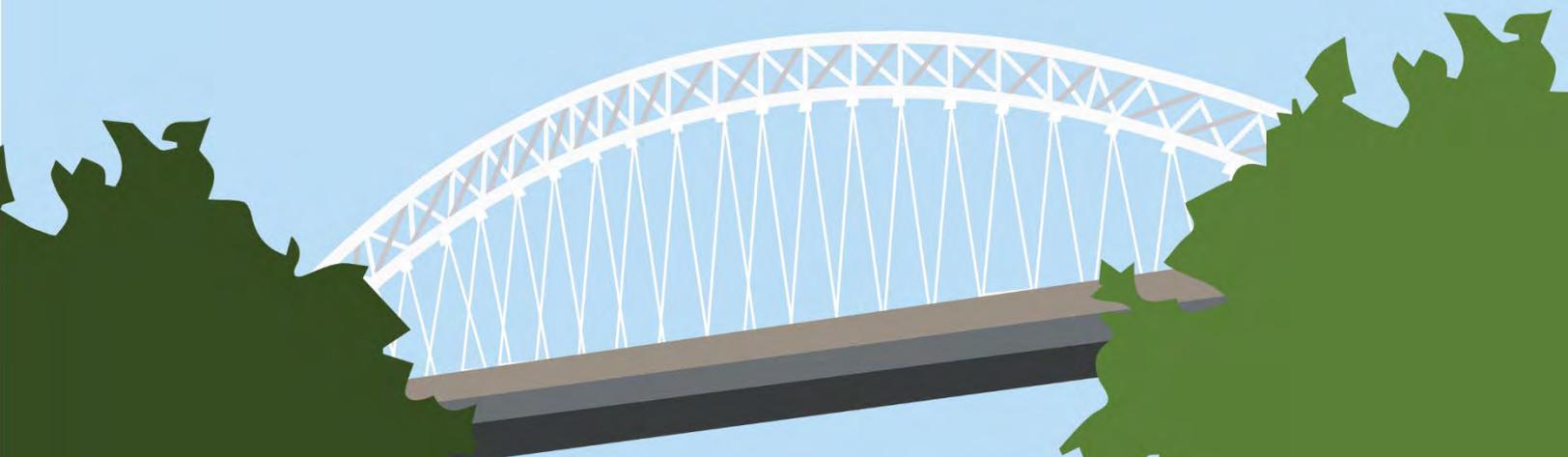


**CHAPTER**

**2**

**Transportation  
Today**



**Chapter 2.0** provides the existing conditions upon which the TMP has been developed. There are two components of “existing conditions” which ultimately need to be considered.

The first is the socio-demographic profile of the City, which helps to identify trends, preferences and potential needs which help to shape potential and preferred solutions.

The second is the layout and functionality of the current transportation network. This allows for the identification of missing links, barriers and potential opportunities.

Both are necessary components as a first step in identifying potential improvements – infrastructure, policy and program.

## Chapter 2.0 includes...

2.1

### City Profile

Provides an overview of key socio-demographic information about the City including existing transportation trends.

2.2

### Context

Provides an overview of the current state of each of the transportation modes within the City including cars, goods movement, transit, walking and cycling.

# 2.1.

## City Profile

The intent of the TMP is to build upon the existing transportation conditions by using both the current and future socio-demographic trends. **Section 2.1** provides an overview of these conditions and trends. Throughout this section we have included icons identifying future ready indicators.

### 2.1.1. Geography & Population

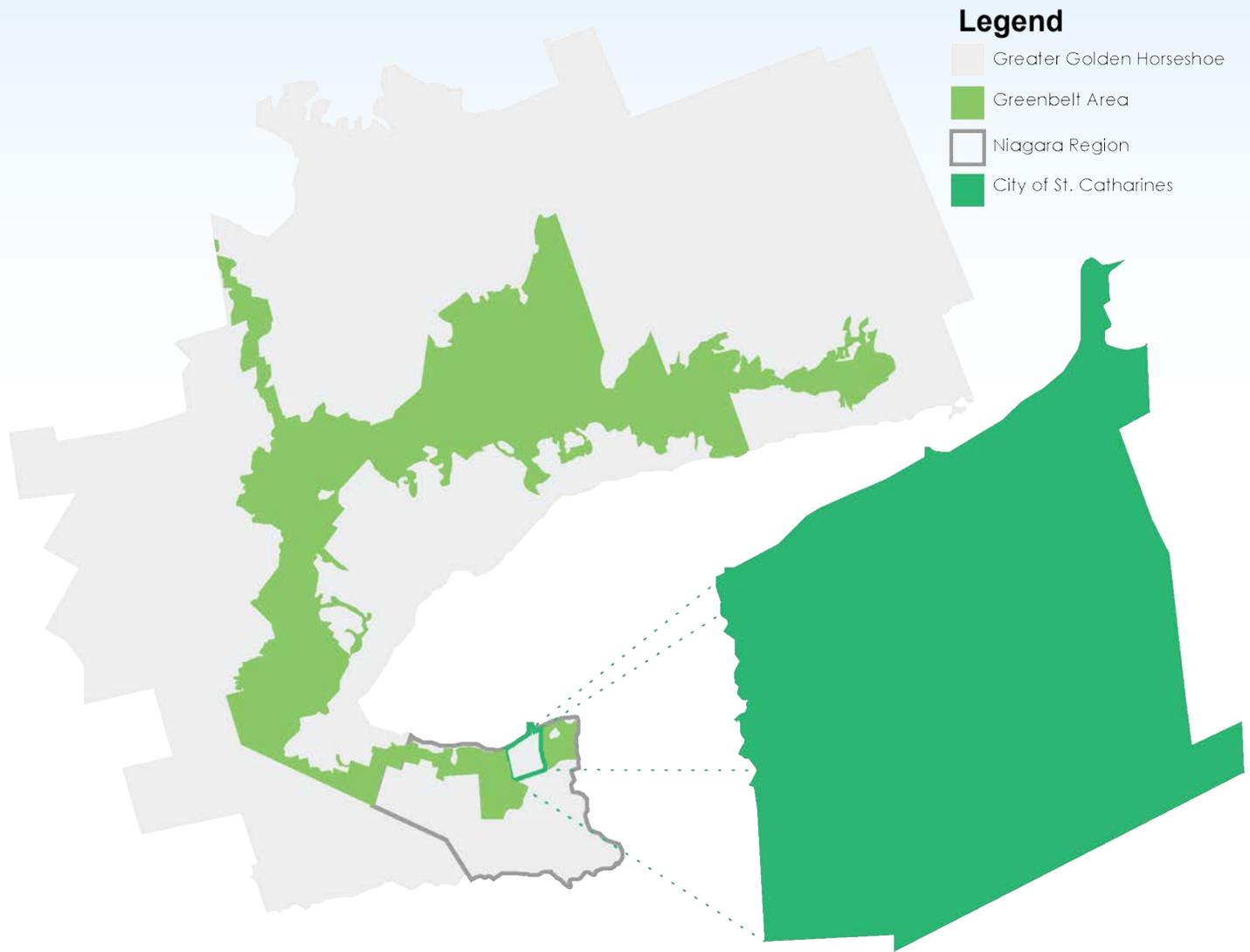
The Greenbelt encompasses the western portion of St. Catharines and contains some of the best tender fruit and crop producing agricultural lands in the country. The Niagara Escarpment runs through the southern portion of the City, and the shore of Lake Ontario forms the northern border. Portions of the eastern boundary are covered by the Welland Canal.

Ontario's Places to Grow Act designates Downtown St. Catharines as Niagara Region's only Urban Growth Centre, which emphasizes urban intensification and protection of Greenbelt lands. Urban Growth Centres are designated to support the highest concentration and mix of transit supportive residential, employment, institutional and civic uses. These are also intended to promote public and private investment. A minimum density target of 150 people and jobs per hectare to be accommodated by 2031 is established for Urban Growth Centres. Urban Growth Centres focus on a creative and cultural role in the city-core chemistry, the presence of institutions of higher learning, attracting new urban entrepreneurs, creating live/work spaces and pedestrian-friendly spaces. In the St. Catharines context, there is also the desire to position the Downtown as a signature tourism destination, including as part of the Niagara Wine Route.

St. Catharines can be identified by both its urban and agricultural areas. The urban area is established by the Region of Niagara Policy Plan and is intended to provide urban development opportunities to accommodate the majority of the City's projected future population and employment growth. The agricultural area includes all lands within the St. Catharines municipal boundary located outside the urban area. The agricultural area is to be protected, with the intended uses predominately agriculture, agricultural related, existing residential and natural heritage. The City's Official Plan (p. 5-6) does not support expansion of the urban area. The City also recognizes the value and opportunities the agricultural area and community have in enhancing the St. Catharines' sense of place.

Figure 3 illustrates Niagara Region and St. Catharines geographic placement within the Greater Golden Horseshoe. Given that the majority of growth is anticipated to occur within the urban area, it is imperative that the TMP provide recommendations that accommodates this growth with strategic recommendations for the rural areas to enhance overall connectivity.

Figure 3. Geographical context



The 2016 population in St. Catharines was just over 133,000, which represented a growth of 3.1% from 2001 to 2016. The population is projected to be as high as 168,000 by 2041. St. Catharines had a 31.5% share of the Regional population in 2001 and 29.7% in 2016.

In 2001, the Niagara Region had a 3.6% share of the provincial population, which fell to 3.3% in 2016. The share of population of both St. Catharines and the Niagara Region has fallen slightly in comparison to Ontario, despite their continued modest growth.

The City of St. Catharines Official Plan (OP), adopted in January 2012, estimates the population will grow to 143,800 residents by 2031, which is approximately a 4% increase from 2011. Employment is forecasted to grow to 71,000 by 2031, representing approximately 6% increase from 2011.

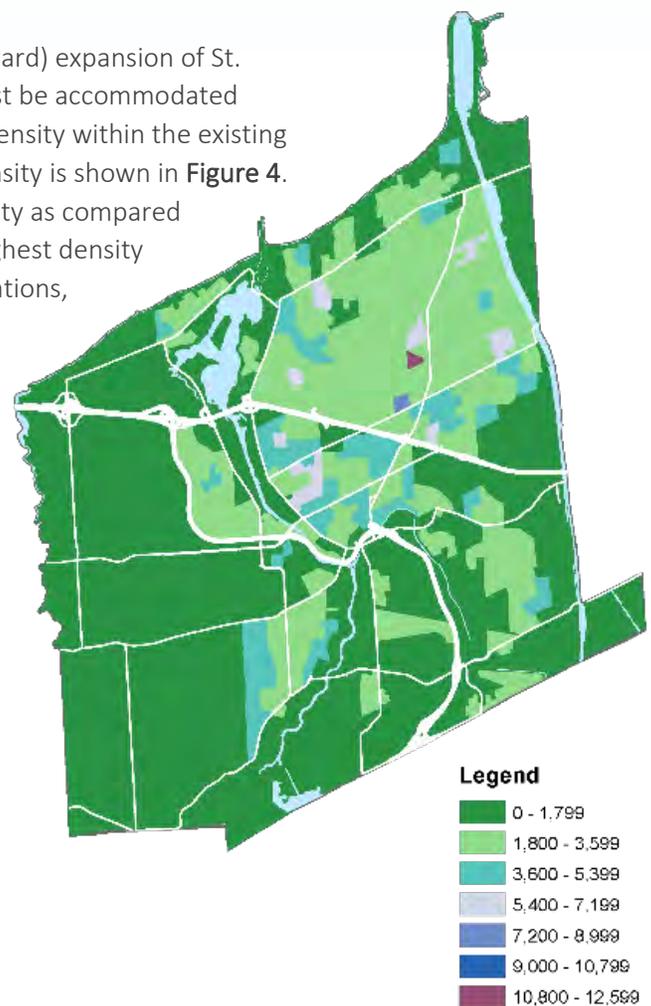
Due to legislated constraints on the physical (outward) expansion of St. Catharines, the majority of population growth must be accommodated through more compact built form and increased density within the existing urban area of the City. The existing population density is shown in **Figure 4**. Existing urban areas are expectedly higher in density as compared to the rural and industrial parts of the City. The highest density locations are around existing high-traffic retail locations, including Lake Street Shopping Area and Ontario Street Commercial Corridor, showing that a mixed land use pattern may attract larger populations.

The intensification of the existing urban area represents an opportunity for a more sustainable approach to development. Carefully considered compact built form could help to increase the number of shorter trips, creating an environment that is more conducive to sustainable modes of transportation such as walking and cycling.



*As St. Catharines continues to develop and integrate their transportation network, focus should be given to the difference in accessibility and modal options that are currently provided within the urban and rural areas. Future considerations need to recognize the vastly different infrastructure needs of the two areas.*

**Figure 4. Population density (persons/km<sup>2</sup>)**



### 2.1.2. Economy

The City's economic pattern is another aspect of the overall profile that is closely tied together with transportation. Drawing from the St. Catharines Economic Development Strategy and Action Plan, transportation is one of the key elements in attracting population and economic growth. As the headquarters for Ontario Ministry of Transportation, St. Catharines has an opportunity to take opportunities in the mobility sector, especially with major technological shifts in transportation. This includes ride-sharing transportation models, connected and autonomous vehicles, and new alternative energy sources and materials.

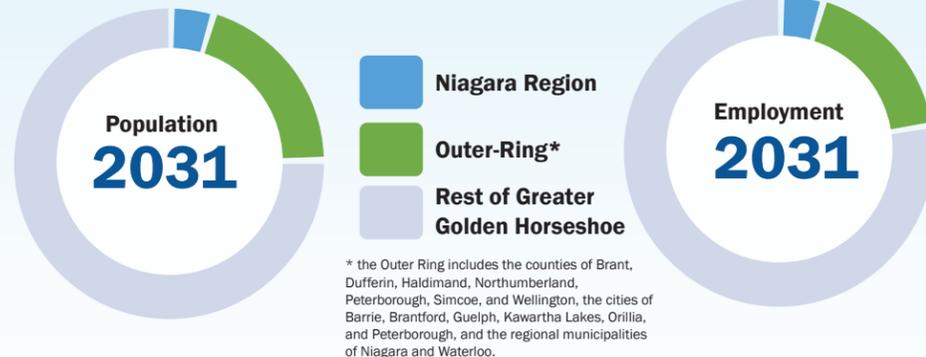
A reflection of St. Catharines' central role as the major business and service centre for Niagara Region can be seen in the relatively high proportion Niagara Census Metropolitan Area (CMA) jobs that are found in the City in sectors that cater to the needs of the residents in Niagara. Across all sectors, just over a third of all jobs (34%) in the CMA are in St. Catharines. A higher proportion of jobs is found however in retail (41%); finance and insurance (43%); real estate, rental and leasing (41%); management of companies and enterprises (68%); educational services (44%); and health care and social assistance (40%). This indicates that St. Catharines operations in these sectors serve clients beyond City residents.

In addition to the population and employment information, a current "snapshot" of key socio-demographic trends for the City of St. Catharines as it relates to Niagara Region and the Greater Golden Horseshoe is provided in **Figure 5**.

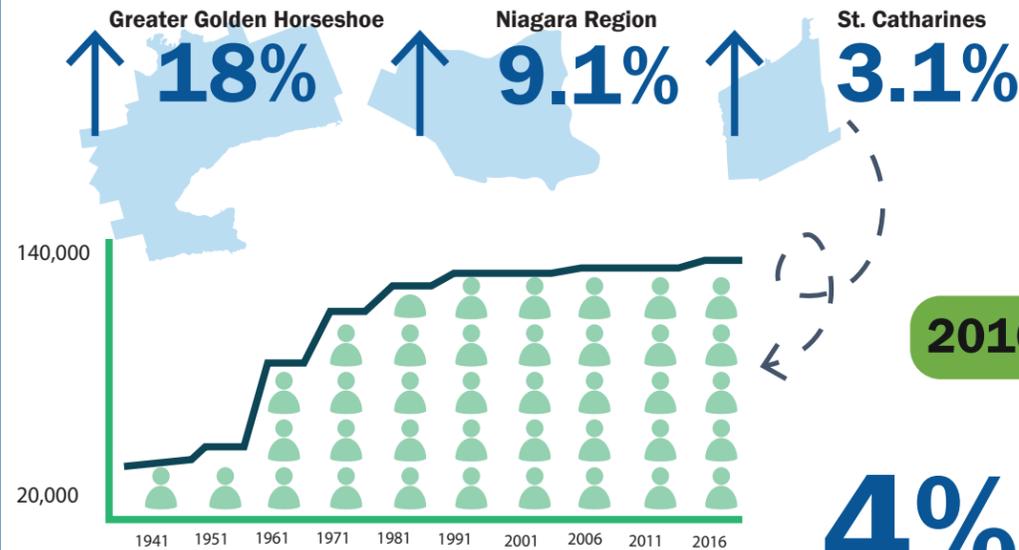
# Figure 5. St. Catharines context

## POPULATION TRENDS

### Population & Employment Distribution

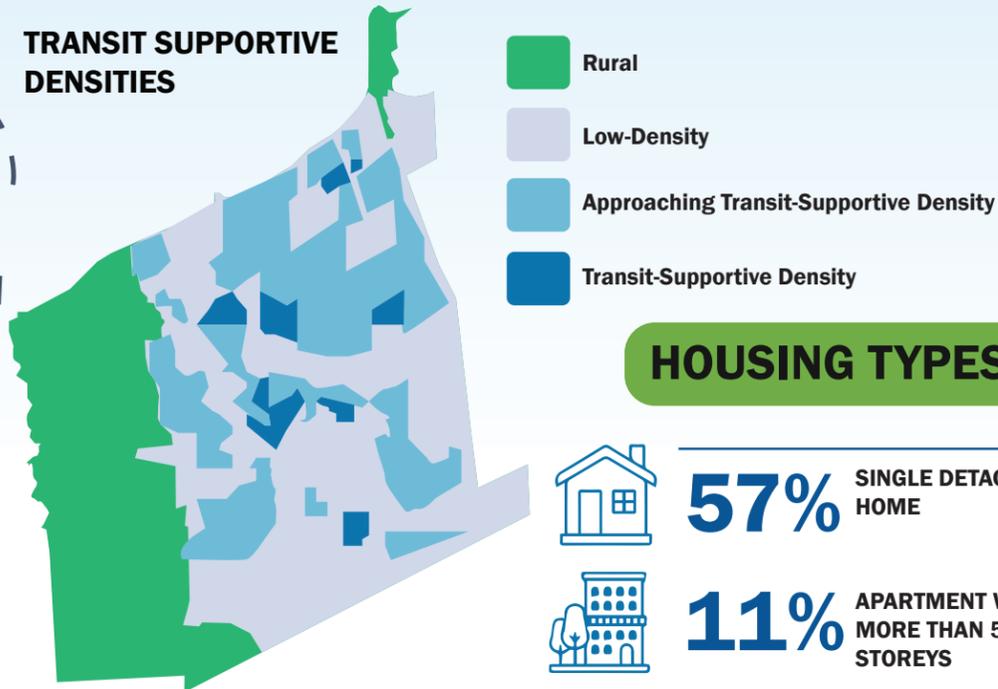


### Population Growth (2001-2016)

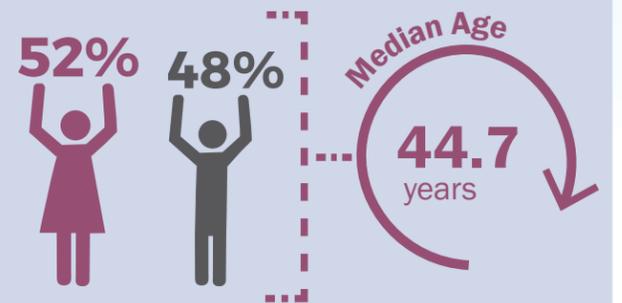


## POPULATION DENSITY

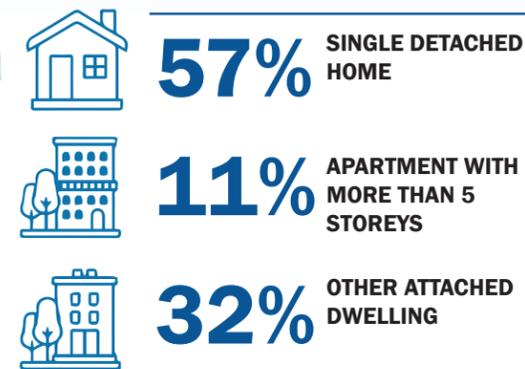
### TRANSIT SUPPORTIVE DENSITIES



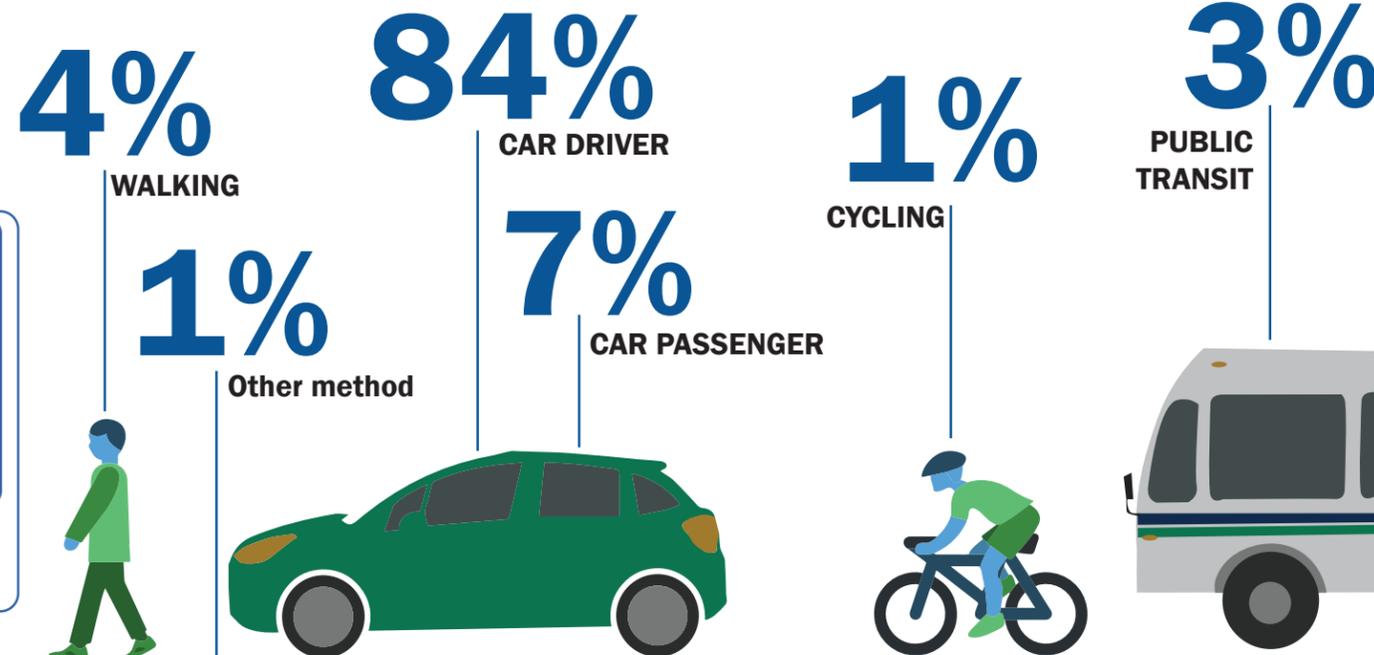
## CENSUS DATA



## HOUSING TYPES



## 2016 MODE SPLIT



**WELCOME TO**

The City of **St. Catharines**

POPULATION **133,113** (as of 2016)

Niagara Region

## Socio-Demographics

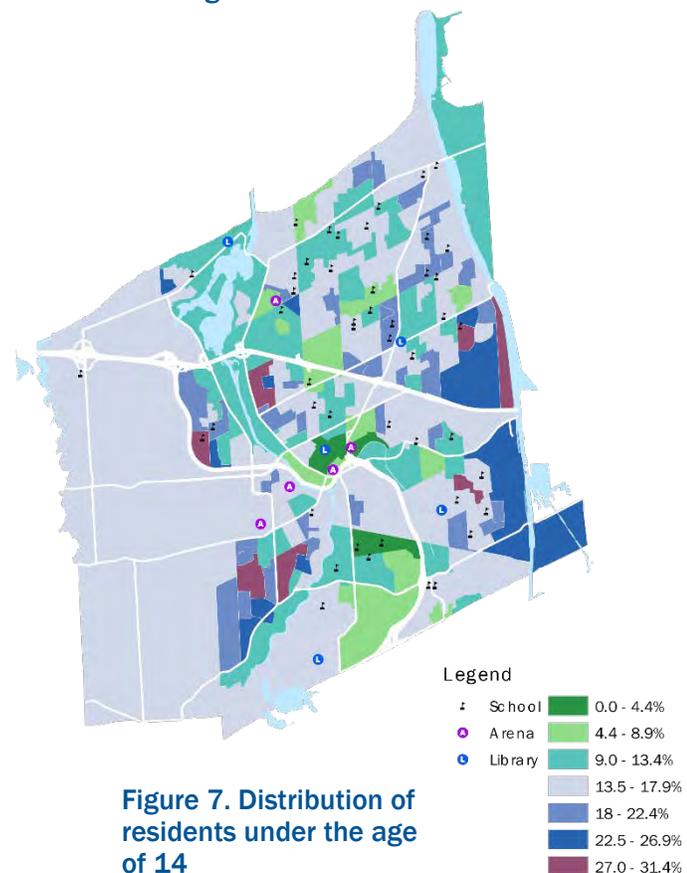
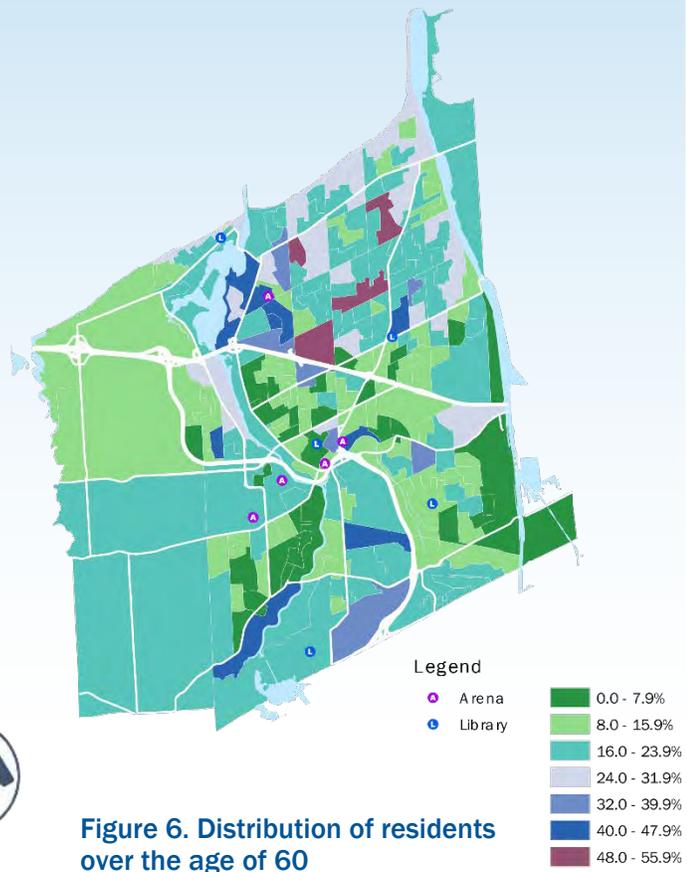
Socio-demographics indicators include age, gender, culture, education and income and are considered some of the most influential aspects of human behavior and trends. The following is a high-level overview of some of those trends.

**Age & Gender:** Across Canada, the population is collectively aging. In St. Catharines, the median age is 46, which is higher than the Canadian median of 41.2. The distribution of the residents over 60 years old is shown in **Figure 6**. The percentage of the population under 14 is 14.6%, as seen in **Figure 7**, and is less than the national percentage of 16.6%. The gender split is equal, which mirrors the Canadian national ratio.

*The future of St. Catharines transportation network should strive for a multi-modal network, for all populations aged 8-80, and beyond.*



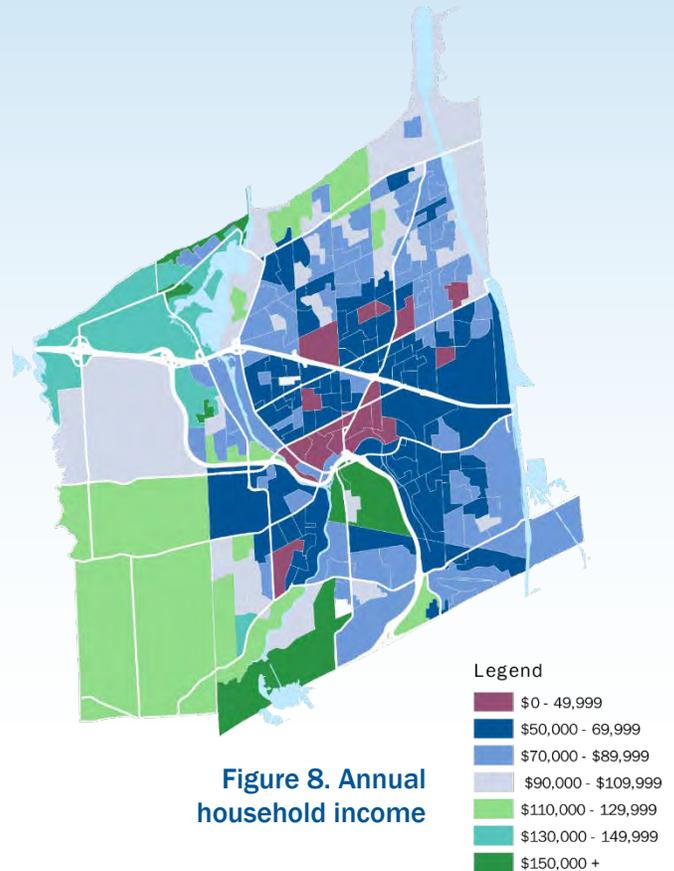
*The distribution of both the youngest and oldest populations in St. Catharines indicate the need to plan for transportation networks that meet the needs of these groups. The geographic distribution can indicate where key trends for the accessibility and functionality of the transportation network should occur. Locations with a high distribution of residents over 60 and under 14 in **Figure 6** and **Figure 7** show areas that may require additional considerations to ensure the accessibility and safety of the network.*



**Culture:** Of the total population, 16.9% identify as an immigrant with 7.4% immigrating between 2011-2016. This overall percentage is lower than what is seen nationally (21.9%). Recently, most immigration has occurred from Asian countries. 2.9% of the population identifies as aboriginal, with the majority (1.65%) identifying with First Nations. The overall distribution of aboriginal-identifying population is lower than the national percentage of 4.9%.

**Education:** Of the population aged 25 to 64 years old, 59.5% have a post-secondary certificate, diploma or degree, which is lower than the Canadian average of 64.8%.

**Income:** Personal and household income can be significant factor in day-to-day transportation choices. In St. Catharines, the median after-tax employment income for individuals in 2015 was \$28,521 and for households it was \$56,572, as compared to the national medians of \$30,866 for individuals and \$61,348 for households.



Transportation is considered a significant part of one's day-to-day cost of living. In Ontario, the average household spends around 18.8% of its income on transportation (the national average of 19.4%).

*The geographic income distribution shows that currently, income parity is not achieved throughout St. Catharines. This is important to note when considering the equity of the transportation network, and the multi-modal connections that are available across all income areas in the City.*

*Culture, education and income affect the accessibility and the overall equity of the system. Locations with lower incomes, as seen in **Figure 8**, show locations that should be connected by transportation. St. Catharines medians for income are lower than the national medians, however the percentage of income spent on transportation is relatively consistent. This indicates that accessibility and affordability in transportation are themes that the City may face and should consider as part of this TMP.*



## 2.1.3. Travel Habits

According to the 2016 census, active modes (walking and bicycling) account for 5% of trips, which is a decrease from 2006. Transit, including St. Catharines Transit and GO Transit, accounts for 3% of travel, unchanged from 2006. The census data also revealed more men than women drive, women were more likely to use transit, and men were more likely cycle to commute. **Figure 9** depicts the results from the 2006 and 2016 Transportation Tomorrow Surveys which provide a detailed break-down of how people use various modes within the City.

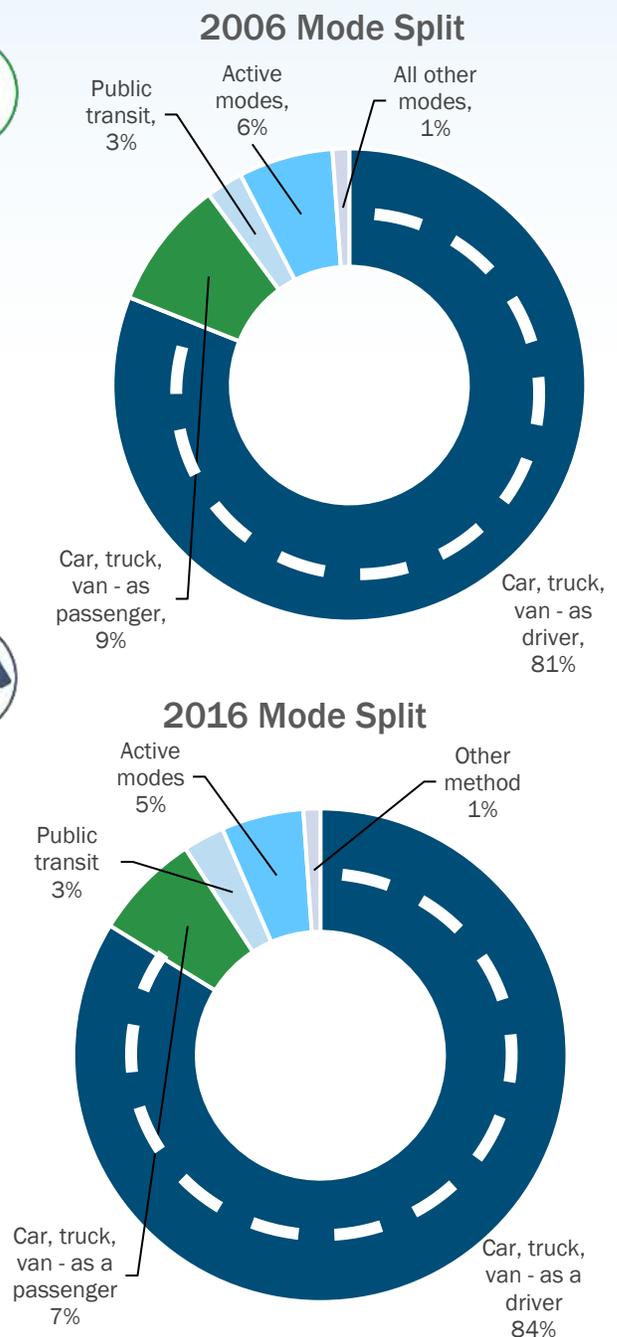
*According to commuting data from the 2016 Census of Canada, driving is the dominant mode of transportation in St. Catharines. Private vehicles (car, truck or van) account for 91% of all trips whether driving alone or as a passenger, which is an increase over the 2006 census. This is an important note to consider for the future sustainability of the City.*



*The City needs to balance the mode diversity of road users when planning for infrastructure so as to accommodate these differences, thereby increasing the resiliency of the transportation network.*



**Figure 9. Comparison of 2006 and 2016 mode split**



## Commuting Patterns

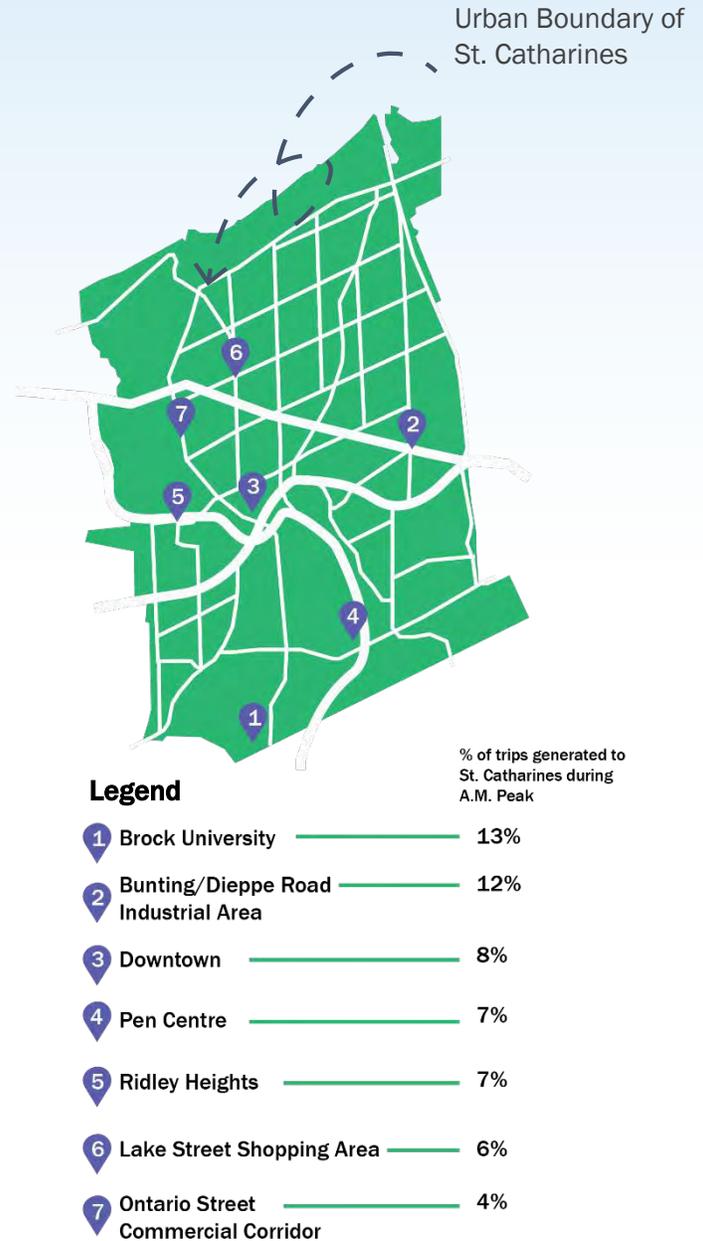
The City’s road network includes links that fall under multiple jurisdictions - Provincial freeways, Regional arterial roads, and City arterial, collector and local roads. The Queen Elizabeth Way links St. Catharines to Niagara Falls and Fort Erie to the southeast, and to Hamilton to the west. Highway 406 links St. Catharines to the southern part of the Region.

Nearly half of all external (non-resident) trips in St. Catharines originate in Niagara Falls, Thorold and Niagara-on-the-Lake. The next most common sources of external trips originate in Welland, Lincoln and the Grimsby-Hamilton area.

To better understand where traffic is destined, trip data for St. Catharines traffic analysis zones were extracted from Transportation Tomorrow Survey database. While trips were somewhat equally distributed across all zones, certain key destinations emerged. In total, “high volume” destinations constituted approximately 56% of all trips in the morning peak period – typically between 6:00 a.m. and 9:00 a.m. Brock University is the single most travelled destination, generating 13% of trips to St. Catharines within the morning peak.

The highest generating trip destination zones are summarized in Figure 10. These areas consist of employment, educational and commercial uses.

**Figure 10. Popular commuting destinations in St. Catharines**



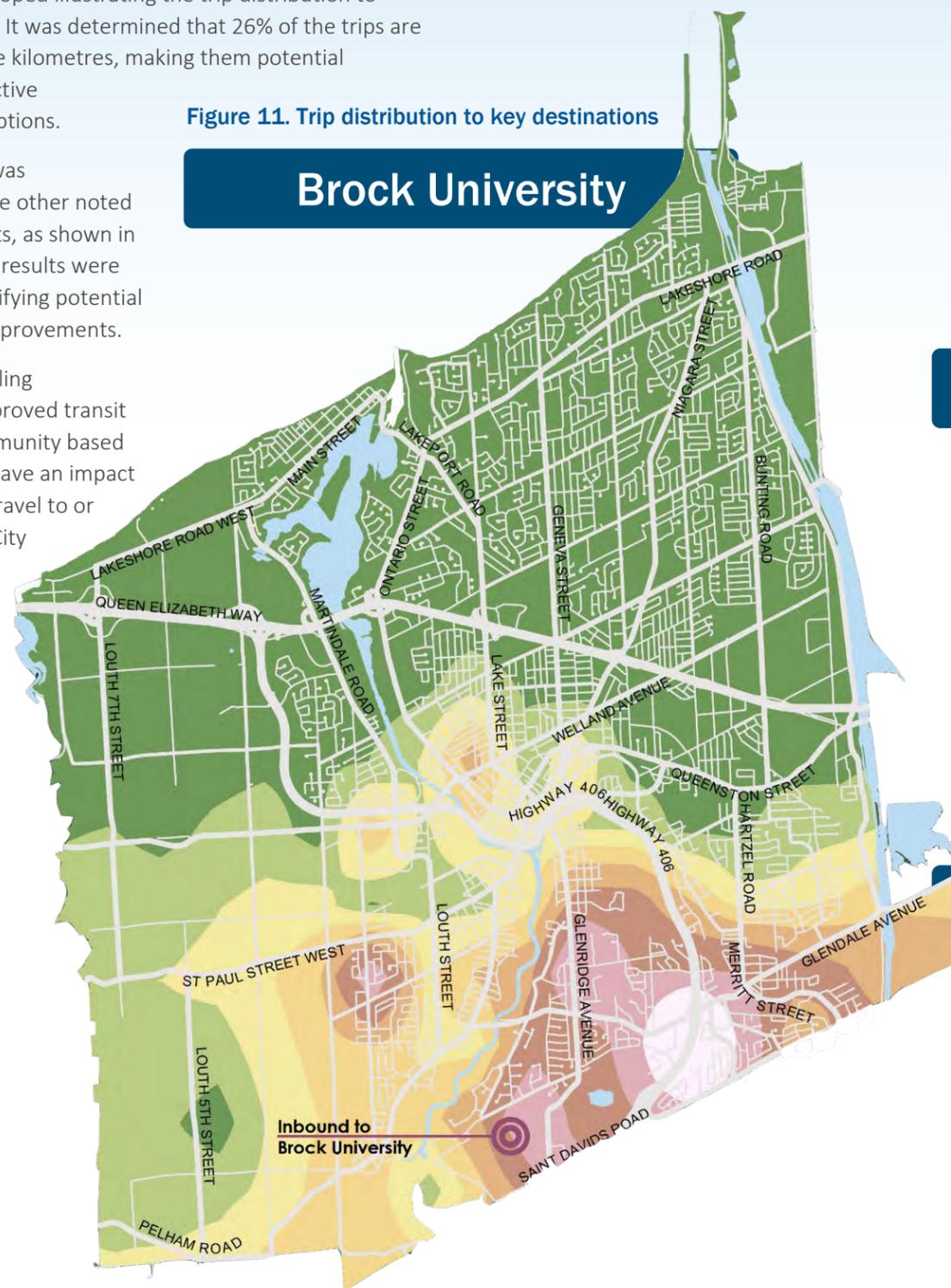
There are several destinations within the municipality that generate daily peak period trips, the majority of which are undertaken using an automobile. An assessment of the potential trips that could be taken to Brock University by more sustainable modes of transportation was undertaken.

A map was developed illustrating the trip distribution to Brock University. It was determined that 26% of the trips are within one to five kilometres, making them potential candidates for active transportation options.

Similar analysis was conducted for the other noted destination points, as shown in **Figure 11**. These results were used when identifying potential infrastructure improvements.

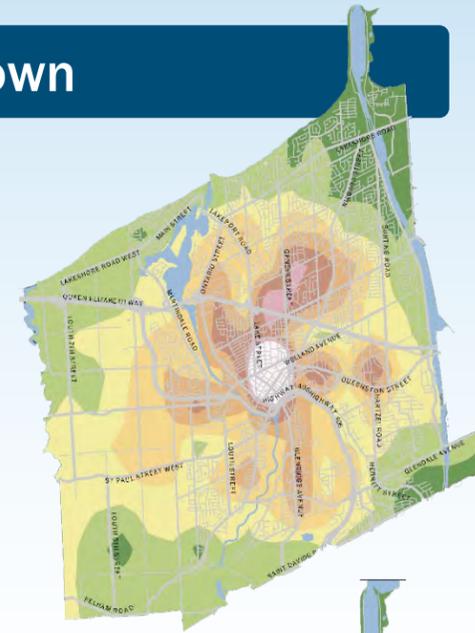
Walking and cycling connections, improved transit service and community based outreach could have an impact on how people travel to or between major City destinations.

Figure 11. Trip distribution to key destinations



**Brock University**

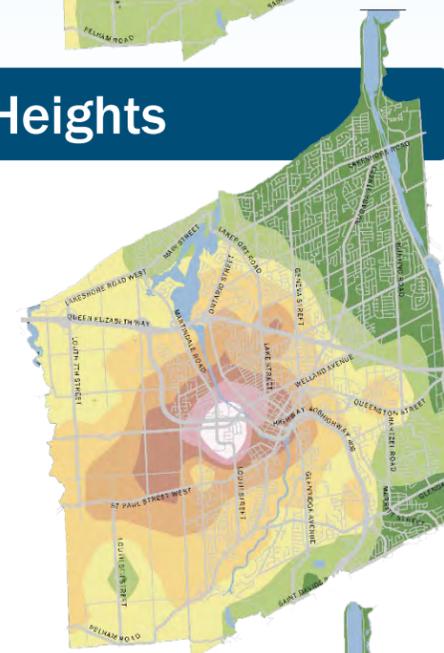
**Downtown**



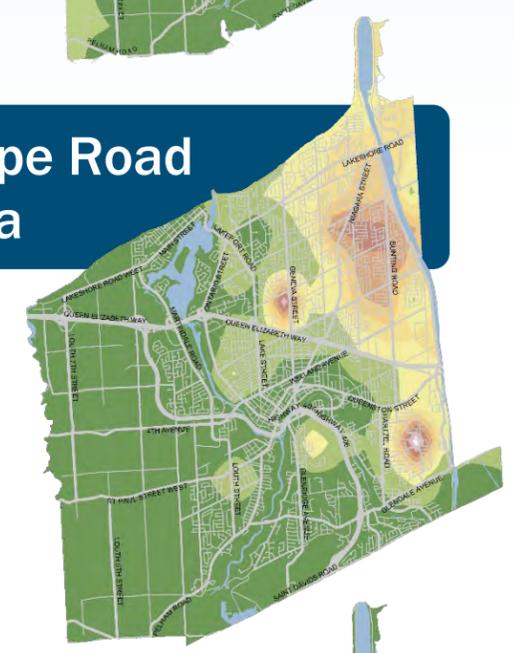
**Lake Street Shopping Area**



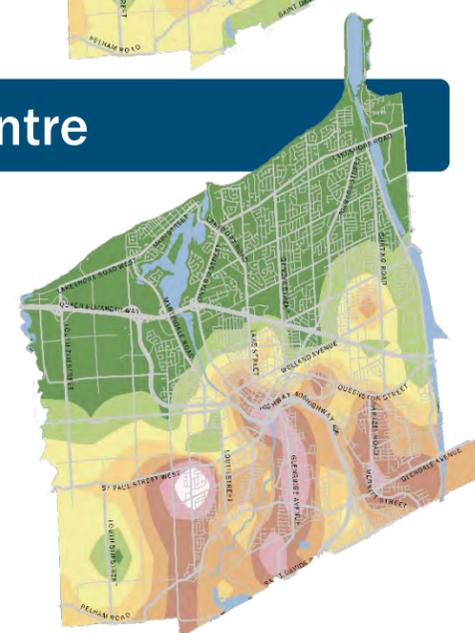
**Ridley Heights**



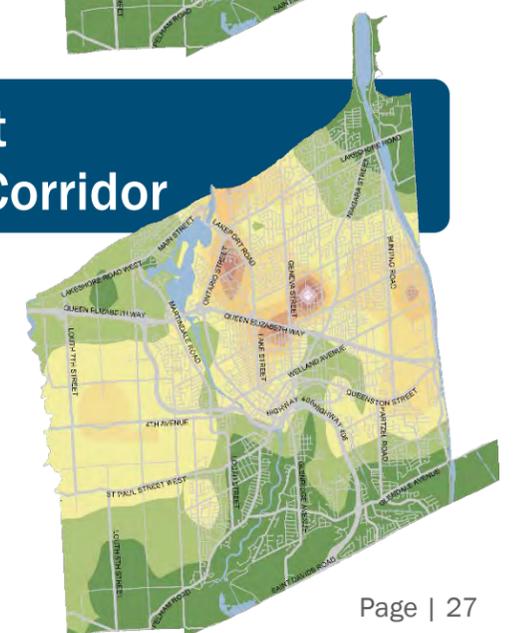
**Bunting/Dieppe Road Industrial Area**



**Pen Centre**



**Ontario Street Commercial Corridor**



# 2.2.

## Multi-Modal Context

This section explores the current operations of each transportation mode – cars, heavy trucks, transit and active transportation including human propelled forms or supported transportation – and the existing interactions between modes that influence how the transportation system functions. The TMP will build upon these existing conditions by integrating or adapting current practices into a more complete streets approach. The focus of this TMP is on trips into and around our City. Inter-municipal trips, while influencing the trips within the city, are under Niagara Region’s jurisdiction and are therefore included in the Region’s Transportation Master Plan. Similarly, high-level inter-provincial trips are considered in the Province’s transportation plans as discussed in **Section 1.3.1**.

A high-level overview is provided in **Figure 12**, followed by more detailed analysis of individual modes of travel.

Figure 12: High-level overview of current transportation conditions



- + The road network in St. Catharines includes a hierarchy of arterial, collector and local streets.
- + As one of Ontario's oldest communities, rights of way tend to be narrow, especially in the downtown.



- + Goods are moved in, out and around St. Catharines mainly by truck and on water using the Welland Canal. All Provincial highways, Regional and arterial roads accommodate truck traffic. There is no truck route bylaw and there are no time of day restrictions regarding truck activity within the City.



- + The St. Catharines Transit Commission (SCTC) oversees the City's transit system. There are 29 transit routes and shuttles provided by St. Catharines Transit and most run on 30-minute headways.
- + Niagara Region Transit, GO Transit, and VIA Rail also operate within the city.



- + Pedestrians are typically accommodated on the City's sidewalk system and comprehensive trails network; however, major barriers limit access to key destinations, causing conflicts with other road users.



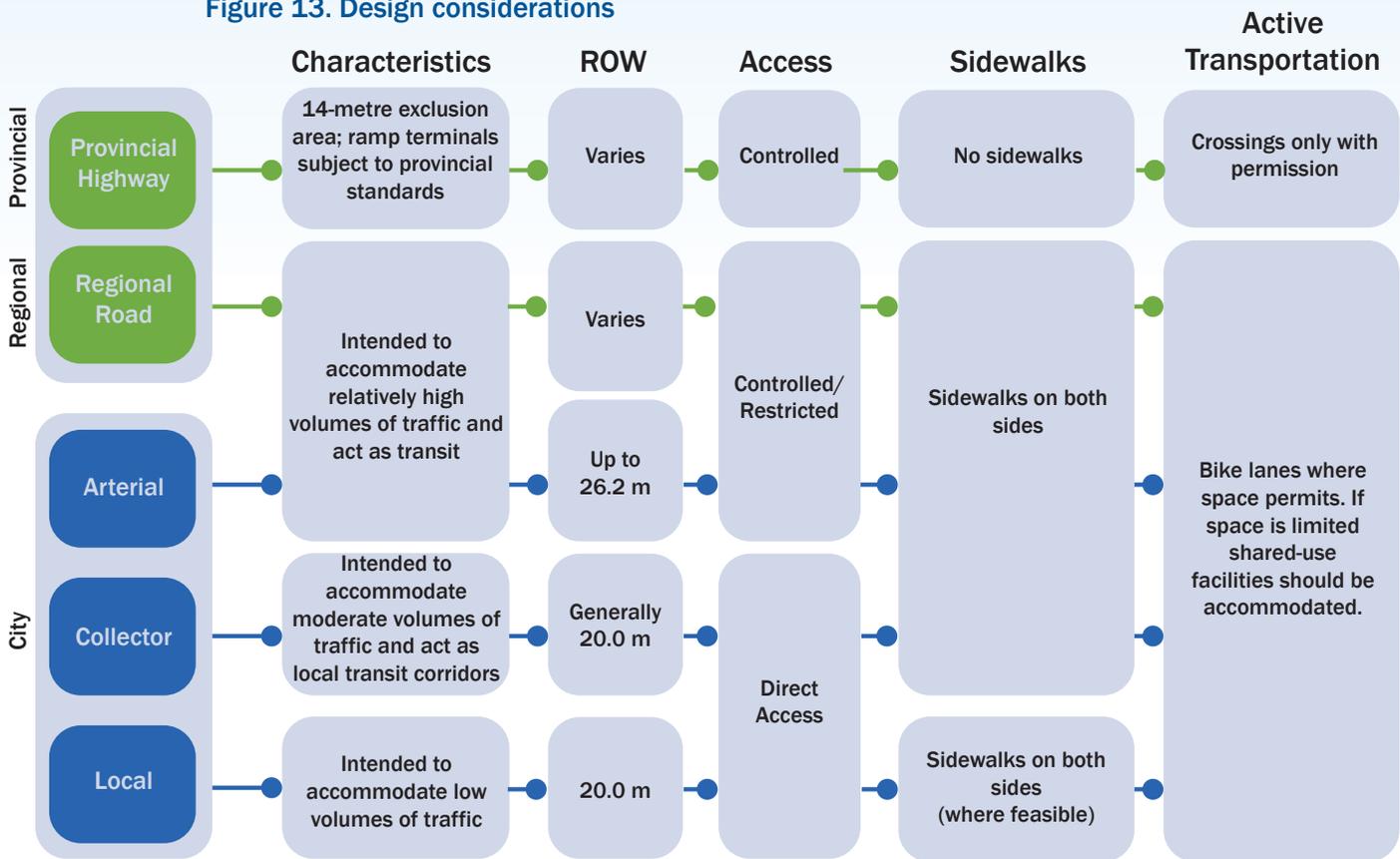
- + On-road cycling is well established within the City including many core north-south and east-west routes found within the urban area. Some critical missing links could improve overall connectivity and future ready thinking and cohesive design could enhance the sense of safety and comfort.

## 2.2.1. Roads

The City of St. Catharines Official Plan identifies four road classifications. For each road classification, a recommended roadway width, access type, sidewalk implementation and active transportation accommodation is identified.

While the road classification is typical, it limits considerations for alternative modes of transportation and those that are addressed, are not consistent with current guidelines and standards. The road classification system does not necessarily provide staff and decision makers with the tools to support a change in design approach and multi-modal integration. Figure 13 illustrates the existing road classification and the design considerations for each.

**Figure 13. Design considerations**



Map 1 depicts the existing roadways and their classifications.

# Map 1 Existing Roadway Conditions

**71km**  
Highway / Freeway

**121km**  
Arterial

**74km**  
Collector

**484km**  
Local

Roadway Classification

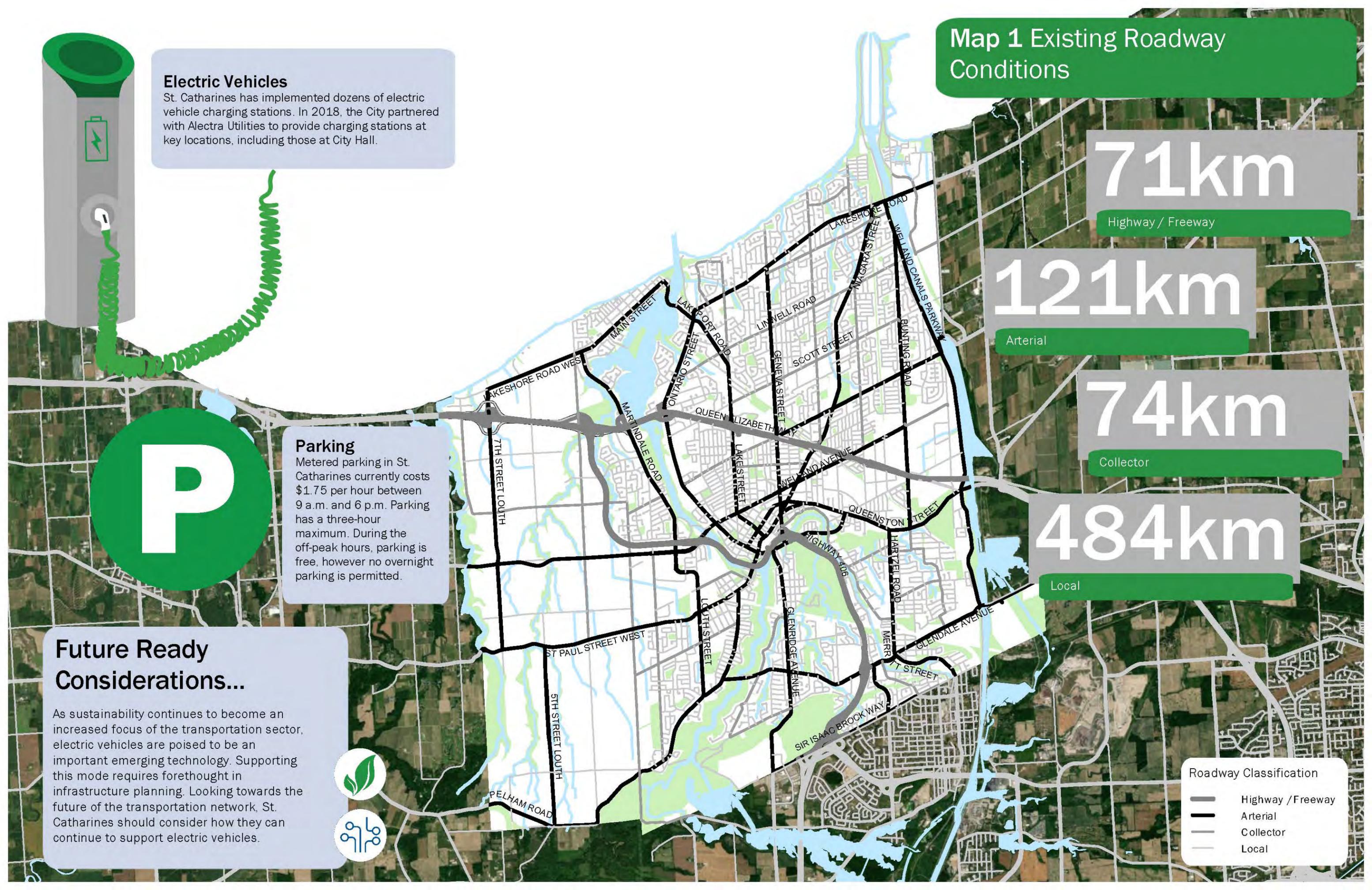
|  |                   |
|--|-------------------|
|  | Highway / Freeway |
|  | Arterial          |
|  | Collector         |
|  | Local             |

**Electric Vehicles**  
St. Catharines has implemented dozens of electric vehicle charging stations. In 2018, the City partnered with Alectra Utilities to provide charging stations at key locations, including those at City Hall.

**Parking**  
Metered parking in St. Catharines currently costs \$1.75 per hour between 9 a.m. and 6 p.m. Parking has a three-hour maximum. During the off-peak hours, parking is free, however no overnight parking is permitted.

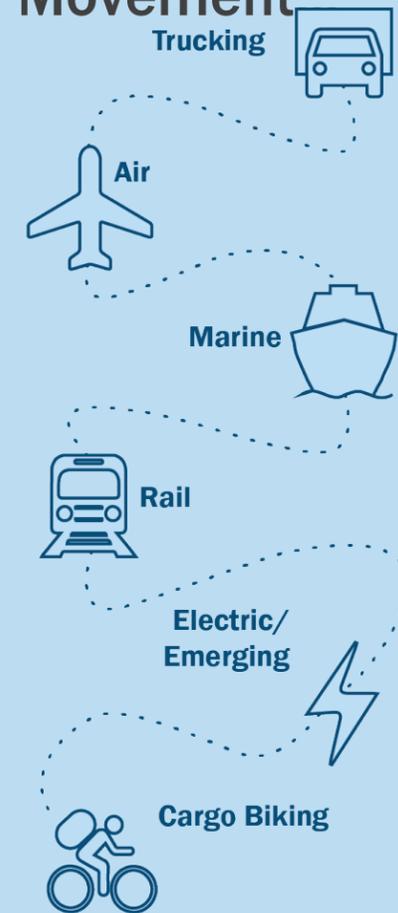


**Future Ready Considerations...**  
As sustainability continues to become an increased focus of the transportation sector, electric vehicles are poised to be an important emerging technology. Supporting this mode requires forethought in infrastructure planning. Looking towards the future of the transportation network, St. Catharines should consider how they can continue to support electric vehicles.



## 2.2.2. Goods Movement

### What is Goods Movement



Goods movement is an integral part of the transportation system. Efficient and effective goods movement is important to support economic vitality.

St. Catharines is a vital element of the Greater Golden Horseshoe’s goods movement network. In 2016, Niagara Region was designated as a Foreign Trade Zone (FTZ), encouraging innovation and international investment within the Region.

Based on this review, four modes of goods movement were identified as key components of the St. Catharines Goods Movement network: trucking, air, marine, and rail. The following is an overview of the existing and potential future goods movement methods for the City of St. Catharines.

### Traditional Considerations...

**Trucking** Much of trucking traffic currently utilizes the QEW, which cuts through the centre of St. Catharines. The majority of roads within St. Catharines accommodate truck traffic, as shown in **Map 2**. The breakdown of trips are as follows:

- 40% of trucking trips are between Niagara municipalities;
- 37% of the trips outside the Region; and
- 23% of trips within the City.

**Air** St. Catharines is near multiple airports that offer freight operations, including the Hamilton International Airport, Niagara Falls International Airport (U.S.), Buffalo-Niagara International Airport (U.S.) and Toronto Pearson Airport. In addition, the Niagara District Airport is co-owned by the City and supports freight operations within their long-term plan. Airport Zoning Regulations related to this nearby airport should be considered when reviewing future freight supportive land uses.

**Rail** There is currently one freight rail line which passes through St. Catharines - the Canadian National Railway (Grimsby Subdivision). It operates both passenger and freight services, terminating in Buffalo, New York. Trains on this line can also connect to the Port Colborne Harbour Railway (PCHR). There is no active railyard in St. Catharines.

**Marine** The largest marine freight operation in St. Catharines is the Welland Canal. The Welland Canal is part of the St. Lawrence Seaway and Great Lakes System. There are 8 locks within Niagara Region, 3 of which are in St. Catharines (Lock 1-3). It is an international, national and regional marine trade corridor resulting in transportation and economic benefits for the Canadian, US and the Niagara regional economy. In 2014, over 31,000,000 tonnes of cargo was transported through the Welland Canal.

### Future Ready Considerations...

**Emerging Technologies/Electric** The St. Catharines Strategic Plan strives for holistic sustainability, meaning economic and environmental sustainability are prioritized. While goods movement is an important economic sector for St. Catharines, there are significant environmental impacts associated with on-road goods movement. Currently, there is minimal guidance in St. Catharines for emerging technologies and/or electric goods movement to be integrated into this network.

**Cargo Biking** A new subset of goods movement is on-demand food delivery services from applications such as UberEats, Skip the Dishes and Foodora. Both Uber Eats and Skip the Dishes are operating within St. Catharines. Food delivery workers often use bicycling as a means to deliver these services. Currently, no bicycling applications are being accepted within St. Catharines and delivery is limited to car deliveries.

How goods movement is integrated into the larger transportation framework is changing. Since 1990, the volume of road freight activity in Ontario has grown by 242% and the goods movement model is adapting to support new trends in technology, including online-shopping and just-in-time delivery. This rapid expansion and fundamental shift of goods movement has increased attention on the environmental, social and economic impacts.

Heavy trucks are responsible for just under 10% of provincial emissions, according to the 2017 National Inventory Report from Environment and Climate Change Canada. Moreover, a new focus has emerged to better integrate goods movement to the community structure; considering the implications of goods movement to quality of life, human health and community functioning. As St. Catharines prepares for the future, consideration should be given to goods movement that is smaller, on-demand and electric.

# Niagara-Hamilton Trade Corridor Technical Paper

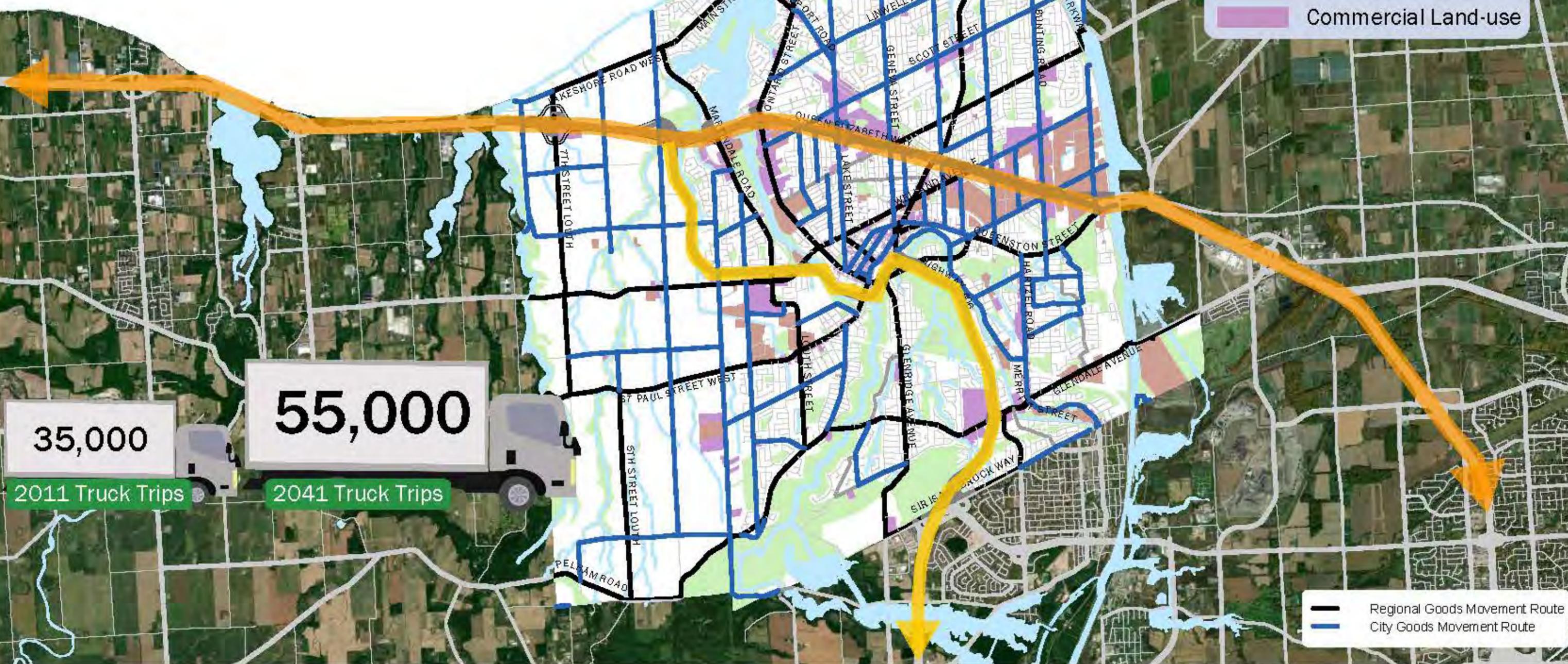
The QEW forms the main connection between Niagara Region to the GTHA. The vast majority of St. Catharines' truck traffic travels to or from the neighbouring municipalities along the QEW.

Truck volumes in Niagara Region are expected to grow by 57% from 2011 to 2041, from 35,000 to 55,000 daily trips.

## Map 2 Existing Goods Movement

**LEGEND**

- Orange arrow: Queen Elizabeth Way
- Yellow arrow: Highway 406
- Red square: Industrial Land-use
- Purple square: Commercial Land-use



— Regional Goods Movement Route  
— City Goods Movement Route

### 2.2.3. Transit

The City of St. Catharines is the owner and operator of the local transit authority, St. Catharines Transit Commission (SCTC). The Region of Niagara, Metrolinx and VIA Rail provide additional transit service within the City and to surrounding areas. The current operation and ridership experienced at the local and regional level was assessed and is documented on the following pages.

#### Local Transit

There has been a small but notable decline in transit ridership across Canada since 2015, which is attributed to several factors, including lower gas prices and slower economic growth, and possibly more people choosing to walk or bicycle to work. In St. Catharines, overall ridership in 2016 was 5,242,947, down 3 percent from the previous year (5,489,764).

**Figure 14** shows transit ridership on a month by month basis in 2015 and 2016. There is an almost 50% decline in ridership during the summer months, which can be attributed to the decrease in student ridership. Regular adult fares are \$3.00 while a monthly transit pass costs \$92.00. Routes and fares are subject to change. Brock University transit passes (U-pass) are mandatory for most students.

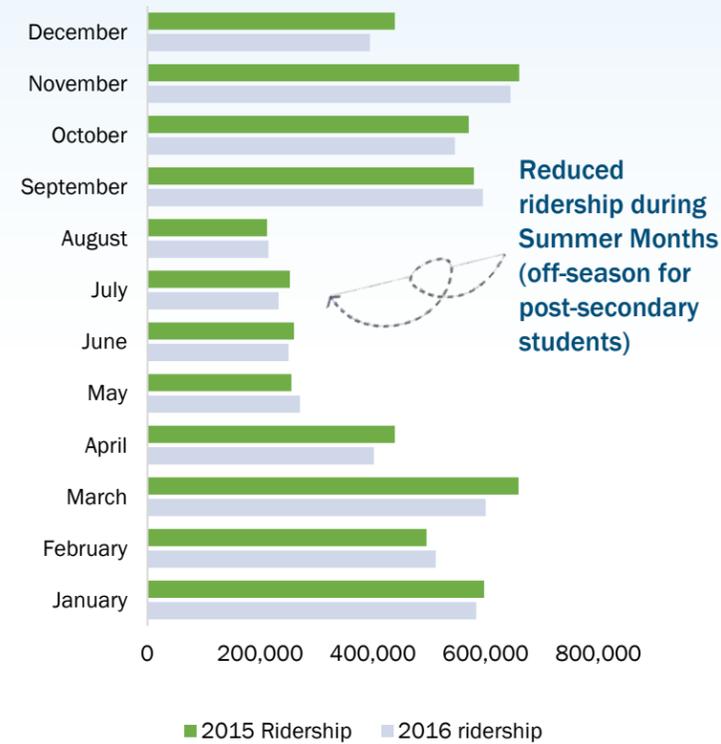
The busiest transit street in the downtown is St. Paul Street, with eight routes, as shown in **Map 3**. Other key transit corridors include Glenridge Avenue (Route 316), linking downtown with Brock University and Geneva/Lake Streets (Routes 306, 309, and 312), linking downtown to Fairview Mall. The SCTC maintains an online real-time map allowing users to identify where the next bus is on any given route. It also provides real-time and trip planning information through their app. Riders can use mobile apps, such as Transit App, to plan their trips using live data.

#### Future Ready Considerations...

Given the geographic and built-form context of St. Catharines, transit likely offers the most feasible alternative to driving. As service expands in the future, consideration should be given to social equity of routing and technology advancements that can make transit more accessible and inclusive.



**Figure 14. Transit ridership by month**



#### Regional Transit

In addition to the municipal transit system, Niagara Region Transit provides service throughout the Region, including St. Catharines. There is also a regional paratransit service.

GO Transit operates daily bus service between Niagara Falls and the Burlington GO station, offering connections to GO rail service on the Lakeshore West Line. The service (GO Route 12) is hourly and stops at the transit terminal at Fairview Mall.

GO Transit rail service to St. Catharines consists of one inbound and one outbound train on weekdays year-round. A weekend and statutory holiday rail service between Union Station in Toronto and Niagara Falls is provided, stopping at the St. Catharines VIA Rail station. This service runs from the Victoria Day weekend through the Labour Day weekend, plus the Thanksgiving weekend in October.

#### Transit Operation Analysis

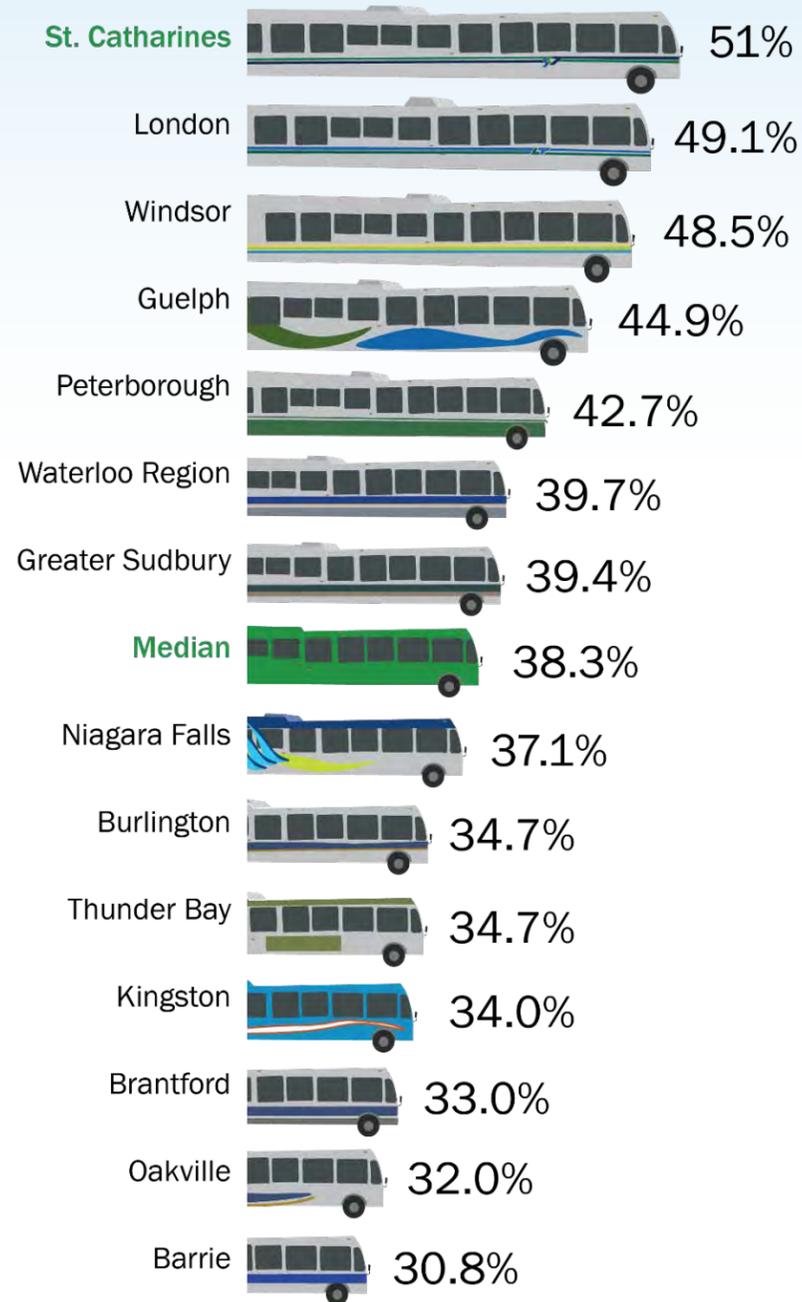
To better understand how the current transit service is operating, the revenue to cost ratios, passengers per vehicle hour and operating expenses for the St. Catharines fixed-route transit system were compared to other municipalities of similar size and geographical area. The results of the comparison are shown on the following page. The data for the comparator municipalities was attained from the Canadian Urban Transit Association’s Canadian Transit Fact Book, 2017.

The performance indicators show that the St. Catharines Transit fixed-route system is operating more efficiently as compared to its peer agencies, providing service to more riders with less of a relative financial impact to the City’s operating budget. **Figure 15**, **Figure 16** and **Figure 17** summarize the comparison to other agencies.

## Revenue to Cost Ratio

St. Catharines Transit is able to recoup 51% of its operational costs from fare revenue, well above the median of 38.3%.

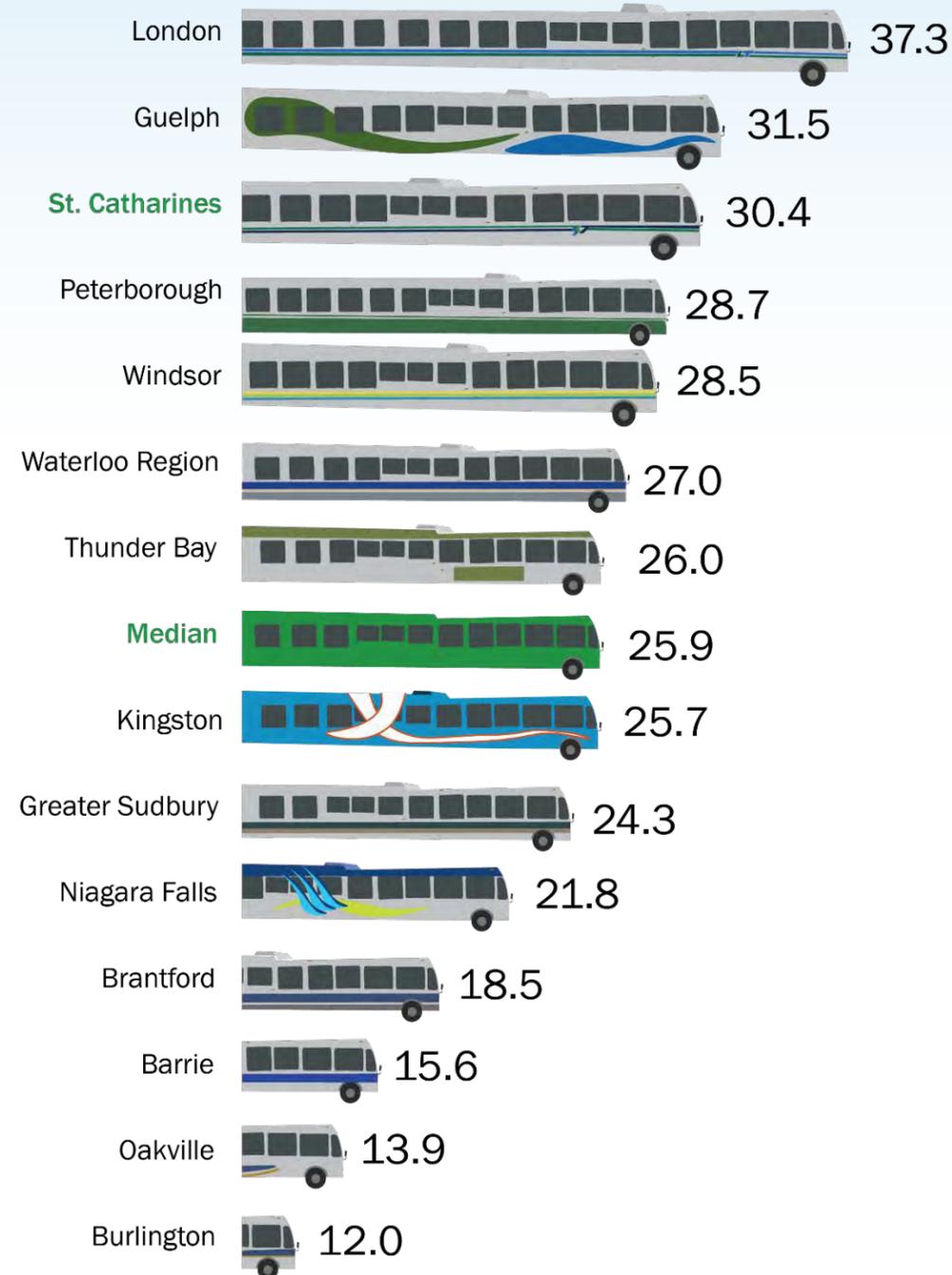
Figure 15. Comparison of revenue to cost ratio



## Revenue by Passenger

St. Catharines Transit carries about 30 passengers per hour on each route over one revenue hour, well above the median of almost 26 passengers.

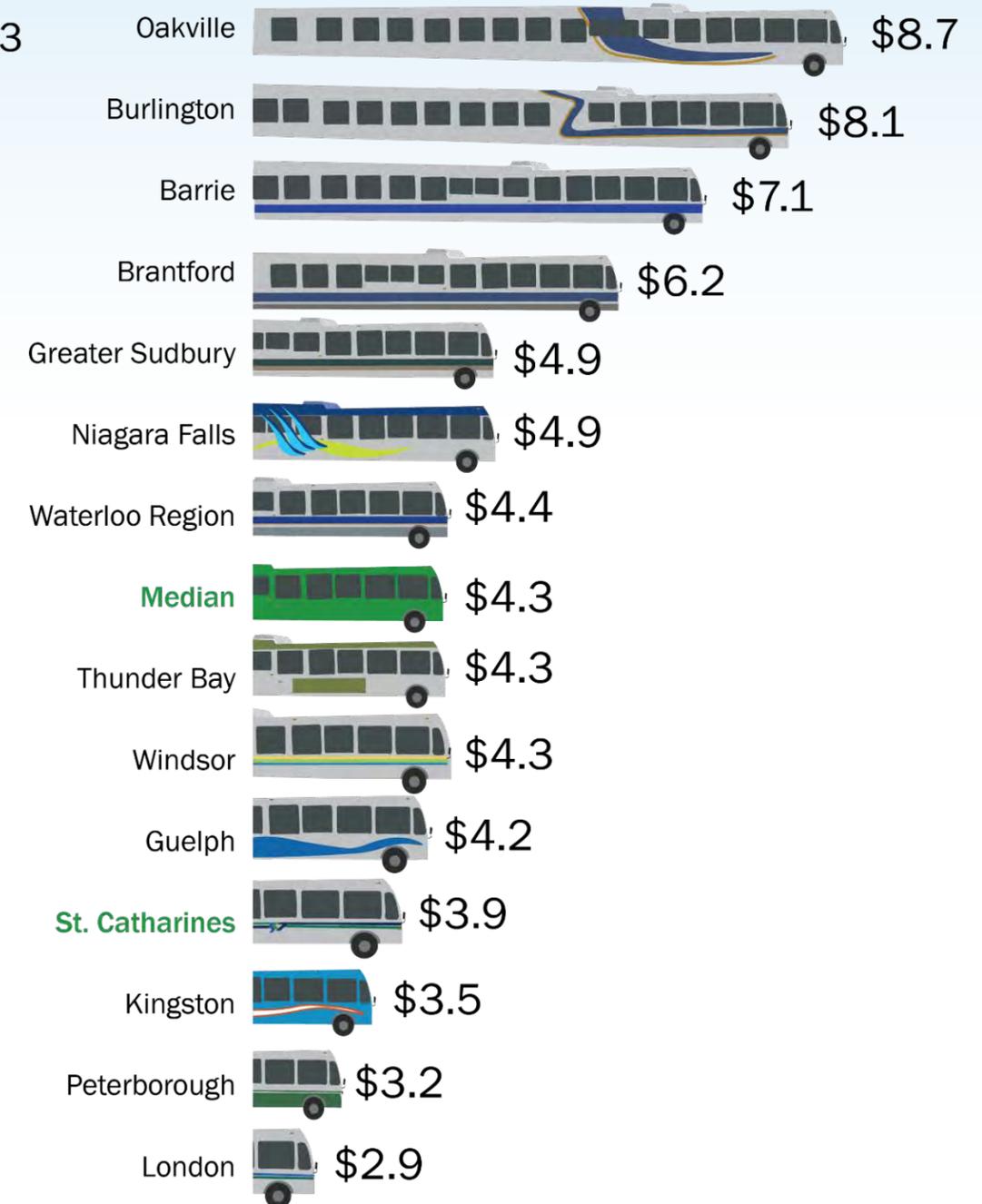
Figure 16. Comparison of revenue to passengers



## Operating Expense per Passenger

The operating cost is estimated at \$3.90 per passenger, below the median of \$4.30.

Figure 17. Comparison of operating expense per passenger



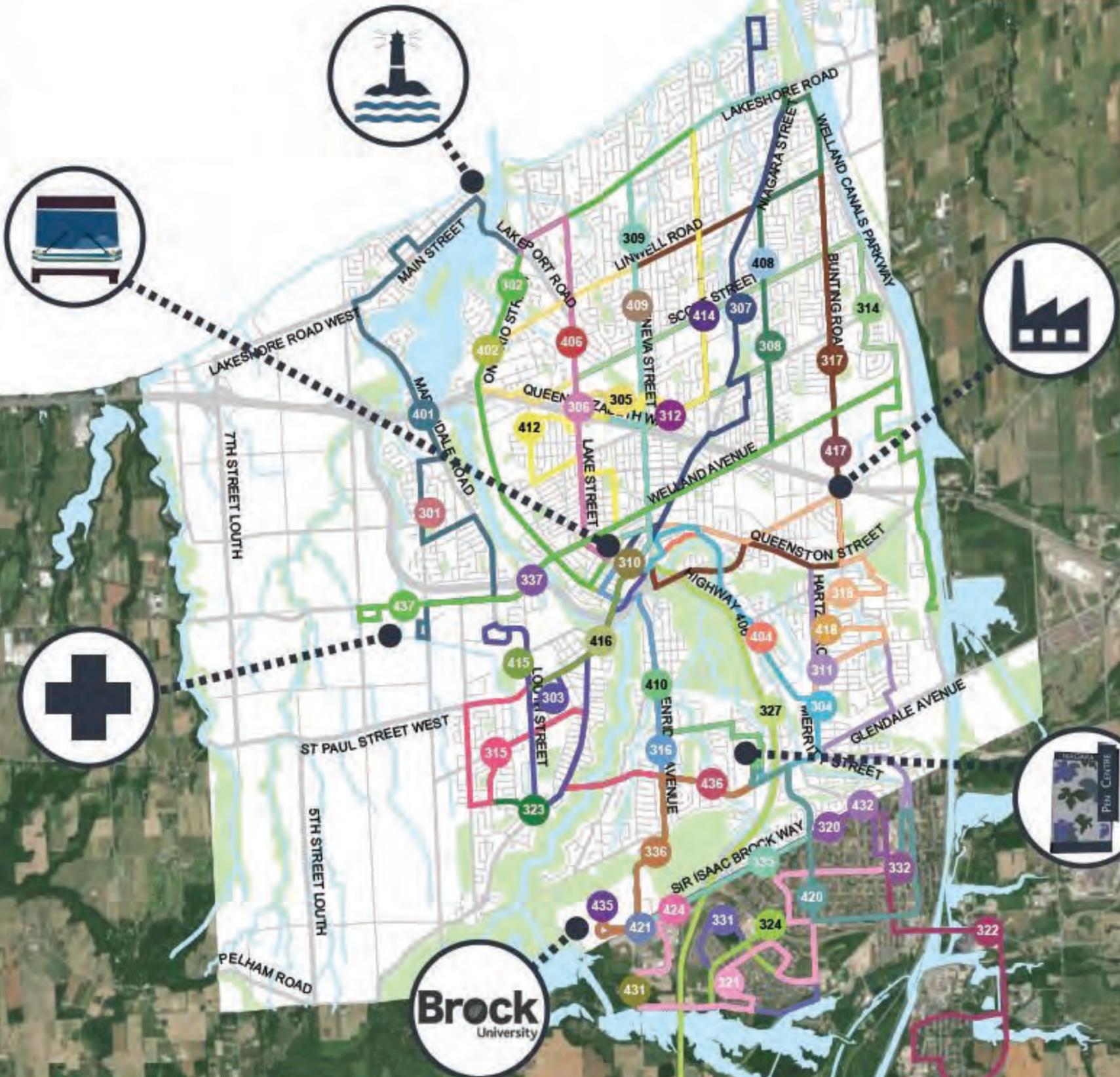
# Map 3 Existing Transit Routes

Included in U-Pass



\$3.00 per ride

\$92.00 per month



### LEGEND

-  Brock University
-  Transit Terminals
-  Pen Centre
-  Port Dalhousie
-  Hospital
-  Dieppe Industrial Area

- #### Existing Bus Routes (St. Catharines Transit Commission)
- 301 Hospital - Dalhousie
  - 302 Ontario Lakeshore
  - 303 Pelham Rd
  - 304 Oakdale - Pen
  - 305 Haig - Linwell
  - 306 Lake St
  - 307 Niagara St
  - 308 Grantham - Lakeshore
  - 309 Geneva St
  - 310 Glenridge - Pen Centre
  - 311 Hartzel Rd
  - 312 Vine St
  - 314 Scott St
  - 315 West St. Catharines
  - 316 Brock - Glenridge
  - 317 Bunting - Linwell
  - 318 Secord Woods
  - 320 Thorold - Pen Centre
  - 321 Confederation - Brock
  - 322 Thorold South
  - 323 West - Brock - Commuter
  - 324 Brock - Tupper
  - 327 Niagara College Welland Campus
  - 328 Brock - Towpath - Shuttle
  - 331 Brock - Winterberry - Shuttle
  - 335 Brock - Pen Centre
  - 336 Brock - Glendale - Pen Centre
  - 337 Crosstown
  - 401 Hospital - Port Dalhousie
  - 402 Ontario St
  - 404 Oakdale - Pen Centre
  - 406 Lake St
  - 408 Grantham - Port Weller
  - 409 Geneva St
  - 410 Glenridge - Pen Centre
  - 412 Vine St
  - 414 Scott St
  - 415 West St. Catharines
  - 416 Brock - Glenridge
  - 417 Bunting - Lakeshore
  - 418 Secord Woods
  - 420 Eve - Thorold - Pen Centre
  - 421 Eve - Confederation - Brock
  - 423 Brock - MacTumbl Dr & Louth St
  - 424 Brock - Tupper
  - 428 Brock - Towpath
  - 431 Brock - Winterberry
  - 435 Brock - Pen Centre
  - 436 Brock - Glendale - Pen Centre
  - 437 Crosstown

## 2.2.4. Active Transportation

Active transportation (AT) is defined as any form of human-powered transportation – walking, cycling, using a wheelchair, in-line skating, scootering and skateboarding.

Active transportation can be used “anywhere” – either within the road right-of-way (sidewalks, on-road - bicycle lanes, signed routes or separated cycling lanes) or outside of the road right-of-way (off-road - in-boulevard multi-use pathways and off-road trails).

### Future Ready Considerations...

Currently, active transportation is not perceived by many as a viable option for day-to-day trips. Climate change trends and socio-demographic shifts show a future where people will need to use active forms of transportation to create lasting individual and community change. Research shows that a significant shift towards active transportation improves the environmental health of a municipality and improves connectivity. This reduces isolation and bridges the gap between the “have” and “have not” populations throughout the City. The City of St. Catharines should strive to make AT a viable option by designing a connected system that integrates e-bikes, bike share and a system of protected / separated routes and facilities.



The City of St. Catharines has a relatively comprehensive and well-connected set of active transportation routes and facilities. Existing routes have been implemented to provide access to major community destinations including the downtown core, Port Dalhousie, surrounding municipalities, the waterfront and neighbourhoods within the north and south ends of the City. Improvements have been made to provide dedicated and separated facilities, including bike lanes and off-road trails, to improve overall connectivity and overcome barriers to walking and cycling around the Welland Canal and Provincial Highways.

While significant investment has been made to support AT in St. Catharines, input generated through the TMP process indicated a desire for strategic enhancements to the existing system. These enhancements would help in efforts to create a meaningful shift towards active and sustainable travel. **Table 1** shows active transportation considerations based on this review of existing conditions.

The existing and previously proposed active transportation network is the foundation from which improvements and recommendations have been identified in **Chapter 3.0**. An overview of the existing AT routes and facilities can be found on the following page along with “key statistics” on the various components of the network including facility type, user accommodation and first and last mile access.



Table 1. Active transportation objectives based on review of existing conditions



Enhancements to the existing AT system including missing links and key corridors.



Crossings into and out of the downtown core as well as within the downtown core.



More separated infrastructure to increase user comfort and safety in appropriate locations.



Opportunities for end of trip facilities to enhance and encourage AT use for short-distance trips.



Meaningful and integrated wayfinding and signage to enhance local use and tourism.



Strategic improvements to accommodate more vulnerable users such as youth and seniors.



Consistent design guidelines and standards for on-and off-road facility design.



Supporting equity by providing more affordable options to critical community destinations.

# 109km

Off-Road Trail



# 62km

Bike Lane



# 16km

Paved Shoulder



# 8km

Signed Route with Sharrow



# 2km

Signed Route



### Map 4 Active Transportation Existing and Previously Proposed Facility Types

# 130km

Previously Proposed Facilities



- Previously Proposed Route
- Existing
- Off-Road Trail
- Bike Lane
- Paved Shoulder
- Signed Route with Sharrow
- Signed Route