



PILLAR ONE  
ENCOURAGE ACTIVE MODES OF  
TRANSPORTATION

5

# 5

## Pillar One

### Encourage Active Modes of Transportation

The first study pillar is the adoption of plans and infrastructure that promote an increase in active modes of transportation, whether for commuting, discretionary trips, or for leisure. Active modes of transportation include all human-powered modes including, but not limited to, walking, cycling, use of personal mobility devices such as wheelchairs, skateboarding, and inline skating.

The Official Plan (Policy 2.4.1) encourages active transportation by incorporating walking and cycling infrastructure into the design of all streets, key destinations, transit stations and stops, and mobility hubs. Other municipal and local policy documents including the City of Toronto Complete Streets Guidelines (CSG), Scarborough Centre Secondary Plan, and Scarborough Centre Public Space and Streetscape Master Plan also outline policies and guidelines related to improving active transportation amenities. Providing space for pedestrians and cyclists helps create vibrant streets and a sense of place.

The rationale for prioritizing active modes of transportation over motorized transport ranges from health, to economic and environmental benefits, as described in this chapter. This chapter also assesses the existing walking and cycling networks, as well as proposes a new network and strategies to increase active modes in the future.

### 5.1 Benefits



#### *Healthy Neighbourhoods*

Studies have shown that the use of active modes of transportation improves cardiovascular and respiratory health, protects against Type 2 diabetes and obesity, and is associated with decreases in colon cancer and cardiovascular disease. As little as 30 minutes of moderate activity (e.g. walking), 5 days a week, can help reduce the risk of premature death, heart disease, stroke, high blood pressure, certain types of cancer, Type 2 diabetes, osteoporosis and obesity, and improve strength, fitness and mental health.

The commute to and from school/work can provide a consistent form of daily physical activity if conducted using active modes of transportation. It is therefore important to make it possible for an individual to safely, comfortably, and conveniently travel to and from school/work using active modes. Promoting active modes for

discretionary activities (e.g. running errands, shopping, visiting friends/family, etc.) and for leisure activities further provides health benefits to the population. Due to the existing retail, office, and residential land uses in the Centre, and the future mixed-use vision, there is opportunity to improve the health of the population through providing connections for daily trips.



#### *Choice*

To compete with motorized travel options, walking and cycling must be recognized as safe and convenient modes of travel. Prioritizing the safety of cyclists by designing safe cycling infrastructure and reducing conflicts for all street users is critical for improving travel choices and accomplishing the benefits of Complete Streets. As emphasized in the City of Toronto Complete Streets Guidelines, streets should be designed for all modes to develop connected networks and provide attractive travel choices.

Enhancing connections and infrastructure for active modes not only elevates walking and cycling as viable travel options, but also improves transit as a travel option. Walking and cycling connections to transit can help solve the “first-mile/last-mile” issue. As shown to the right, the first-mile/last-mile issue refers to the part of the trip from an origin to a transit stop (first mile) or from a transit stop to a destination (last mile). If convenient and safe walking and cycling connections are not provided to and from transit, a traveller may choose to drive or be driven to/from transit stops/stations, or drive the entire length of the trip. Therefore, providing active transportation connections and amenities can enable a shift towards sustainable modes of transportation.

Bicycle parking at transit stations, for example, encourages people to cycle, makes transit a more viable option, and allows for efficient mixed-mode travel. In Toronto, the demand for bicycle parking has increased as 88% of cyclists and 80% of non-cyclists reported a shortage of secure bicycle parking, and 56% indicated that the primary reason for not cycling was a lack of secure parking at their destination. Secure bicycle parking at transit stations and other key destinations will therefore help mitigate the first-mile/last-mile issue and help increase the attractiveness of cycling and transit as possible travel choices.



#### *Public Health and Environment*

Greenhouse gas (GHG) emissions from human activities are the most significant observed driver of climate change since the mid-20th century. Since emissions from motor fuel use by private vehicles are the largest source of direct emissions attributable to households, encouraging non-motorized modes of transportation is important for improving the environmental impacts of climate change. At the national and global level, environmental impacts of GHGs include increased average annual temperatures, rising sea levels, increased precipitation levels and more frequent severe events, increased risk of flooding, heat waves, and stress on wildlife species. Supporting climate change mitigation through active transportation options will help produce a future population that engages

in sustainable travel behaviour. This is particularly important in Scarborough Centre, where the automobile is currently the dominant mode of transportation.

At a more local level, encouraging active modes of transportation supports and enhances natural areas by providing pedestrian and cyclist connections to parks and green spaces. Active and green connections not only connect people and places, but contribute to developing vibrant and sustainable communities.

## 5.2 Existing Conditions

### 5.2.1 Multi-Modal Assessment: Walking

An analysis of the study area's pedestrian level of service (LOS) was conducted. Pedestrian LOS was measured using the following criteria: sidewalk width, grass or paved boulevard width (from the sidewalk to travel lane), the presence of on-street parking, traffic volumes and operating speeds. The availability of sidewalks within the study area is shown in Figure 5.1 and pedestrian LOS is shown in Figure 5.2. Additional information on the analysis conducted is provided in Appendix G.

The majority of pedestrian infrastructure in the Centre operates at an LOS E. LOS E is largely characterized by fragmented and disconnected sidewalk infrastructure, narrow sidewalks, high traffic speeds, and lack of physical separation between sidewalks and streets. The Town Centre Commercial Precinct, which mainly encompasses the Scarborough Town Centre shopping mall, is predominately an LOS F, which indicates the absence of safe pedestrian infrastructure. LOS F streets signify that sidewalks are either entirely absent or are less than 1.5 metres in width. The pedestrian experience is further hindered by inconsistent and haphazard wayfinding and signage that is in poor condition.

Figure 5.1: Existing Sidewalks in the SCTMP Study Area

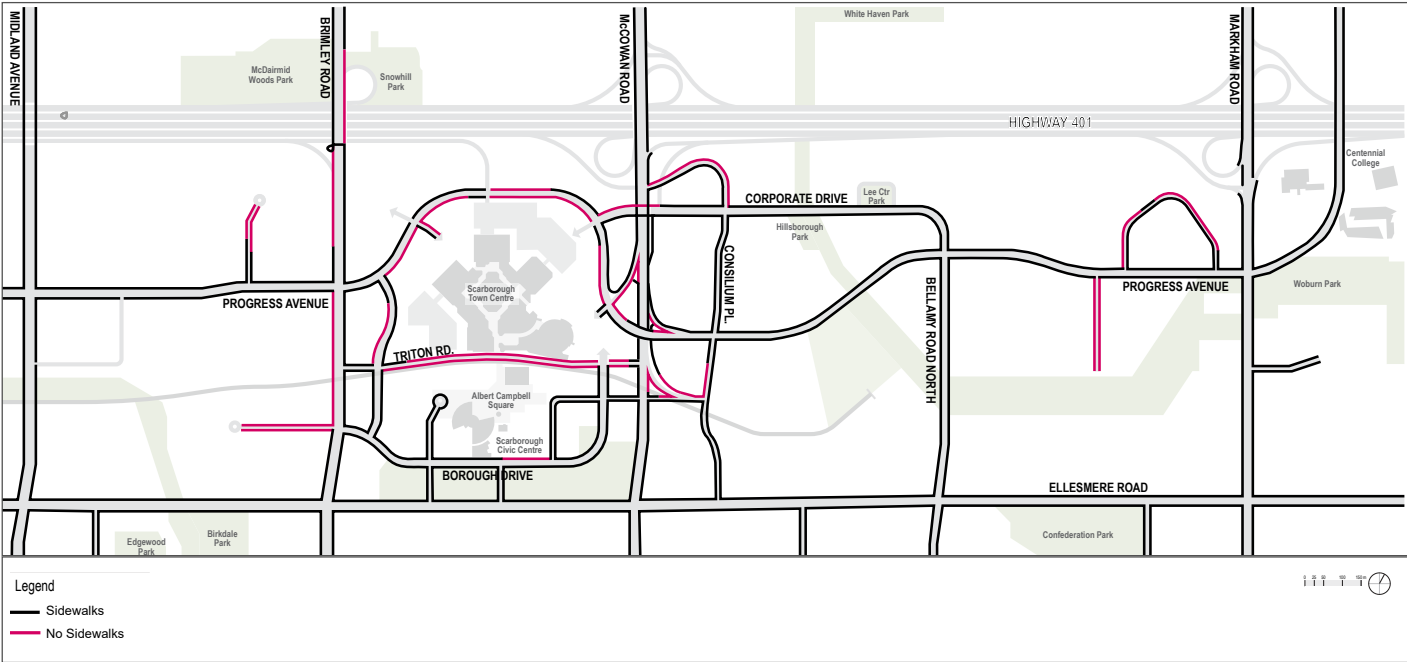


Figure 5.2: Pedestrian level of service in the SCTMP study area

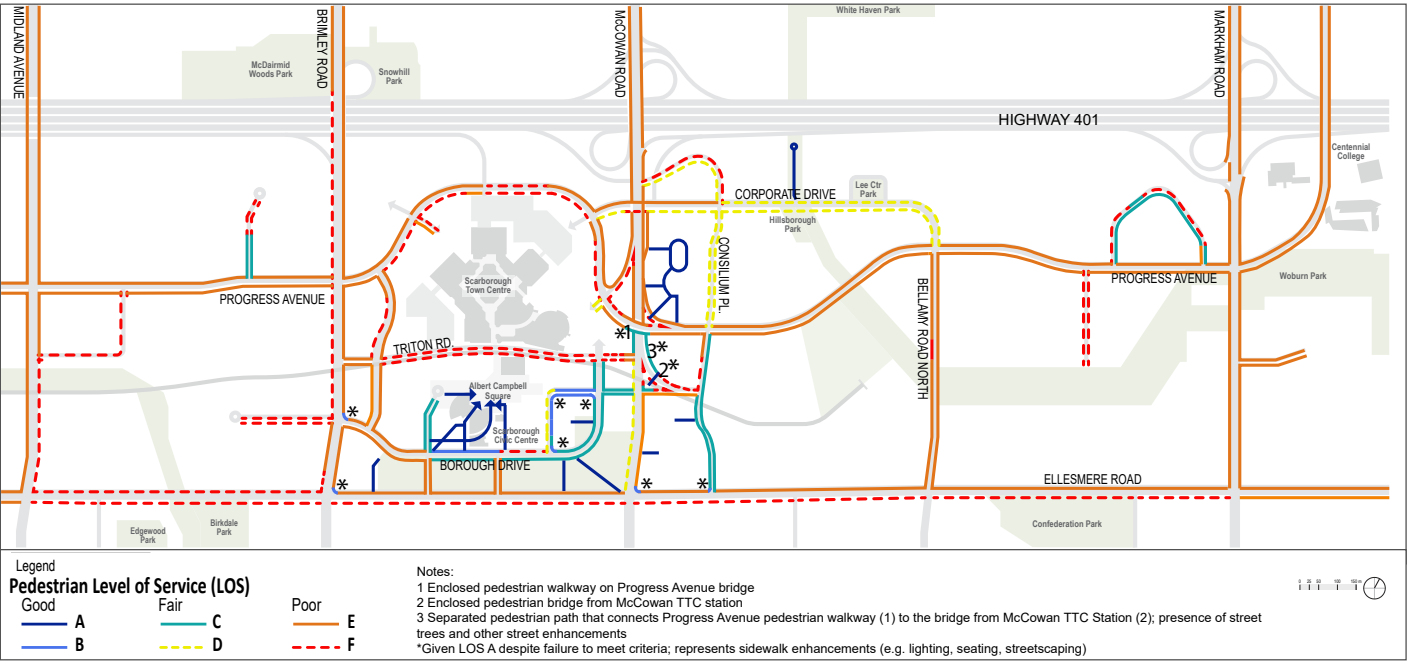
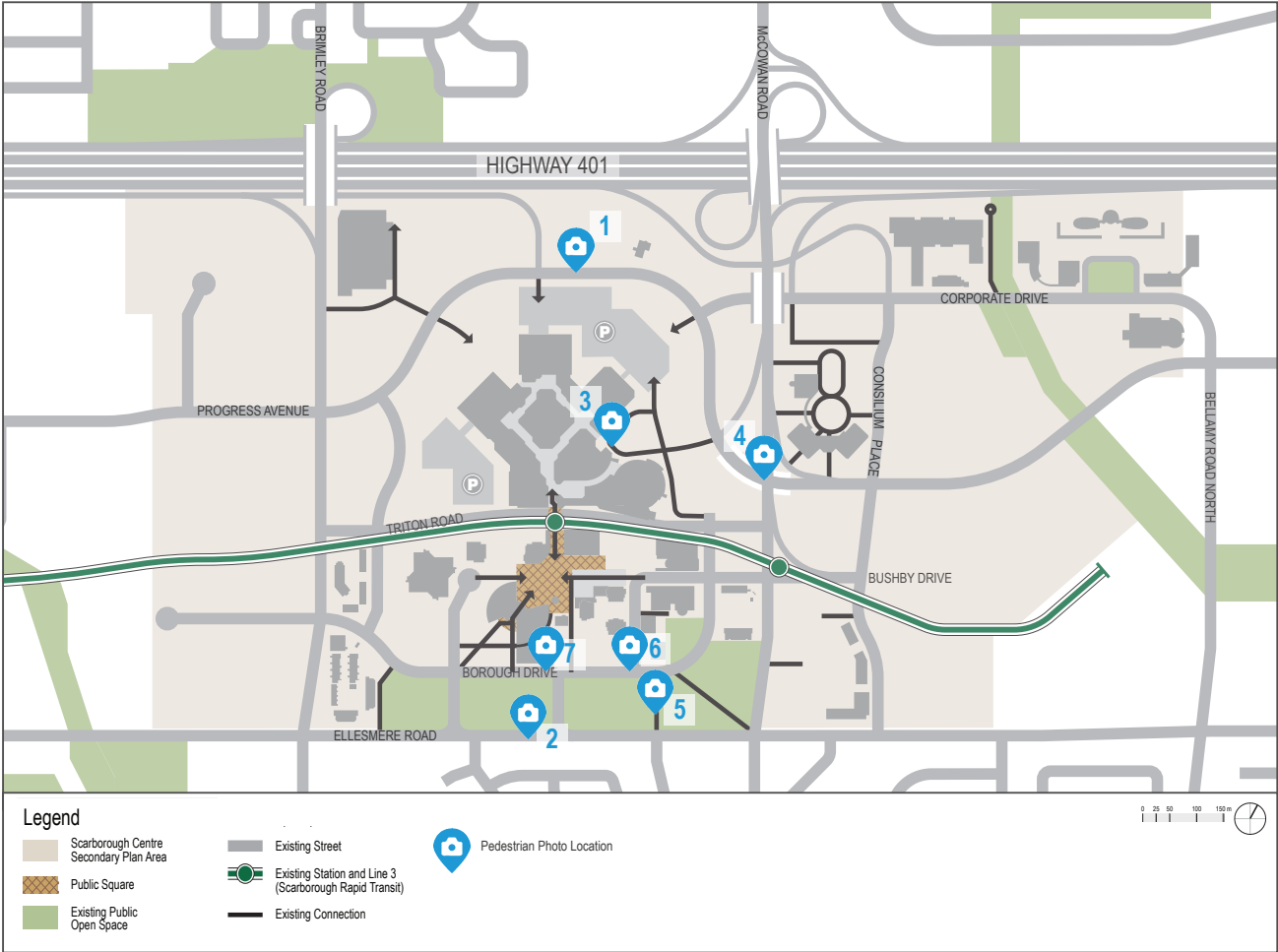


Photo locations and photos of existing pedestrian conditions are shown in Figure 5.3 and 5.4, respectively.

**Figure 5.3: Existing Pedestrian Conditions Photo Locations**





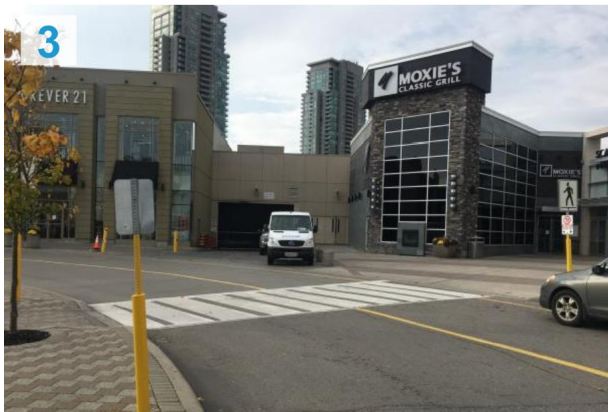
**Figure 5.4: Existing Pedestrian Conditions Photos**



Missing Sidewalks on Progress Avenue



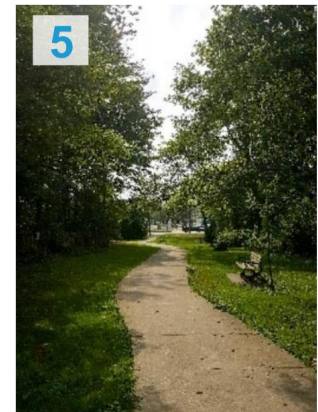
Narrow Sidewalks Adjacent to Traffic Lanes on Ellesmere Road



Crossing at Scarborough Town Centre Shopping Mall



Progress Avenue  
Pedestrian Tunnel



Pedestrian Connection  
(Borough Dr to Ellesmere Rd)



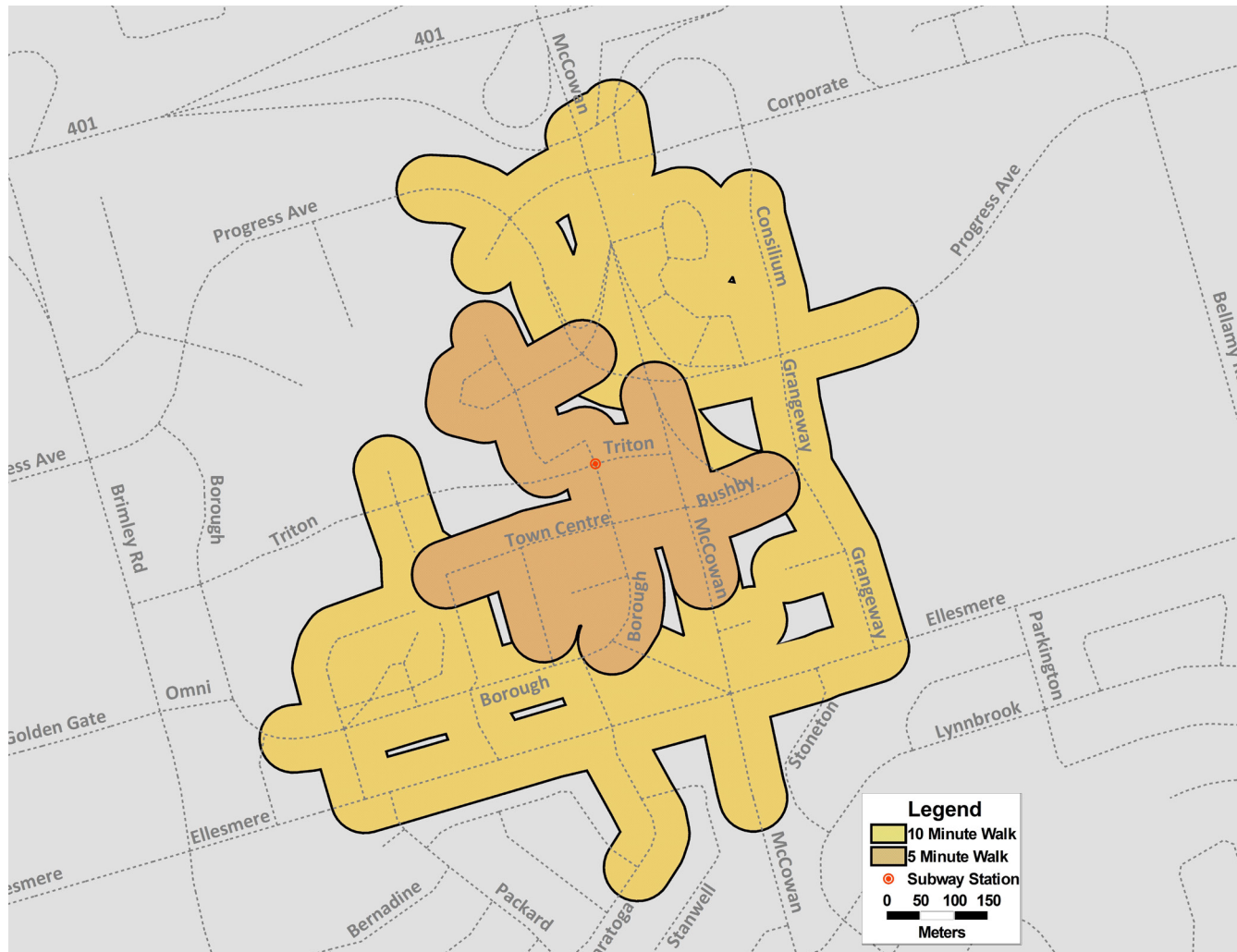
Wide Pedestrian Space at Town Centre Court and  
Borough Drive



Wide Sidewalks on Borough Drive

Figure 5.5 illustrates the 5 and 10-minute walkshed image originating at the Preferred Line 2 – Scarborough Subway Extension station. The 5 minute walkshed covers an area of approximately 17ha, while the 10 minute walkshed covers an area of approximately 64ha. As this figure shows, individuals can travel north as far as Highway 401 and can walk south of Ellesmere Road within 10 minutes. Greater impedance exists with respect to travelling east-west across the study area. Overall, the existing walkability of Scarborough Centre, is limited by the existing coarse auto-oriented street pattern.

**Figure 5.5: Five and ten-minute walkshed image from Preferred Line 2 – Scarborough Subway Extension Station (Existing Active Transportation Network)**

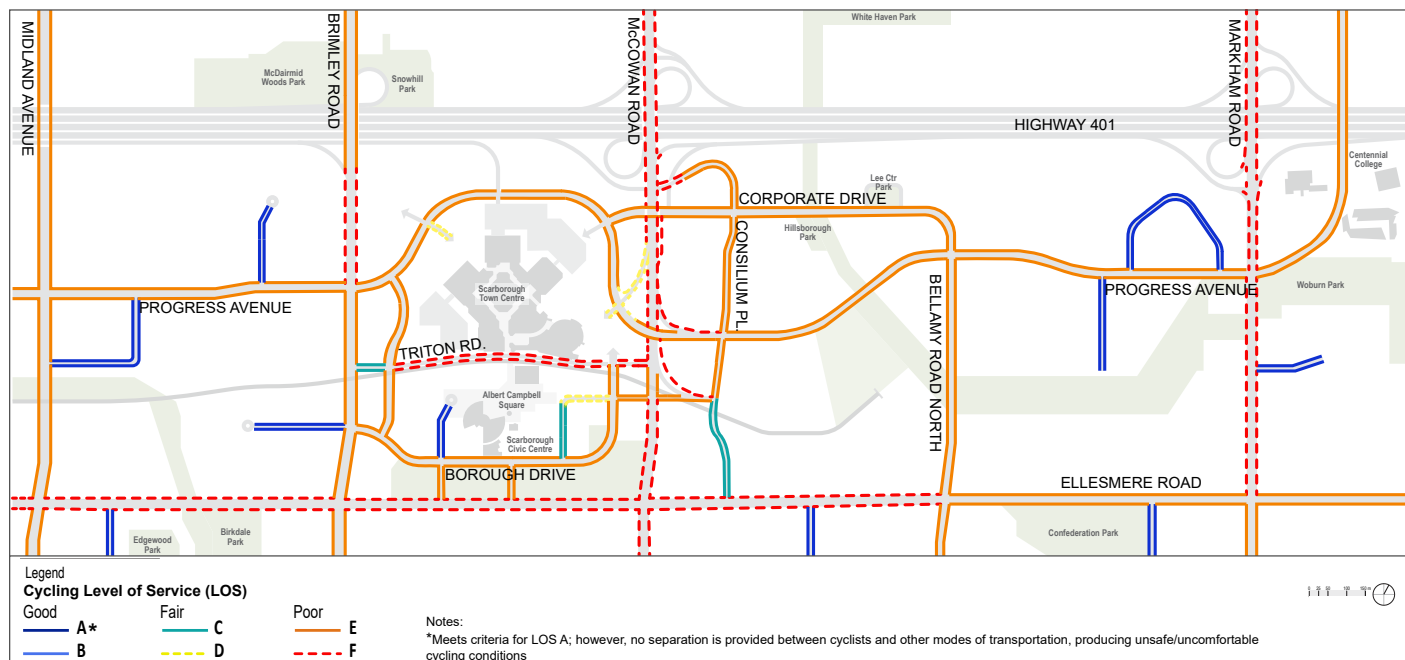




## 5.2.2 Multi-Modal Assessment: Cycling

An analysis of cycling Level of Service (LOS) was conducted to evaluate the presence or absence of cycling infrastructure within the study area. The following criteria were used to determine cycling LOS: Bicycle lane width, curb lane width, on-street parking, heavy vehicle volume, overall traffic volume, the percentage of right and left turns, speed limit and the number of travel lanes (the LOS evaluation table and analysis is included in Appendix G). The existing cycling LOS is shown in Figure 5.6.

**Figure 5.6: Cycling level of service in the SCTMP study area**

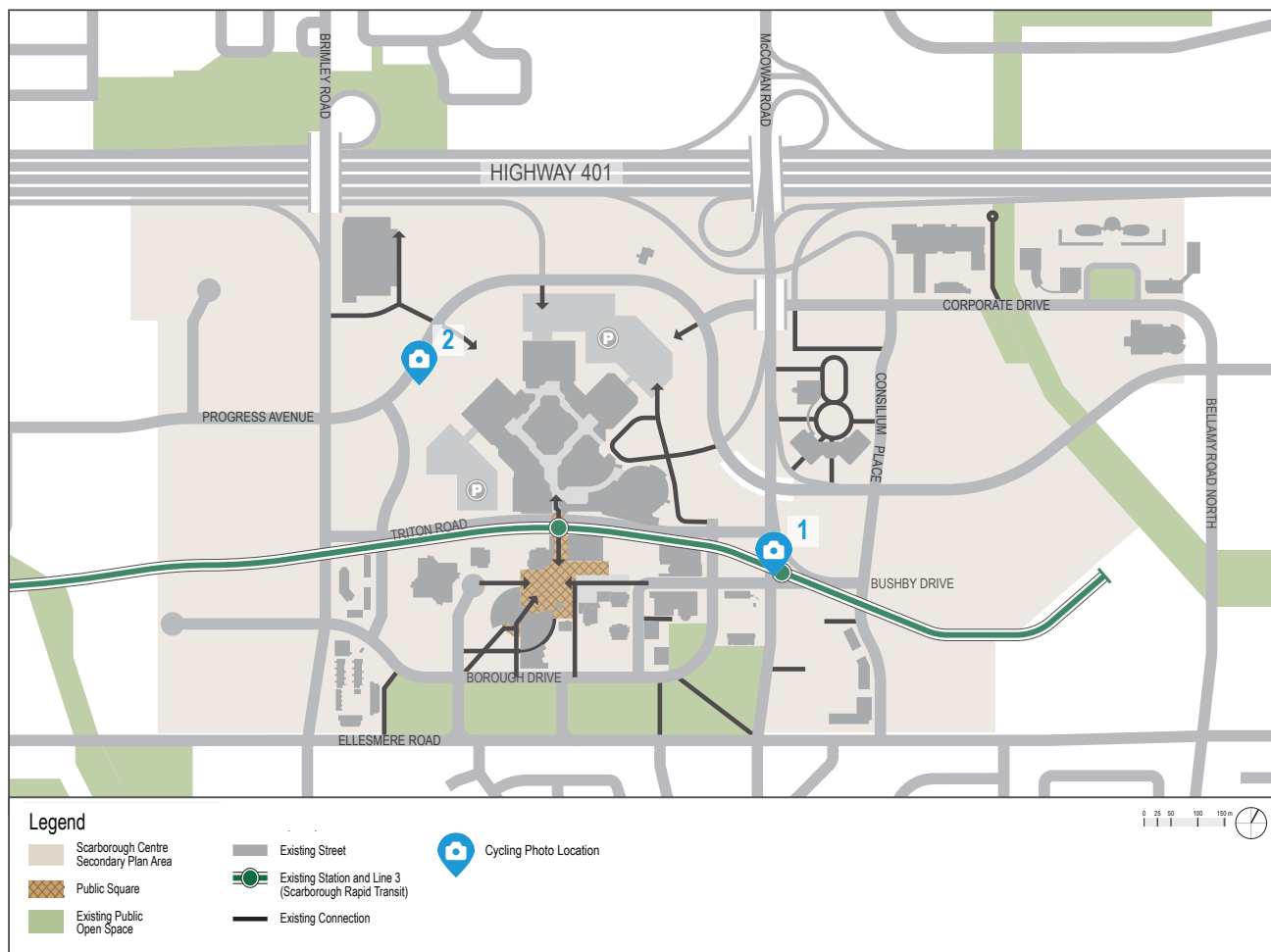


Overall, it can be concluded that the current cycling level of service in the study area is poor. There are no dedicated cycling facilities present, causing the majority of streets to be categorized as LOS E or F. LOS E or F indicates the absence of a dedicated cycling lane with relatively high traffic volumes and speeds of 60 km/h (e.g. Midland Avenue, Progress Avenue, Brimley Road, Ellesmere Road, McCowan Road, and Markham Road). This creates an unpleasant and dangerous environment for cyclists.

A large number of conflict zones exist for cyclists in the study area, including the Highway 401 on and off ramps, arterial roads, grade separations, free flow ramps and major intersections. Overall, the existing conditions contribute to the poor cycling performance of the streets, which currently represent a deterrent to cycling to and from, as well as within the study area. There are, however, a few cycling amenities in the Centre, such as bicycle parking at transit stations and within Albert Campbell Square. Photos of existing cycling conditions and their location are shown in Figure 5.7 and Figure 5.8, respectively.

Photo locations and photos of existing pedestrian conditions are shown in Figure 5.3 and 5.4, respectively.

**Figure 5.7: Existing Cycling Conditions Photo Locations**



**Figure 5.8: Existing Cycling Conditions Photos**



Bicycle Parking at McCowan Station



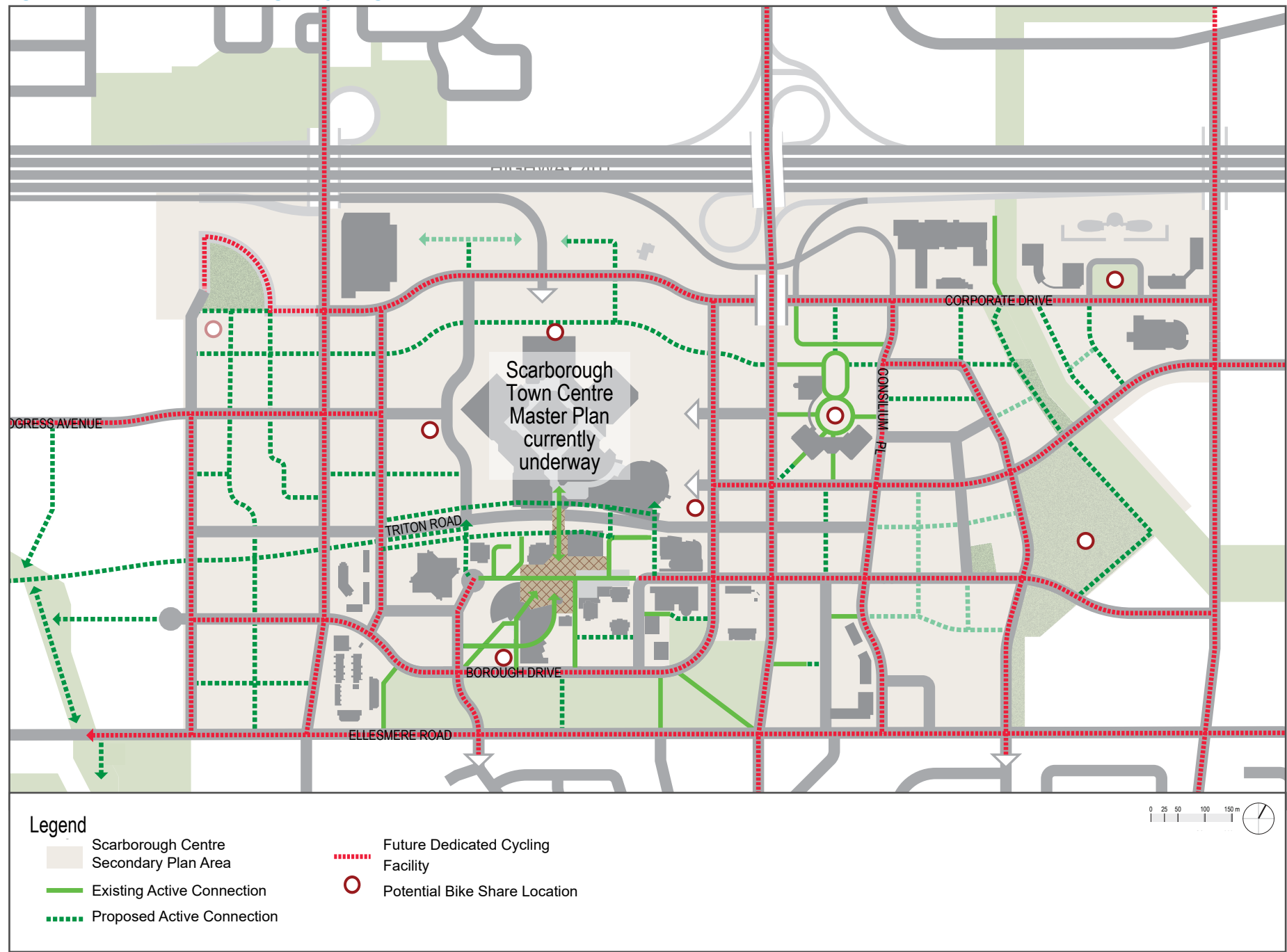
Typical Street Lacks Cycling Facility (Progress Avenue)

### 5.3 Preferred Walking & Cycling Network

The recommended walking and cycling network (Figure 5.9) proposes new active connections that contribute to a comprehensive grid network that is pedestrian and cyclist-friendly. The objective of this network is to encourage active modes of transportation through new connections, pedestrian and cyclist facilities, and smaller walkable blocks. Increasing the permeability of the network creates more route options and more direct paths between destinations.

- Cycle tracks on Progress Avenue, Midland Avenue, Brimley Road, McCowan Road, Bellamy Road, Bushby Drive, and Borough Drive
- Buffered bike lanes on Corporate Drive, Consilium Place, Grangeway Avenue, and 20-metre ROW local streets
- Multi-use paths on Ellesmere Road
- Decommission of Borough Approach East and its conversion to a park trail
- Pedestrian-scale wayfinding and signage
- Satellite Bike Share expansion into Scarborough Centre
- Repurposing of Line 3 – Scarborough rapid transit infrastructure/corridor into an active transportation connection

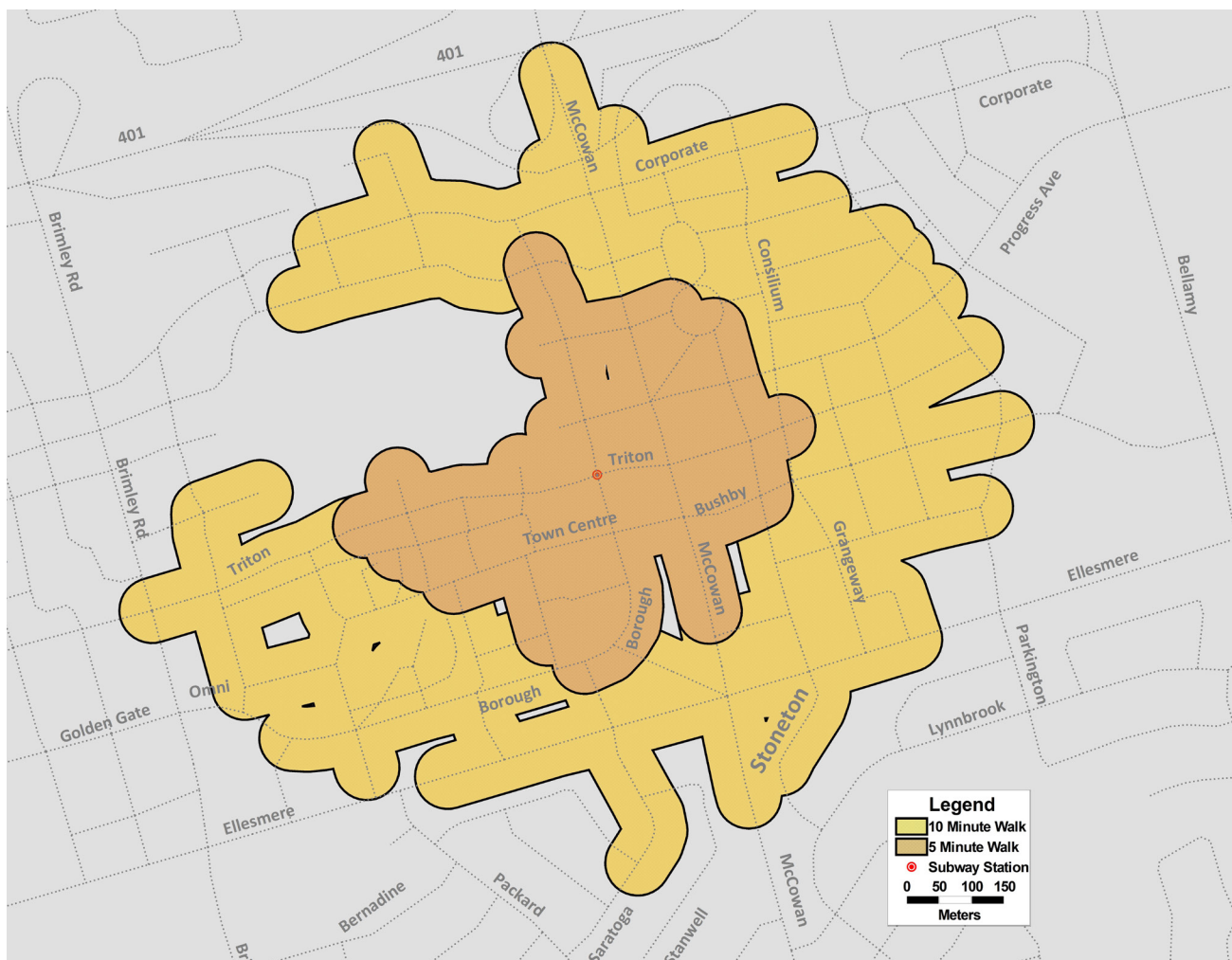
Figure 5.9: Preferred Walking & Cycling Network





The pedestrian walkshed image for the preferred active transportation network (Figure 5.10) shows the increased permeability of the network over existing conditions (previously shown in Figure 5.5). In 10 minutes, it will be possible to walk from the proposed subway station to the school and park site at 705 Progress Avenue, to commercial land uses north of the existing Scarborough Town Centre, to green spaces (e.g. 'Hand of God' Park, Civic Green Park, woodlots), and to many office and residential areas in the McCowan and Civic Precinct. A comparison of the preferred network walkshed image to the existing walkshed image reveals improved connectivity in both the north-south and east-west directions. Specifically, the 5 minute walkshed covers area increases to approximately 27ha, while the 10 minute walkshed area increases approximately 97ha - increases of 58% and 53% respectively.

**Figure 5.10: Five and ten-minute walkshed image from Preferred Line 2 – Scarborough Subway Extension Station (Preferred Active Transportation Network)**



## 5.4 Supporting Strategies

### 5.4.1 Bike Share Expansion

Bike share programs offer a way to expand the City's transportation options and alleviate traffic at a relatively low cost, and can be integral to the transit systems. Programs enable users to bike short trips (e.g. to/from transit), which helps to overcome 'first and last mile' issues. Currently, there are no bike share programs operating in the SCTMP area.

The preferred walking and cycling network proposes expansion of Toronto Bike Share into the study area to strengthen cycling connections between key destinations and to/from the future Scarborough Centre subway station and bus terminal. The SCTMP identifies potential locations such as the Scarborough Civic Centre Library, Scarborough Town Centre, Lee Centre Drive condominiums, Consilium Place offices, and the future park/school site at 705 Progress Avenue. The identified potential locations will be further reviewed and refined, and additional locations may also be identified with the implementation of the Bike Share network.

### 5.4.2 Cycling Amenities

Individuals are more likely to cycle if there are options to securely park their bicycle near their destination. The City of Toronto Bike Ring Program supplies post and ring bicycle parking on a by-request basis. Community members can request bike ring locations that are near frequent cycling destinations. Existing cycling rings are located outside Scarborough Civic Centre Library (Figure 5.12), Scarborough Town Centre, McCowan Station and Midland Station.

In addition to expanding bicycle parking rings throughout the Centre, numerous other cycling enhancements are possible, including secure bicycle parking, bicycle storage within new developments.

Figure 5.11: Bike Share Station



Figure 5.12: Bicycle Parking at Scarborough Civic Centre Library (top) and McCowan Station (bottom)



Bicycle parking should be located in highly visible, well-lit or security monitored areas to discourage theft and vandalism.

Bike repair stations, which are currently absent from the study area, provide a location for cyclists to inflate their tires and make repairs during their trip. Air pumps and repair stands are particularly important around transit stations and station areas to prioritize active modes of transportation for the first and last-mile connections to transit. An example of a bike repair station is shown in Figure 5.13.

**Figure 5.13: TTC Bike Repair Station (Davisville Station)**



### 5.4.3 Cycling Programs

Cycling programs provide access to cycling tools, and knowledge to engage communities and promote cycling. Specifically, a cycling program in Scarborough would promote cycling in a suburban context as well as teach the community the benefits of improving cycling infrastructure. These programs also aim to create a welcoming atmosphere for new cyclists, and provide them with resources and a community to learn with.

The Toronto Centre for Active Transportation (TCAT) leads Scarborough's only cycling program Scarborough Cycles. The program runs in collaboration with the Clean Air Partnership, Culturelink Settlement and Community Services, Toronto Cycling Think & Do Tank, and Cycle Toronto. Scarborough Cycles runs two community bike hubs at 3079 Danforth Avenue and 93 Birchmount Road. The bike hubs offer community engagement opportunities (workshops, group rides, and a bike mentorship program for newcomers). Each hub features access to bicycles and tools, and do-it-yourself repair clinics and workshops for cyclists. This program aims to engage the community in cycling as well as cycling infrastructure and creating community engagement. Neither of the existing Scarborough Cycles hubs are located in the SCTMP study area. With the proposed



changes to Scarborough Centre outlined in this plan, the Centre will become a suitable location for expansion of this and/or other cycling programs.

#### 5.4.4 Wayfinding and Signage

Wayfinding and signage are installed to tell users where they are in the network and indicate the location of major destinations. Signage is used to support efficient navigation, particularly for pedestrians and cyclists. Signage can combine with streetscaping, public art, and open spaces to improve the pedestrian and cyclist experience.

In the Scarborough Centre on the Move Transportation Master Plan (SCTMP) study area, wayfinding and signage features are concentrated along Borough Drive, McCowan Road, as well as Scarborough Town Centre and Scarborough Civic Centre. An example of existing signage is illustrated in Figure 5.14.

**Figure 5.14: Existing Signage in the Study Area**



Wayfinding and signage is a great way to improve the pedestrian and cyclist experience, service, and safety, and to shorten travel times through the mitigation of navigational and physical barriers. To enhance active transportation connections, a comprehensive and consistent system of wayfinding must be provided throughout the Centre.

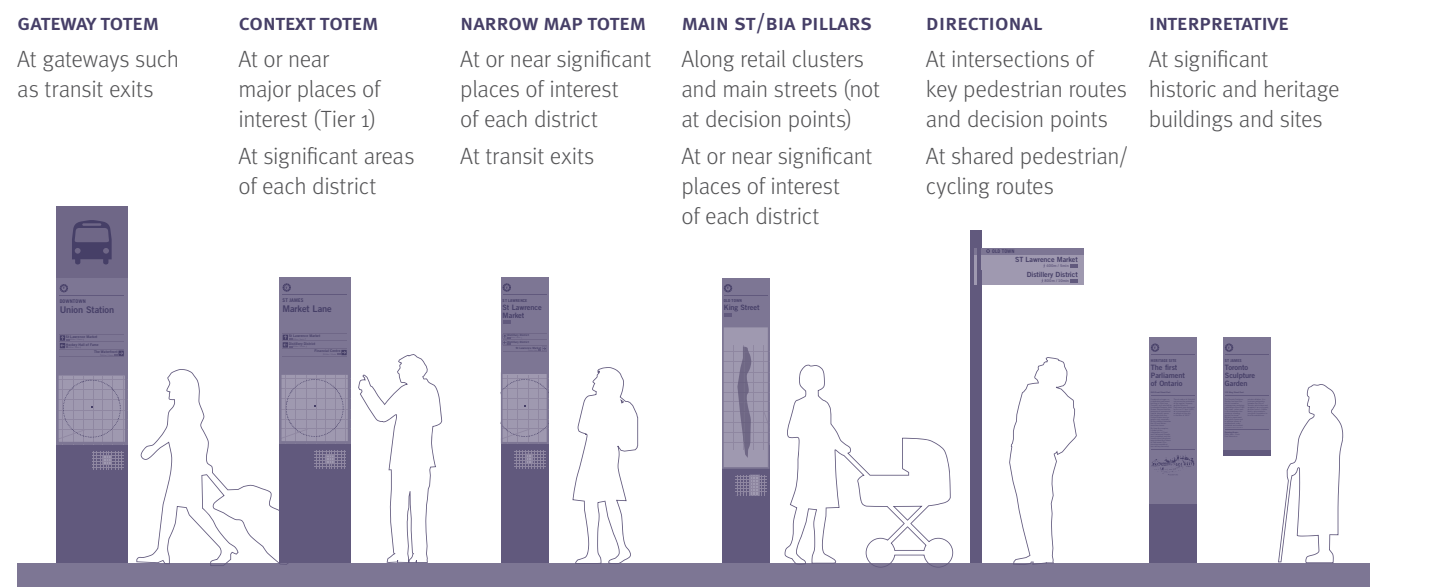
Based on the goals outlined in the City of Toronto's 360o Wayfinding Strategy (TO360), wayfinding should:

- Identify and connect places
- Stimulate economic growth
- Reduce reliance on the car/public transit
- Build confidence and trust to walk
- Encourage exploration, wandering, and discovery



This means that Scarborough Centre should adopt the city’s wayfinding strategy TO360 to ensure consistency with the rest of the City of Toronto and provide familiar and intuitive navigation. Types of signage from TO360 that should be implemented in the study area are shown in Figure 5.15.

**Figure 5.15: Types of Signage**



Source: Toronto 360o Wayfinding Strategy Panels

Signage should be strategically placed so that it is integrated and prominent in the public realm, while supporting overall wayfinding goals. Further details about the type and location of signage can be found in the TO360 Signage Placement Guidelines.

### 5.4.5 Accessible Design

The City of Toronto's Accessibility Design Guidelines promote universal accessibility for all, and will be applied to planned changes. All new streets and facilities must be constructed to meet or exceed standards established by the Accessibility for Ontarians with Disabilities Act. More specifically, sidewalks and pedestrian facilities, transit stations and stops, cycling facilities, and intersections will be designed to eliminate barriers for individuals with visual, mobility, and hearing impairments. The City of Toronto Complete Streets Guidelines provides accessibly design examples as shown below in Figure 5.16.

**Figure 5.16: Accessible Design Examples**



Depressed curbs, Borough Drive  
Source: Google Street View



Tactile Walking Surface  
Source: Toronto Complete Streets Guidelines



