

MOBILITY AND STREET NETWORK

Existing Conditions Review

Growing Glencairn Study

RFP No. Doc 437383168

Prepared for: City of Toronto

April 11, 2025

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1 Introduction

1.1 Project Background and Growing Glencairn Study Area

The Growing Glencairn Study is focused on developing a comprehensive and integrated planning framework to guide growth around the Glencairn Subway Station. The project aims to align with provincial density requirements, while fostering the creation of a transit-supportive, complete community. The study encompasses several components including land use, built form, parks and open space, mobility and public realm, community services and facilities, environment and sustainability, and municipal servicing. Parsons has been retained as a subconsultant to the O2, to lead the transportation analysis and design.

The Primary Study Area (PSA) comprises of the area approximately 800 metres around Glencairn Subway Station, while the Mobility Study Area (MSA), which will be the area used in transportation analysis, is bounded by Lawrence Avenue West to the north, Eglinton Avenue West to the south, Bathurst Street to the east, and Dufferin Street to the west. The PSA (red) and MSA (golden) are shown in **Figure 1-1**.

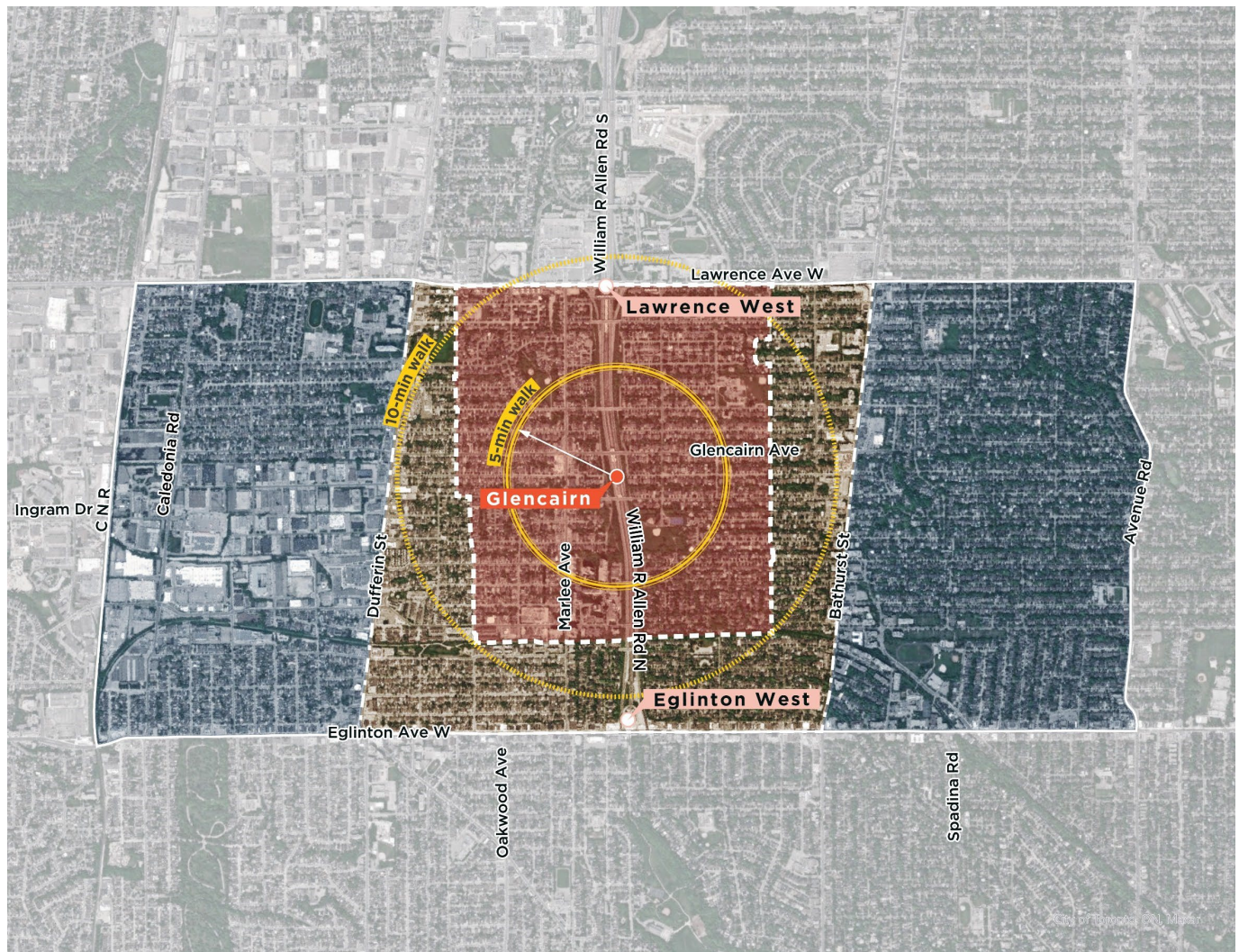


FIGURE 1-1: STUDY AREAS

2 Planning Context

2.1 Provincial Policy

2.1.1 PROVINCIAL PLANNING STATEMENT (2024)

The Provincial Planning Statement (PPS) is the overarching planning policy direction from the Government of Ontario, replacing the Provincial Policy Statement (2020) and A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019). The PPS provides policy direction for Major Transit Station Areas (MTSA), frequent transit corridors, transportation systems and transportation corridors. Applicable MTSA and active transportation policies are discussed in the broader Growing Glencairn Study Phase 1 Report.

2.1.2 ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT (2005)

The Accessibility for Ontarians with Disabilities Act (AODA) is a series of mandated provincial standards for organizations to remove existing and prevent future barriers for people with disabilities. Within the AODA, the Design of Public Spaces Standard focuses on the need for newly constructed or redeveloped outdoor spaces to be accessible for those with disabilities. These spaces include outdoor paths for travel, like sidewalks, ramps, stairs, curb ramps, rest areas and accessible pedestrian signals. Key policies under Part IV.1: Exterior Paths of Travel (particularly Section 80.21 to 80.31) of this Standard which are applicable to the study include, but are not limited to:

- The exterior path and curb ramps must have a minimum width of 1.5m and 1.2m, respectively
- Where the curb ramp is provided at a pedestrian crossing, it must have tactile walking surface indicators that has raised tactile profiles, a high tonal contrast with the adjacent surface, and extends the full width of the curb ramp
- Accessible pedestrian control signals must:
 - Have a locator tone that is distinct from a walk indicator tone
 - Be installed within 1.5m of the curb's edge and mounted at a maximum of 1.1m above ground level
 - Have tactile arrows that align with the direction of crossing
 - Include both manual and automatic activation features and audible and vibro-tactile walk indicators.
- Exceptions to the requirements are permitted where it can be demonstrated that the requirements would likely affect the cultural heritage value or interest of a property protected under the Ontario Heritage Act.

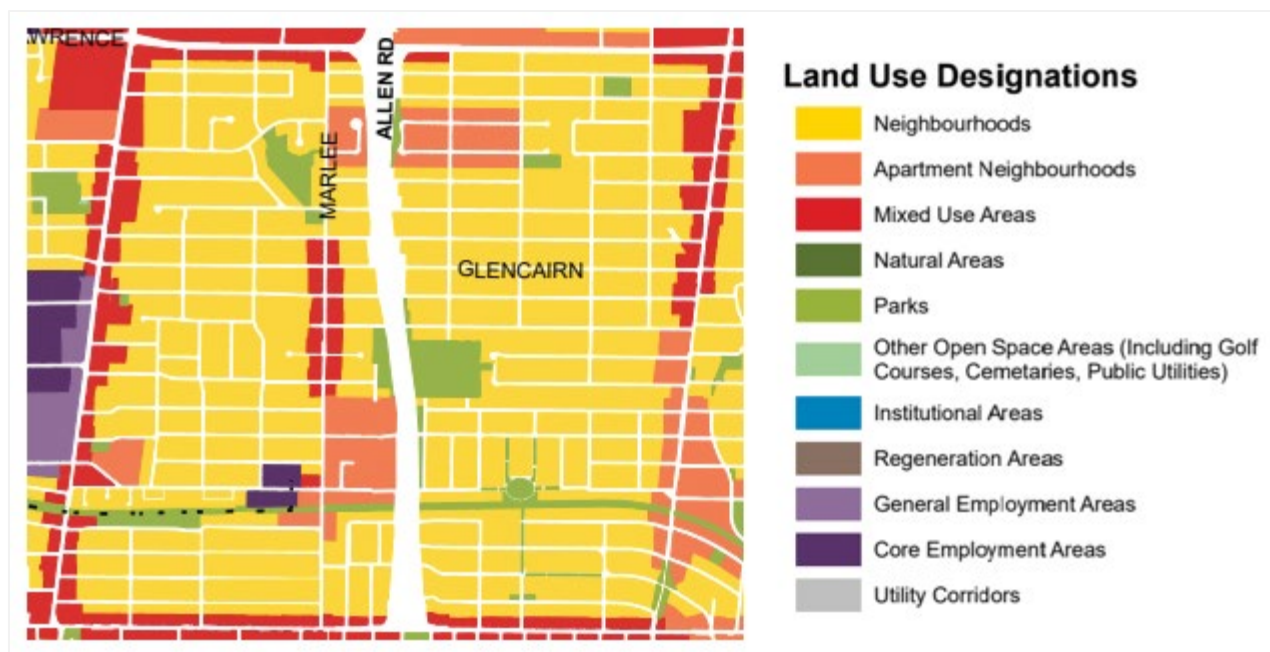
2.2 City Policy

2.2.1 OFFICIAL PLAN (2024)

The City of Toronto Official Plan is a strategic document that outlines the vision, policies, and framework for managing growth and development in Toronto over the long term. It serves as a guide for land use planning, infrastructure investment, and city-building initiatives to ensure sustainable and equitable development. The plan promotes public transit, cycling, and pedestrian infrastructure, and directs priority to accessible, sustainable, and integrated transportation networks.

The Official Plan's land use designations within the MSA are shown in **Figure 2-1**. The MSA is predominantly a neighbourhood residential area with commercial uses concentrated on Marlee Avenue and the edge arterials. There are several parks and open space dispersed throughout the area, as well as small pockets of apartment neighborhoods. There is a core employee area centered on Roselawn Avenue.

FIGURE 2-1: TORONTO OFFICIAL PLAN LAND USE DESIGNATIONS



The Official Plan's Right-of-Way (ROW) designations are displayed in **Figure 2-2**. The two ROWs along Marlee Avenue are 20 m south of Stayner Avenue and 27 m north of Stayner Avenue.

FIGURE 2-2: TORONTO OFFICIAL PLAN RIGHT-OF-WAY WIDTHS



The Official Plan's Urban Structure is displayed in **Figure 2-3**. The MSA is bounded by four Avenues; designated corridors along major streets where reurbanization is anticipated and encouraged to create new housing and job opportunities while improving the public realm and transit service for community residents. An update to the Avenue Policy was undertaken as part of the City's Housing Action Plan. Official Plan Amendment 778 (OPA 778) provides updated policies and mapping, including Marlee Avenue, as well as the remaining Lawrence Avenue West and Bathurst segments (between Eglinton Avenue West and Lawrence Avenue West) are identified as Avenues. OPA 778 is currently under appeal.

FIGURE 2-3: TORONTO OFFICIAL PLAN URBAN STRUCTURE



The Official Plan's Enhanced Surface Transit Network (Map 5) is displayed in **Figure 2-4**. Transit Priority Segments are planned for the arterials of Dufferin Street, Bathurst Street, Lawrence Avenue West, and Eglinton Avenue West. Future transit projects are discussed in more detail in **Section 3.4**.

FIGURE 2-4: TORONTO OFFICIAL PLAN ENHANCED SURFACE TRANSIT NETWORK



2.2.2 CYCLING NETWORK PLAN

The Cycling Network Plan (CNP) serves as a comprehensive roadmap and work plan, outlining the City's planned investments in the near term and intentions for the long term. The CNP's mandate is to connect the gaps in Toronto's existing cycling network, grow the cycling network into new parts of the city, and renew the existing cycling network routes to improve their quality.

The CNP has three main components: the Long-Term Cycling Network Vision, Major City-Wide Cycling Routes, and a rolling three-year Near-Term Implementation Program. All three major components of the CNP are detailed further in **Section 3.3**.

2.2.3 SECONDARY AND AREA PLANS

2.2.3.1 Lawrence Allen Secondary Plan

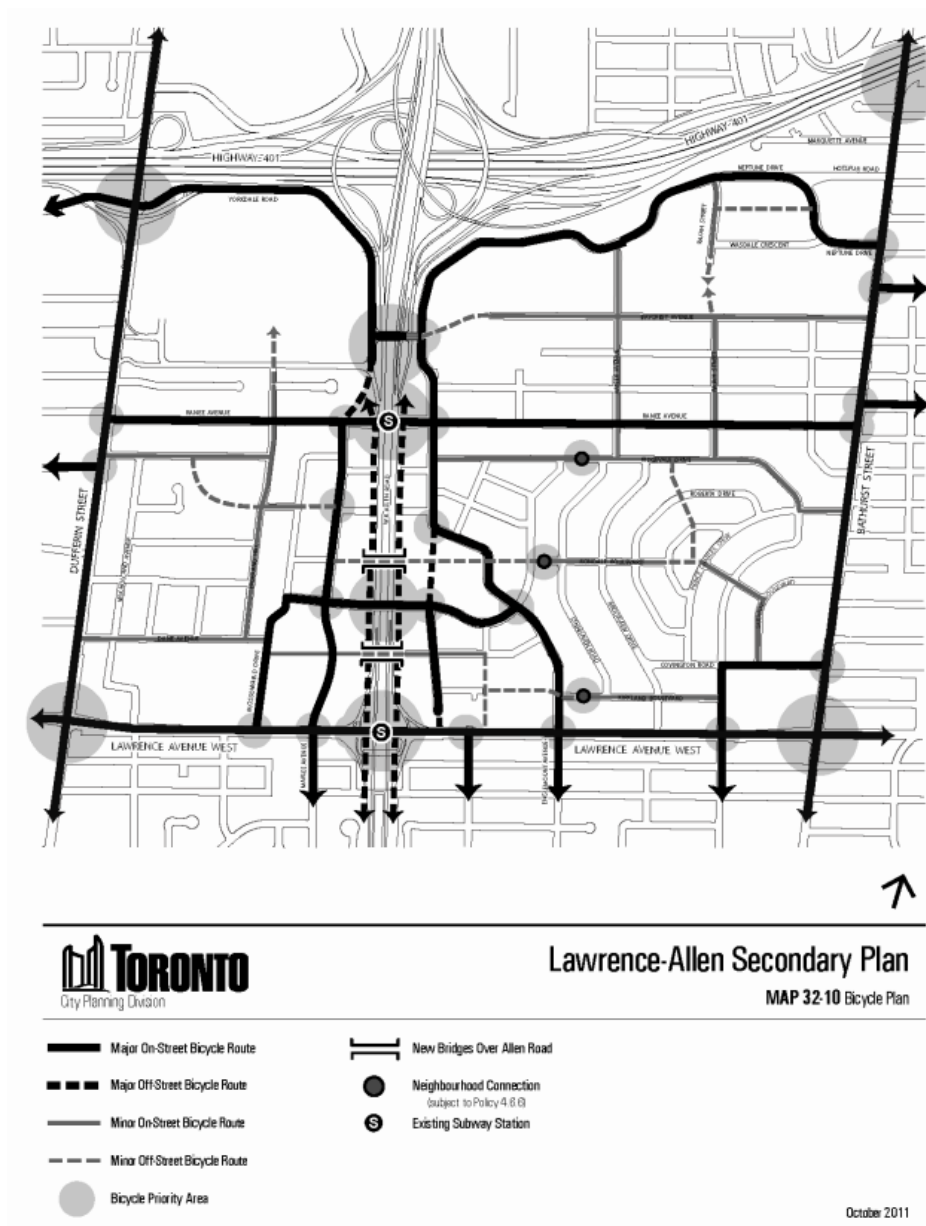
The Lawrence-Allen Secondary Plan outlines a framework for revitalizing the Lawrence-Allen area, including Lawrence Heights, immediately north of the Glencairn MSA. The plan aims to transform the area into a mixed-income, mixed-use, and transit-supportive community while addressing issues such as social housing renewal, infrastructure improvements, and community connectivity.

The plan recommends a new street network, as shown in **Figure 2-5**, and upgrades to the pedestrian/public realm and cycling infrastructure, as displayed in **Figure 2-6**. The new street network includes several new roads and alignments, notably connecting to Marlee Avenue and Englemount Avenue in the MSA. Major on-street bicycle and pedestrian routes connecting to the Glencairn MSA are located on Dufferin Street, Marlee Avenue, Shermount Avenue, Englemount Avenue, Glenmount Avenue, and Bathurst Street.

FIGURE 2-5: LAWRENCE-ALLEN SECONDARY PLAN STREET NETWORK



FIGURE 2-6: LAWRENCE-ALLEN SECONDARY PLAN BICYCLE PLAN



2.2.3.2 Dufferin Street Transportation Master Plan

The Dufferin Street Transportation Master Plan (TMP) was prepared as part of the Avenue Study for Dufferin Street. The TMP addresses opportunities for improving the multimodal transportation network to facilitate a sustainable pattern of growth along the Dufferin Street corridor between Lawrence Avenue West and Highway 401.

The plan made the following recommendations:

- **Pedestrian Infrastructure:**
 - Streetscape improvements at all intersections on Dufferin Street and on adjacent collector and local streets.
 - Provide direct pedestrian access to transit stops and subway stations.
 - Integrate transit shelters, seating, and weather-protected pathways to encourage walking.
- **Cycling Infrastructure:**

- Implement grade-separated cycle tracks on Dufferin Street to provide a safer cycling experience.
- Introduce bikeways on Orfus Road and bike-friendly treatments on new and existing local streets.
- Increase bicycle parking facilities across the study area, especially near transit stops and commercial areas.
- Road Network Improvements:
 - Road network improvements, including new local streets and laneways within large development blocks to improve connectivity and new public street connections to break up large blocks and encourage better circulation.
 - Two new signalized intersections at:
 - Dufferin Street & Cartwright Avenue
 - Dufferin Street & Apex Road
 - Removal of the McAdam Loop in conjunction with the new signalized intersection at Cartwright Avenue.
 - Implement a raised planted median on Dufferin Street with alternating center turn lanes between Bridgeland Avenue/Yorkdale Road and Lawrence Avenue West to manage traffic flow.
 - Reconfiguration of the Highway 401 eastbound off-ramp at Dufferin Street to improve its urban integration and access.

2.2.3.3 Yorkdale Transportation Master Plan

The Yorkdale TMP focuses on developing a sustainable and efficient transportation network for the Yorkdale Shopping Centre and its surrounding area. The plan aims to accommodate future growth, enhance mobility options, improve transit integration, and create a safer, more accessible environment for vulnerable road users such as pedestrians and cyclists.

The plan recommended pedestrian and cycling, road network and transit infrastructure enhancements.

2.2.4 RAPIDTO: SURFACE TRANSIT NETWORK PLAN

The RapidTO: Surface Transit Network Plan is a joint program by the City of Toronto and Toronto Transit Commission (TTC), which aims to improve bus and streetcar reliability with transit priority solutions, and guides the study, evaluation and delivery of bus and streetcar improvement projects in the city. Within the Mobility Study Area, Dufferin Street, Lawrence Avenue West and Bathurst Street were identified as Priority Roadways proposed for roadway-specific studies.

2.2.5 OTHER CITY-WIDE PLANS

The City of Toronto has a wide-ranging set of strategy and policy documents which will be considered in the development of the transportation planning strategies and design in later stages of this project. These include:

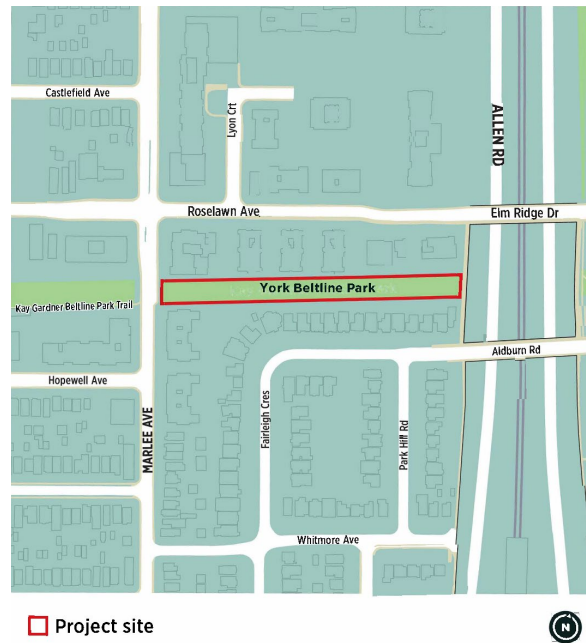
- TTC 5-Year Service Plan & Customer Experience Action Plan (2024-2028)
- Electrical Vehicle Strategy (2019)
- A Micromobility Strategy for Toronto (2024)
- Vision Zero Road Safety Plan
- Congestion Management Plan
- City Asset Management
- Toronto Electric Vehicle Strategy

2.3 Existing and Planned Projects

2.3.1 YORK BELTLINE TRAIL EXTENSION

The City is planning a new extension of the York Beltline Trail between Marlee Avenue and Allen Road. A new trailhead will be added to the Marlee Avenue entrance, just south of Roselawn Avenue as shown below in **Figure 2-7**.

FIGURE 2-7: YORK BELTLINE PROJECT STUDY AREA

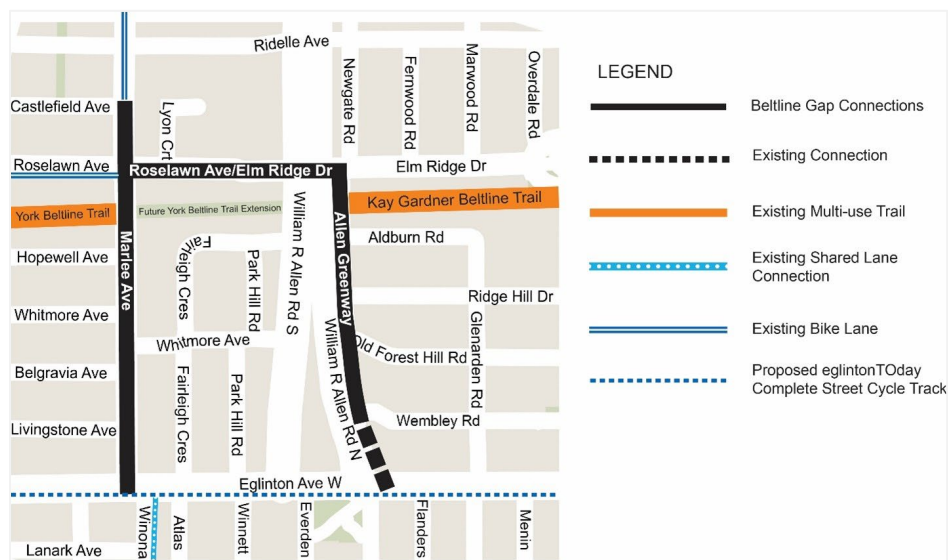


The trail alignment is proposed to include a three-metre-wide limestone pathway with two entry points: a west entrance at Marlee Avenue and an east entrance near Allen Road. Planned construction work for the trail extension is temporarily paused due to the construction of the Reena Affordable Housing Project at 165 Elm Ridge Dr. Community engagement and design development will continue during this time.

2.3.2 BELTLINE GAP CONNECTIONS

The Beltline Gap Connections project includes several upgrades to the active transportation infrastructure on Marlee Avenue, Roselawn Avenue/Elm Ridge Drive and the Allen Greenway, approved by City Council in June 2024. The project aims to provide a safe and connected route for cycling and pedestrians over the Allen Road Expressway closing the gap between the York Beltline Trail and Kay Gardner Beltline Trail. The project area is shown below in **Figure 2-8**.

FIGURE 2-8: BELTLINE GAP CONNECTIONS PROJECT AREA



The project includes the following:

- Marlee Avenue (**Figure 2-9**)
 - Converting the west-side sidewalk into a raised bi-directional cycle track and a widened sidewalk (between Eglinton Avenue West and Roselawn Avenue)
 - Upgrading the bicycle lanes to cycle tracks (between Roselawn Avenue and Castlefield Avenue)
- Roselawn Avenue/Elm Ridge Drive (**Figure 2-10** and **Figure 2-11**)
 - Converting the south-side sidewalk into a multi-use trail (between Marlee Avenue and the western limit of the bridge)
 - Converting the south side of the roadway into a bi-directional on-road cycle track (between the western limit of the bridge to Newgate Road)
 - Removing the westbound left turn lane on Roselawn Avenue approaching the Marlee Avenue intersection
- Allen Greenway (**Figure 2-12**)
 - Converting the sidewalk into a multi-use trail (between Elm Ridge Drive and Wembley Road)
- Adding bicycle signals, protected intersection corner islands and curb extensions to improve safety by giving priority and reducing crossing distances for pedestrians and people cycling

FIGURE 2-9: BELTLINE GAP CONNECTIONS UPGRADES TO MARLEE AVENUE

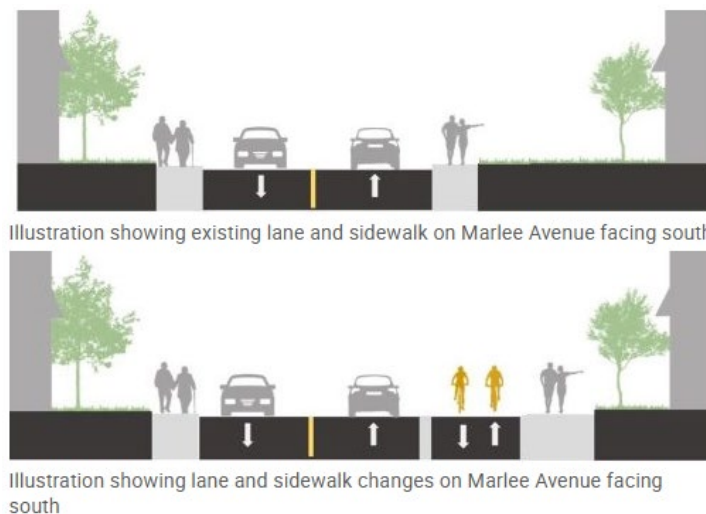


FIGURE 2-10: BELTLINE GAP CONNECTIONS UPGRADES TO ROSELAWN AVENUE AND ELM RIDGE DRIVE

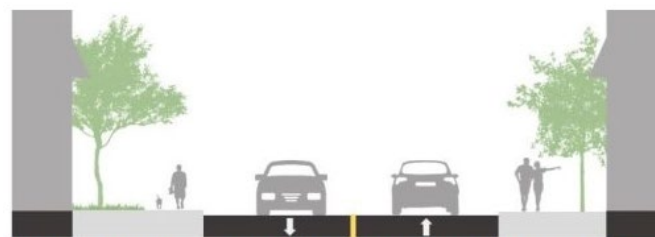


Illustration showing existing lane and sidewalk on Roselawn Avenue and Elm Ridge Drive facing west



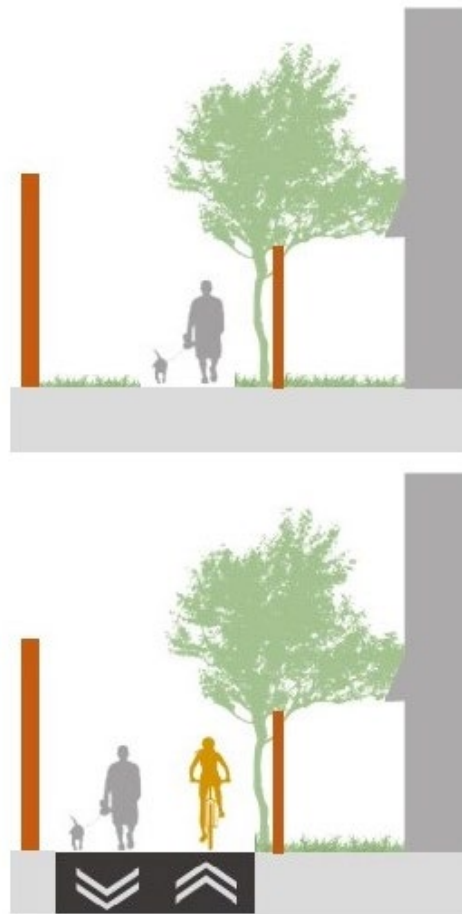
Illustration showing lane and sidewalk changes on Roselawn Avenue and Elm Ridge Drive facing west

FIGURE 2-11: BELTLINE GAP CONNECTIONS UPGRADES TO THE ELM RIDGE DRIVE BRIDGE



Elm Ridge Drive/ Bridge Existing (top) and Approved (bottom)

FIGURE 2-12: BELTLINE GAP CONNECTIONS ALLEN GREENWAY UPGRADES

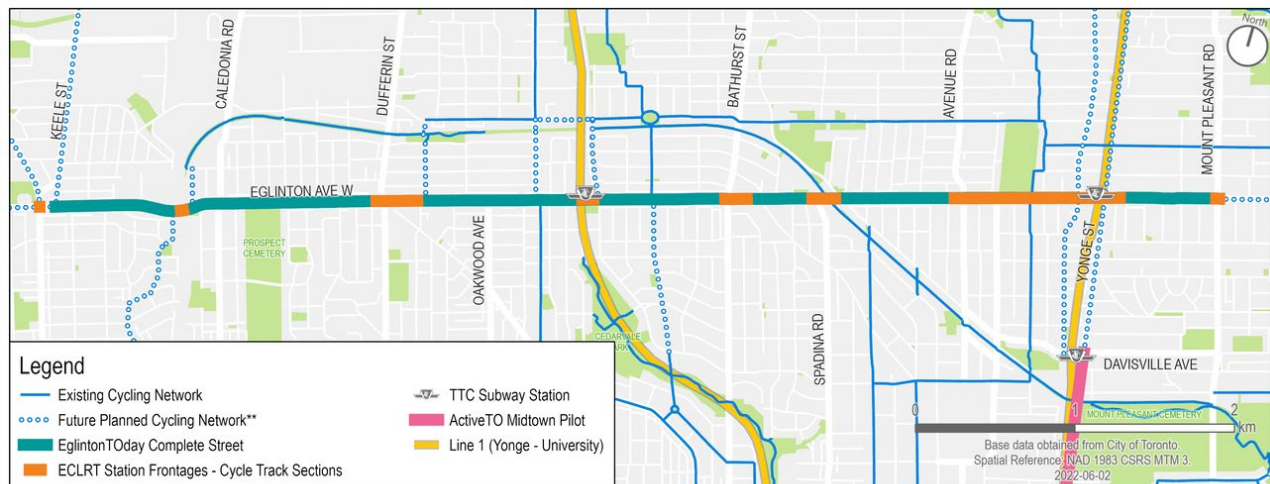


Allen Greenway Existing (top) and
Approved (bottom)

2.3.3 EGLINTONTODAY COMPLETE STREET PROJECT

The EglintonToday Complete Street Project proposes to implement complete street features and public realm upgrades on Eglinton Avenue West between Keele Street and Mount Pleasant Road as shown in **Figure 2-13**.

FIGURE 2-13: EGLINTONTODAY PROJECT AREA



**Implementation of projects is subject to public consultation, Council approval, feasibility of route alignment and detailed design, and capital infrastructure coordination.

Several complete street upgrades between Dufferin Street and Bathurst Street (**Figure 2-14**) are approved by City Council and planned, including the following:

- **Caledonia Road to Oakwood Avenue (Image B)**
 - One-way cycle tracks with various buffer treatments. New north-south contra-flow bicycle lanes on Jimmy Wisdom Way (**Image on the right**).
 - Retaining one westbound motor vehicle lane and one eastbound motor vehicle lane. Lane configuration at intersections varies.
 - Consideration for traffic signal upgrades at Eglinton Avenue West/Northcliffe Boulevard/Jimmy Wisdom Way. Signal upgrades and signal timing changes at various locations, including bicycle signal heads and leading pedestrian intervals.
 - Proposed 24/7 parking on both sides of the street between Caledonia Road and Glenholme Avenue. Proposed 24/7 parking on the south side of Eglinton Avenue West between Glenholme Avenue and Oakwood Avenue.
 - Dufferin Street intersection and streetscape improvements, including raised cycle tracks.
- **Oakwood Avenue to Spadina Avenue (Image C1 and C2)**
 - One-way cycle tracks with various buffer treatments. New north-south contra-flow bicycle lanes on Glen Cedar Road.
 - Retaining two westbound motor vehicle lanes and two eastbound motor vehicle lanes during peak hours. Lane configuration at intersections varies.
 - Consideration for traffic signal upgrades at Eglinton Avenue West/Marlee Avenue/Winona Drive. Signal upgrades and signal timing changes at various locations, including bike signal heads and leading pedestrian interval.
 - Off-peak parking on both sides of the street and afternoon peak hour parking will be permitted on the south side of Eglinton Avenue West between Westover Hill Road and Peveril Hill Road.
 - The Section between Parkhill Road and Flanders Road, including the Allen Road interchange, accommodates additional turning lanes.

FIGURE 2-14: EGLINTONTODAY COMPLETE STREET PLANNED UPGRADES



2.3.4 EGLINTON CROSSTOWN LRT

The Eglinton Crosstown Light Rail Transit (ECLRT) is a 19-kilometre LRT line along Eglinton Avenue between Weston Road in the west and the Kennedy Subway Station in the east, as shown in **Figure 2-15**. Currently under construction, the line will have 25 stations, four of which will be within the MSA: Fairbank, Oakwood, Cedarvale, and Forest Hill Stations. The segment of the LRT with the MSA boundaries will be underground. The Cedarvale Station will connect to the Eglinton West Line 1 Station. The LRT will provide high-frequency service, improving the area's already strong access to transit.

FIGURE 2-15: EGLINTON CROSSTOWN LRT ROUTE AND STATION STOPS



2.4 Design Guidelines

The City of Toronto has a comprehensive set of design guidelines which will be utilized to inform the mobility and public realm strategy and to develop the functional concept design in Phase 3. The following guidelines will be used:

- Complete Streets Guidelines
- Green Streets Technical Guidelines
- Design Criteria for Green Infrastructure in the Right-of-way (2021)
- Toronto Streetscape Manual
- Transit Design Guide
- Transit-Supportive Guidelines – Ministry of Transportation (2012)
- Freight-Supportive Guidelines - Ministry of Transportation (2016)
- General Guidelines for the Preparation of Traffic Impact Studies - Ministry of Transportation (2023)
- On-Street Bikeway Design Guidelines (2023)
- Multi-use Trail Design Guidelines
- Road Engineering Design Guidelines
- Lane Width Guidelines
- Curb Radii Guidelines
- Truck Aprons Guidelines
- Curb Extension Guidelines
- Raised Crosswalk Guidelines
- Accessibility Design Guidelines (2021)
- Ontario Traffic manual (OTM Books)

3 Existing Transportation Network

3.1 Street Network

3.1.1 STREET NETWORK AND ROAD CLASSIFICATION

The existing MSA road network classification is displayed in **Figure 3-1**. The MSA is bounded by the four major arterials: Lawrence Avenue West, Eglinton Avenue West, Bathurst Street and Dufferin Street, and is bisected by the Allen Road. Within the MSA, the minor arterials of Marlee Avenue and Glencairn Avenue, provide the primary north-south and east-west connections, respectively. Several collector roads provide connections: Roselawn Avenue/Elm Ridge Drive provide east to west connections in the south of the MSA while the three parallel collectors of Shermount Avenue, Englemount Avenue and Glenmount Avenue provide a connection between Glencairn Avenue and Lawrence Avenue West. The MSA lacks continuous north-south connections especially in the east side of Allen Road.

The Allen Road has interchanges at Lawrence Avenue West and Eglinton Avenue West and acts as a major physical barrier dividing the MSA into two distinct halves. However, there are seven bridges crossing Allen Road within the MSA (excluding the bridges at Lawrence Avenue West and Lawrence Station Bus Terminal), located at Dell Park Avenue, Glengrove Avenue, Glencairn Avenue, Viewmount Avenue, Ridelle Ave, Roselawn Avenue, and Aldburn Road. These bridges provide critical east-west connections over Allen Road and help retain the grid structure of the street network. The existing fine grid street network provides opportunities for support active network in the study area.

FIGURE 3-1: EXISTING ROAD NETWORK CLASSIFICATIONS



3.1.2 RIGHT-OF-WAY AND ROADWAY WIDTHS

The following maps present the average ROW and roadway widths in **Figure 3-2**, respectively. The ROW is largely uniform throughout the MSA, at approximately 20 m. Marlee Avenue and Glencairn Avenue have generally consistent ROW widths of 20 m. The bridges over Allen Road have consistent ROW of 14 m and roadway width of 10 m, the only exception being Glencairn Avenue with a ROW of 17 m and roadway width of 13.5 m. This is summarized in **Table 3-1**.

TABLE 3-1: SUMMARY OF BRIDGES OVER ALLEN ROW AND ROADWAY WIDTH

Road	ROW (m)	Roadway Width - curb to curb (m)
Dell Park Ave.	14	10
Glengrove Ave.	14	10
Glencairn Ave.	17	13.5
Viewmount Ave.	14	10
Ridelle Ave.	14	10
Elm Ridge Dr.	14	10

FIGURE 3-2: ROW WIDTH

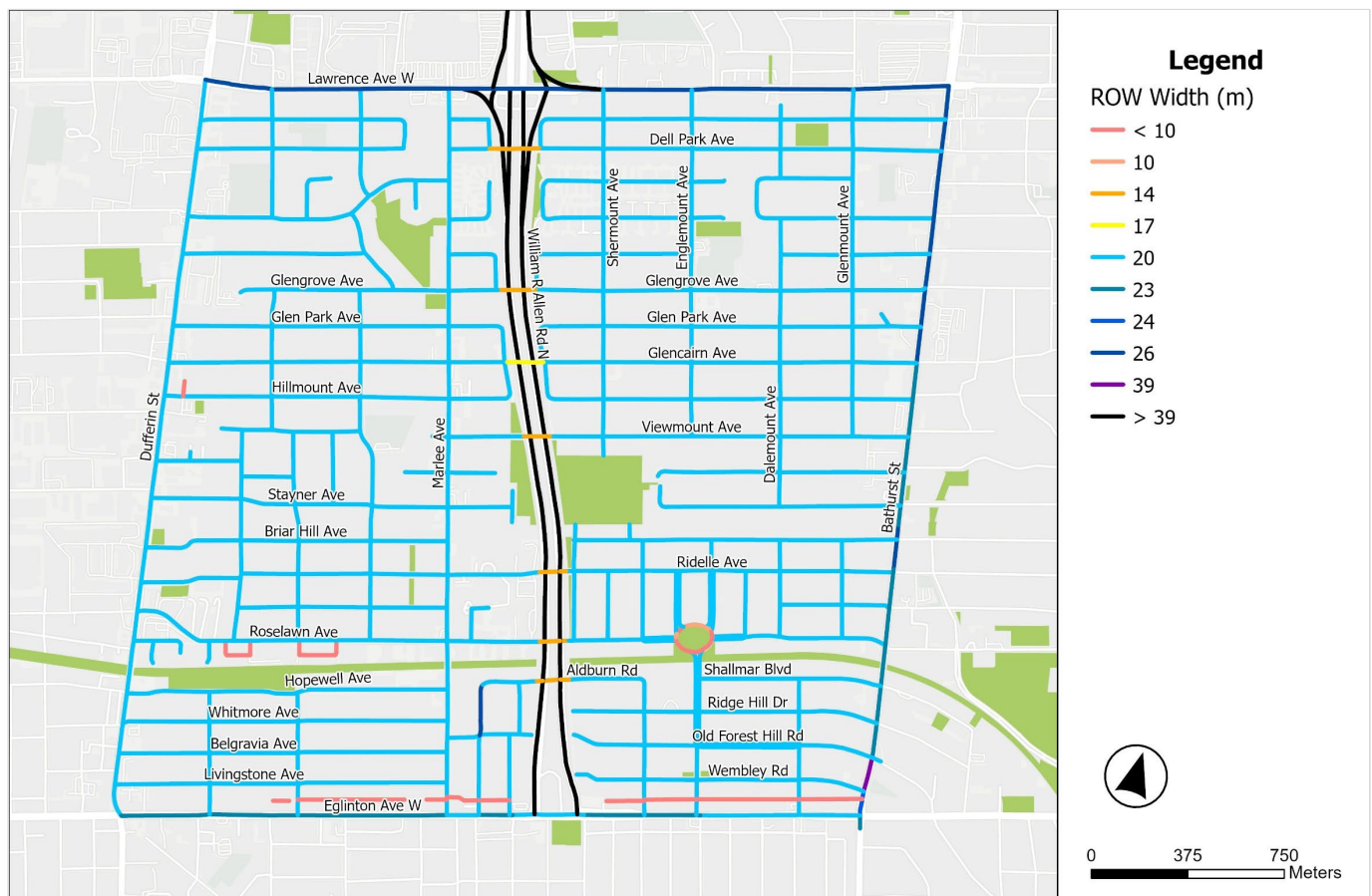


Figure 3-3 illustrates the typical bridge configuration over Allen Road; two travel lanes with a curb buffer and sidewalks on either side of the roadway. As discussed in **Section 2.3.2**, the Beltline Gap Connections plans to implement a bi-directional on-road cycle track on the south side of the Elm Ridge Drive bridge over Allen Road, shifting the travel lanes to the north.

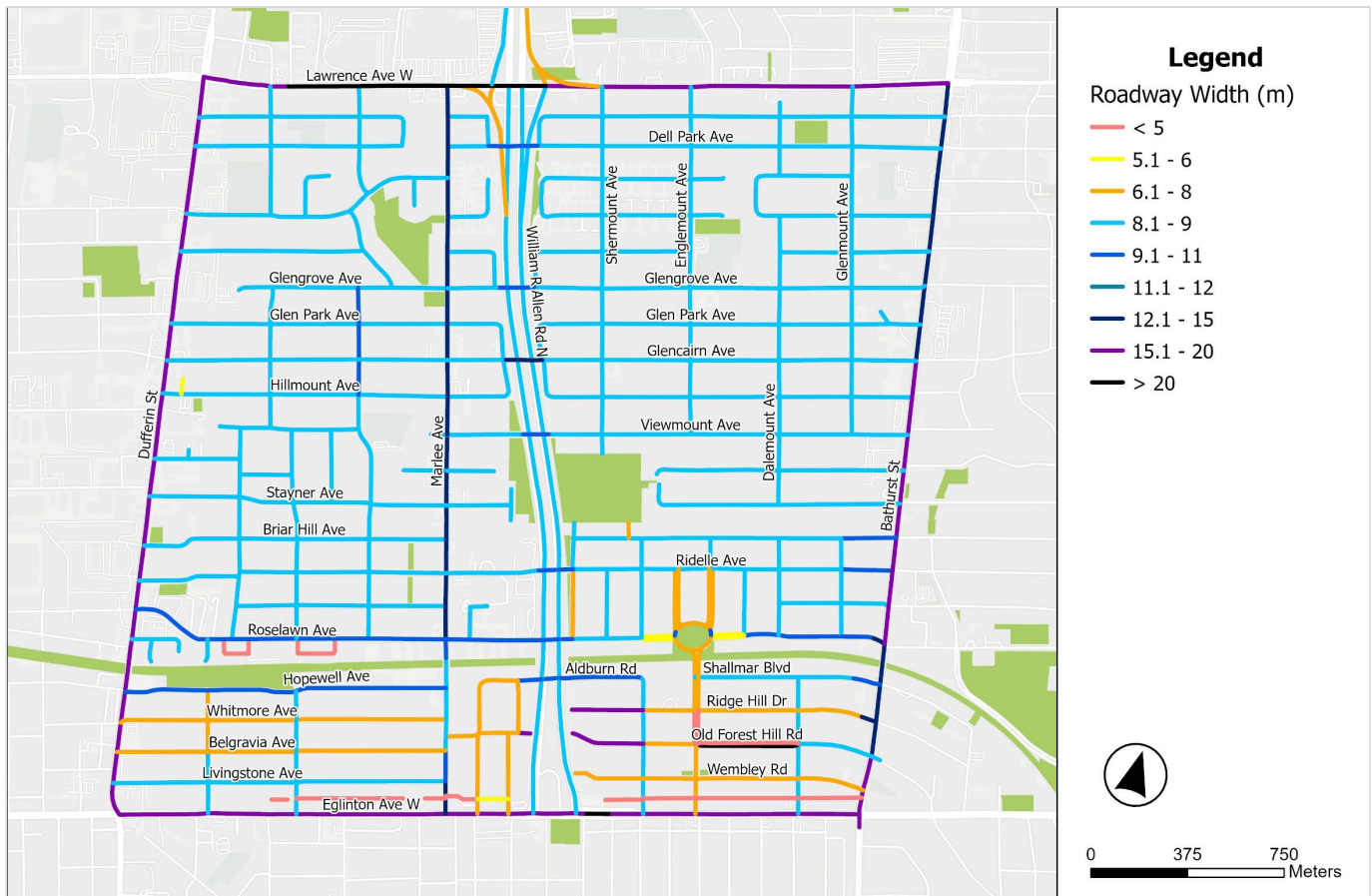
FIGURE 3-3: RIDELLE AVENUE BRIDGE OVER ALLEN ROAD



With regards to roadway width there is generally no variation in the MSA, with the majority ranging between 8.1 m to 15 m wide. Glencairn Avenue has a consistent roadway width of 8.5 m, however, Marlee Avenue has a minor variation ranging from 8.5 m to 13.4 m. The average roadway width is displayed in **Figure 3-4**.

If lane widths are right-sized to 3.3 m (minimum width on TTC bus service routes) based on the City's Lane Widths Guidelines, there will be approximately 1.9 m on Glencairn Avenue and 6.8 m on Marlee Avenue (assuming a roadway width of 13.4 m) that could potentially be repurposed for enhanced bikeway design and/or public realm improvements at midblock locations. The design at intersections will require additional analysis, and these opportunities will be further reviewed in the subsequent phases of this study.

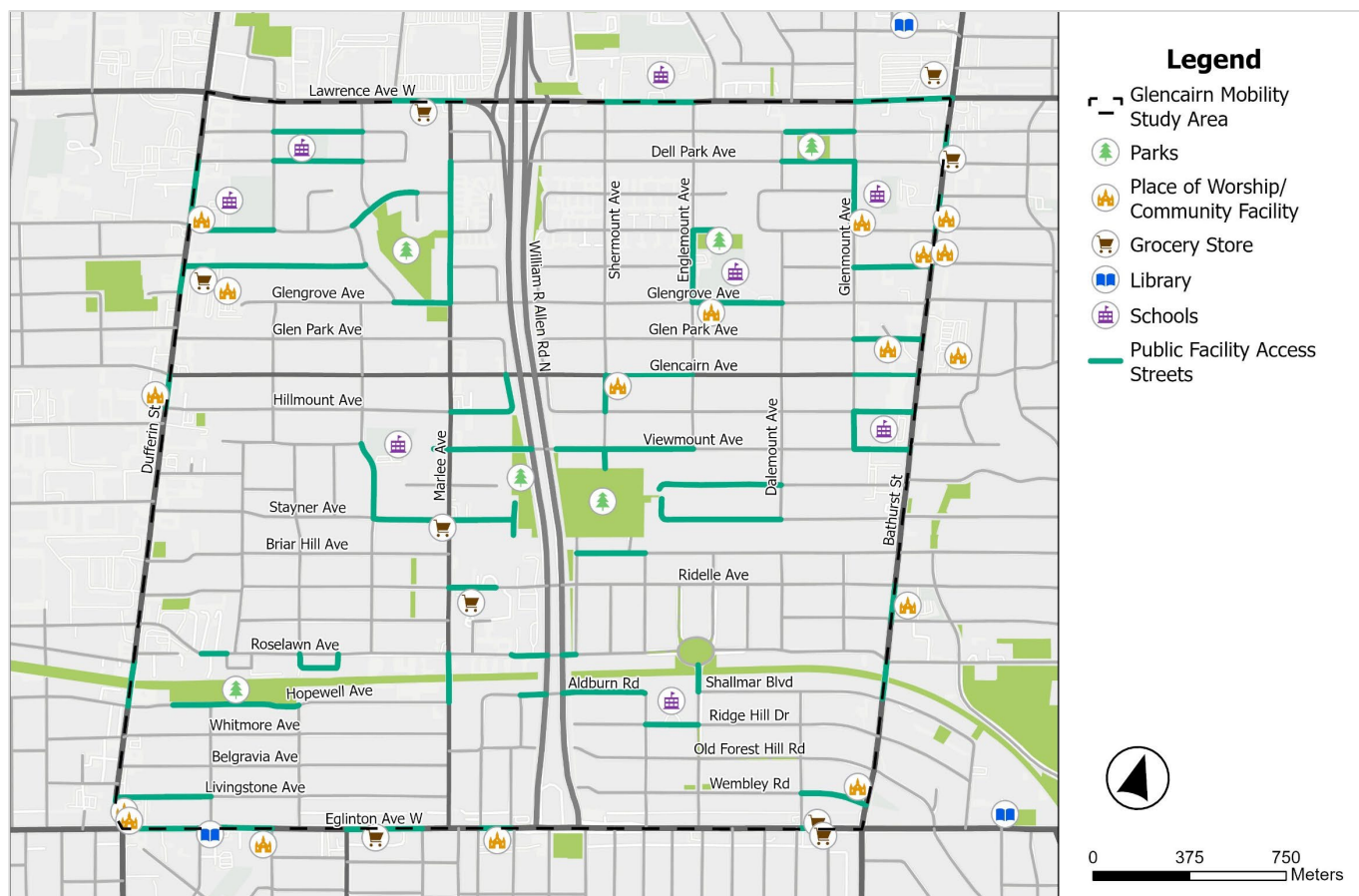
FIGURE 3-4: ROADWAY WIDTH



3.1.3 PUBLIC BUILDINGS AND FACILITIES ACCESS

Streets accessing various publicly accessible and community facilities are displayed in **Figure 3-5**. Facilities identified included schools, parks, grocery stores, libraries, places of worship, and community centres/facilities. The distribution of these streets provides insight into the neighborhood focal points and areas requiring consideration for improved access, connectivity and pedestrian safety measures.

FIGURE 3-5: EXISTING COMMUNITY FACILITIES AND ACCESS STREETS



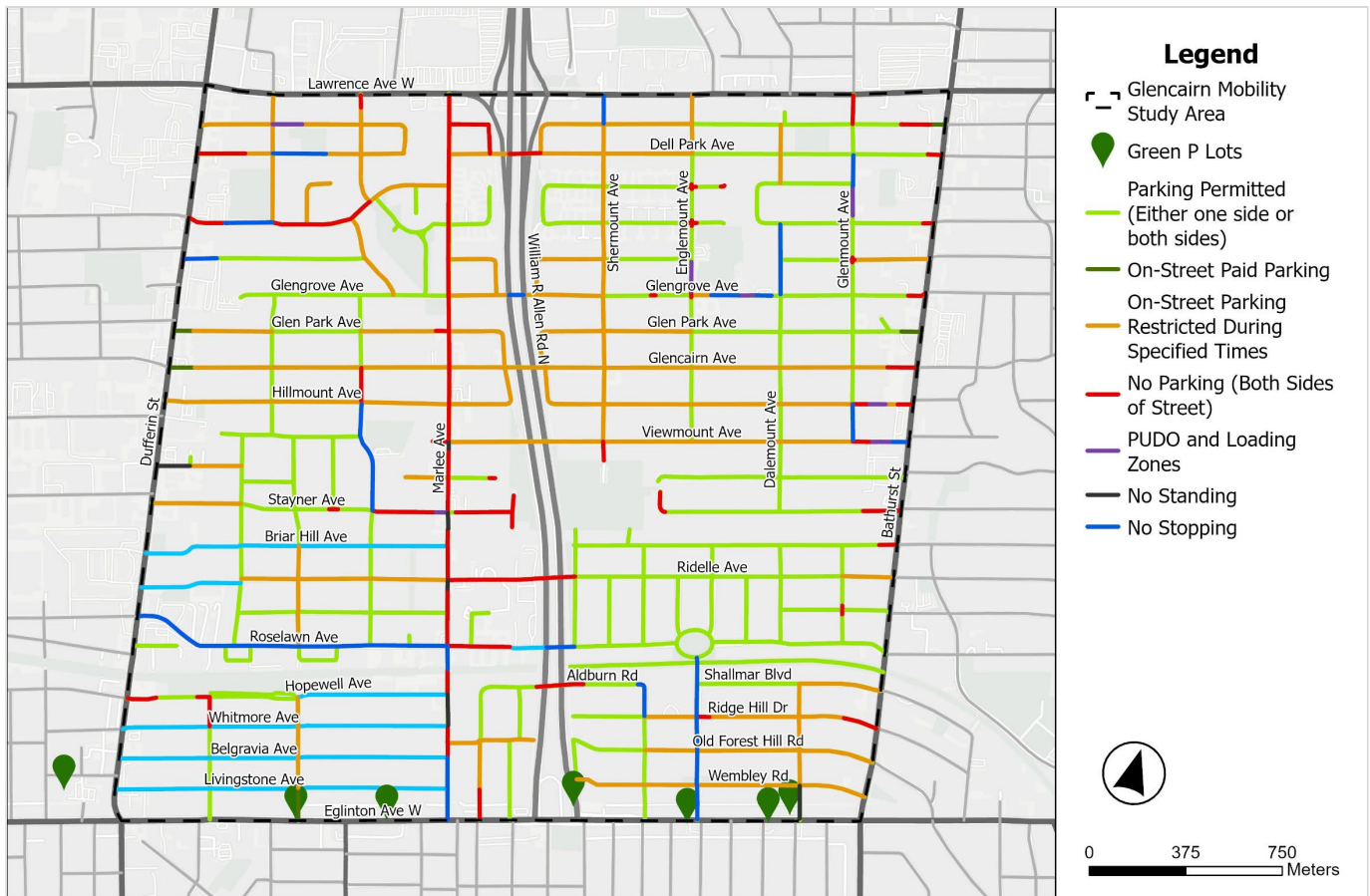
3.1.4 PARKING

A summary of on-street parking and traffic restrictions and off-street parking is displayed in **Figure 3-6**. On-street parking is not permitted on Marlee Avenue and the south side of Glencairn Avenue, the only exception being a small segment (~80 m) of on-street paid parking available immediately east of the intersection with Dufferin Street. On-street parking is permitted on the north side of Glencairn Avenue, but it is prohibited between 7 AM and 6 PM.

Designated permit parking is located on Briar Hill Avenue, Whitmore Avenue, Belgravia Avenue, Livingstone Avenue, and small segments of Ridelle Avenue and Roselawn Avenue. On-Street parking is generally permitted throughout the MSA; however, it is often restricted during certain times or limited to one side of the street.

With regards to off-street parking there are no Green P lots within the PSA however there are several located on Eglinton Avenue West along the south boundary of the MSA.

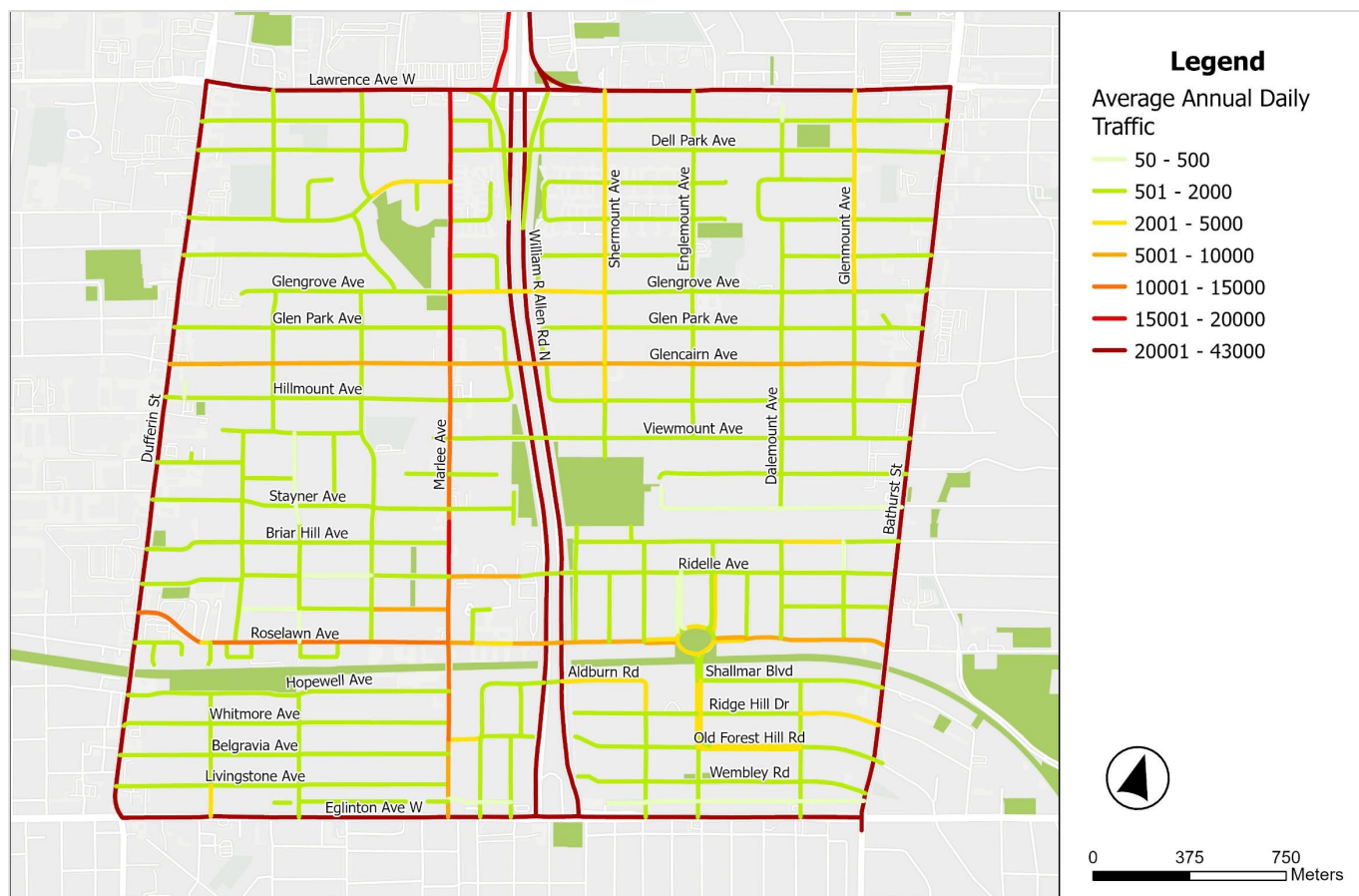
FIGURE 3-6: EXISTING ON-STREET PARKING AND TRAFFIC REGULATIONS AND OFF-STREET PARKING



3.1.5 MOTOR VEHICLE VOLUMES

Annual Average Daily Traffic is displayed in **Figure 3-7**. Annual Average Daily Traffic (AADT) is a measure of the average number of vehicles that travel on a road segment in both directions over the course of a year. It should be noted that Allen Road has been divided by direction, hence its AADT is only in one direction. The vehicle volumes follow an expected pattern, where the higher order roads experience higher volumes. Excluding the major arterials and Allen Road, Glencairn Avenue, Marlee Avenue, and Roselawn Avenue experience the highest volumes within the MSA. Of note are the relatively low volumes on the Lawrence Avenue West and Allen Road Southbound On-Ramp and Northbound Off-Ramp.

FIGURE 3-7: AVERAGE ANNUAL DAILY TRAFFIC VOLUME



3.1.6 ALLEN ROAD AND LAWRENCE AVENUE WEST INTERCHANGE RAMP TERMINAL INTERSECTIONS

The Allen Road and Lawrence Avenue West interchange provides key multi-modal access to the Marlee-Glencairn community, including the TTC Lawrence West Subway Station and Bus Terminal. In the Lawrence Allen Secondary Plan, this interchange is identified as a Pedestrian and Bicycle Priority Area where high volumes of pedestrian and cycling activity exist and/or are anticipated, and it will be provided with high-quality facilities and amenities for pedestrian and bicycles.

On February 2 and 3, 2022, City Council directed staff to report back on traffic and transportation improvements in the Marlee Avenue corridor, including Lawrence Avenue West/Allen Road access ramps, which will be incorporated into this study.

3.2 Pedestrian Network

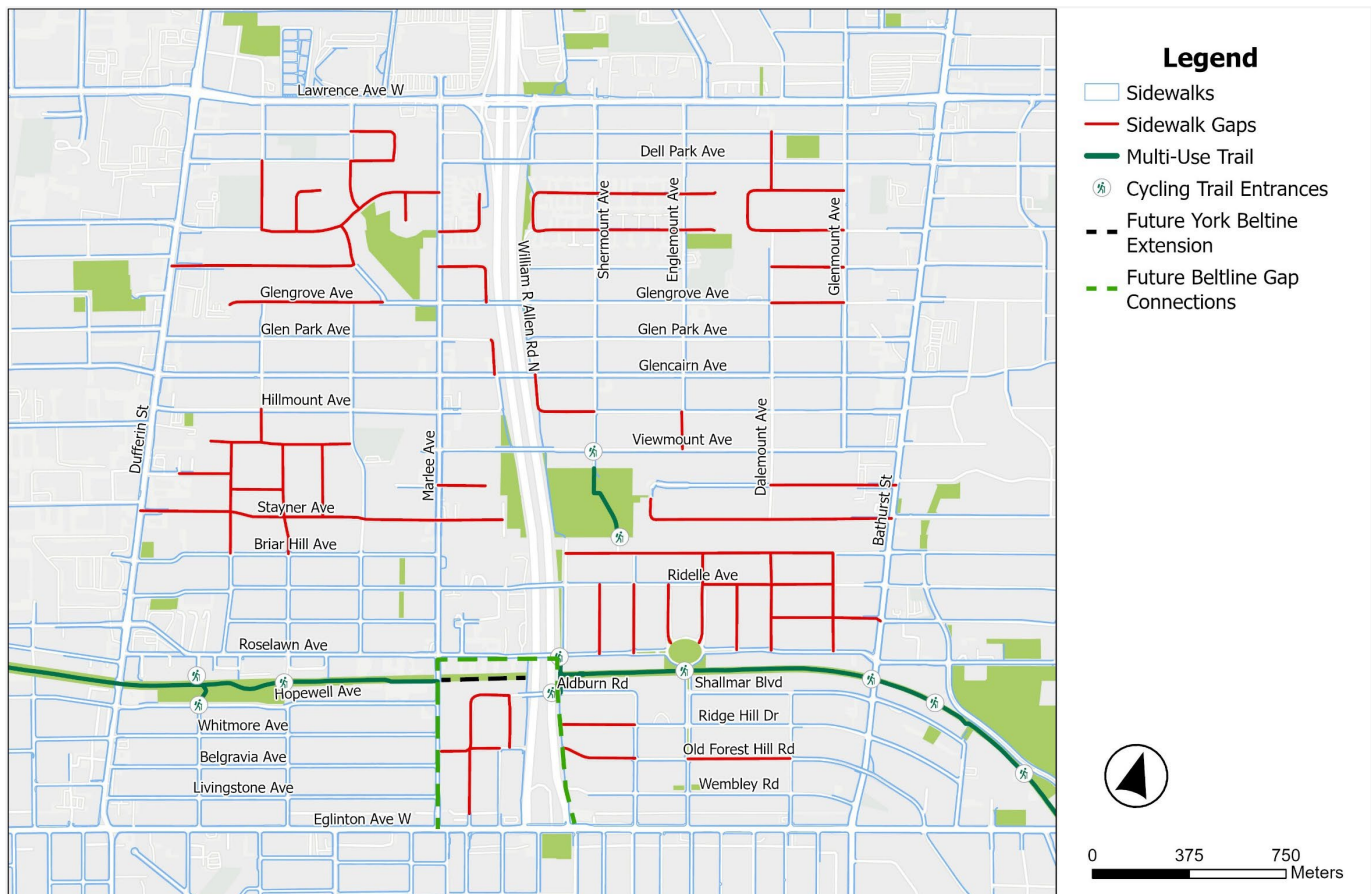
3.2.1 SIDEWALKS AND TRAILS

The existing sidewalk and trails network, and future Beltline projects are displayed in **Figure 3-8**. Although there are sidewalks on either side of Marlee Avenue and Glencairn Avenue, sidewalks are missing on some long segments of the collectors such as Shermount Avenue, Englemount Avenue and Glenmount Avenue. Furthermore, there are several prominent gaps in the local network where there are no sidewalks on either side of the street (highlighted in red in **Figure 3-9**). The sidewalk gaps coincide with the identified Public Facility Access Streets (**Figure 3-5**) and are within the surrounding of schools and/or the Glencairn Subway Station. These areas can be described as the following:

- Southeast – Gaps are located primarily on Ridelle Avenue/Briar Hill Avenue and the north-south roads between Ridelle Avenue and Elm Ridge Drive. This area is located around West Preparatory Public School, raising concerns over safety for pedestrians travelling to and from the school. Furthermore, the lack of sidewalks impedes pedestrian connection between the residential area in the southeast and Glencairn station, and due to its proximity to Allen Road, there are minimal alternative routes which do not add substantial distance.
- Central-west – Centered on Stayner Avenue this area is located near Sts. Cosmas and Damian Catholic School and impedes pedestrian connections west of the school. Briar Hill Avenue, Hillmount Avenue and Marlee Avenue provide alternative connections to Dufferin Street and Glencairn Station.
- Northwest – Centered on Wenderly Drive and Glenbrook Avenue, this area is located near Wenderly Park and Fieldstone school. The gaps impede connections for residents travelling to both Lawrence West and Glencairn Station, neither of which have strong alternative routes available.
- Northeast – There are substantial gaps on Fraserwood Avenue, Meadowbrook Road, Shelborne Avenue, and Madoc Drive. This area has several schools and community facilities, including Glen Park Public School, Our Lady of the Assumption Catholic School, and several synagogues, raising concerns for pedestrian safety. The gaps impede connections for residents travelling to both Lawrence West and Glencairn Station, although Glengrove Avenue and Dell Park Avenue provide alternative connections.

The trail network consisting of the York Beltline and Kay Gardner Beltline provides strong east-west connections throughout and outside of the MSA in the south part, however connectivity is impacted by Allen Road. North-South connections and a continuous pedestrian network in the north part of the MSA are currently lacking.

FIGURE 3-8: PEDESTRIAN NETWORK MAP



In addition to the connectivity gaps outlined above, north-south pedestrian crossings are lacking on either side of the bridges on Glencairn Avenue and Viewmount Avenue as exemplified in **Figure 39**. The existing conditions assessment will

consider the existing network, its impact on the walkshed analysis, and safety measures in place (Section 4.4). As these streets are crucial for the pedestrian network and accessibility to transit and community facilities, future assessment will be required to evaluate the need and allocation of pedestrian infrastructure.

FIGURE 3-9: LACK OF PEDESTRIAN CROSSINGS ON VIEWMOUNT AVENUE - EAST SIDE OF BRIDGE



3.2.2 SIDEWALK WIDTHS

Average sidewalk widths on segments on Marlee Avenue and Glencairn Avenue are summarized below in **Table 3-2**. Most segments along both corridors have sidewalks widths less than 2 m which is below the current City of Toronto standard and Toronto Green Standard (version 4) Tier 1 requirement to provide a pedestrian clearway that is a minimum of 2.1m wide, to safely and comfortably accommodate pedestrian flow.

TABLE 3-2: AVERAGE PEDESTRIAN SIDEWALK WIDTHS ON MARLEE AVENUE AND GLENCAIRN AVENUE

Road	Between	Average Sidewalk Width (m)*
Marlee Avenue	Eglinton Avenue West to Roselawn Avenue	1.7
Marlee Avenue	Roselawn Avenue to Ridelle Avenue	2.0
Marlee Avenue	Ridelle Avenue to Viewmount Avenue	2.8
Marlee Avenue	Viewmount Avenue to Glencairn Avenue	2.2
Marlee Avenue	Glencairn Avenue to Lawrence Avenue West	1.6
Glencairn Avenue	Dufferin Street to Marlee Avenue	1.4
Glencairn Avenue	Marlee Avenue to Bathurst Street	1.5

*Calculated by taking multiple widths along both sides of segment

3.3 Cycling Network

3.3.1 CYCLING NETWORK

The existing cycling network and planned cycling projects are displayed in **Figure 3-10**. North-south linkages are provided by the Marlee Avenue bicycle lanes (**Figure 3-11**) and the signed shared roadway route network located on the east side of Allen Road. The primary east-west linkage is the York Beltline and Kay Gardner Beltline Trails. There is currently a lack

of east-west cycling routes in the north side of the MSA, a direct north-south route to the east of Allen Road and cycling connections to the subway stations in the MSA's.

FIGURE 3-10: EXISTING CYCLING NETWORK AND PLANNED PROJECTS

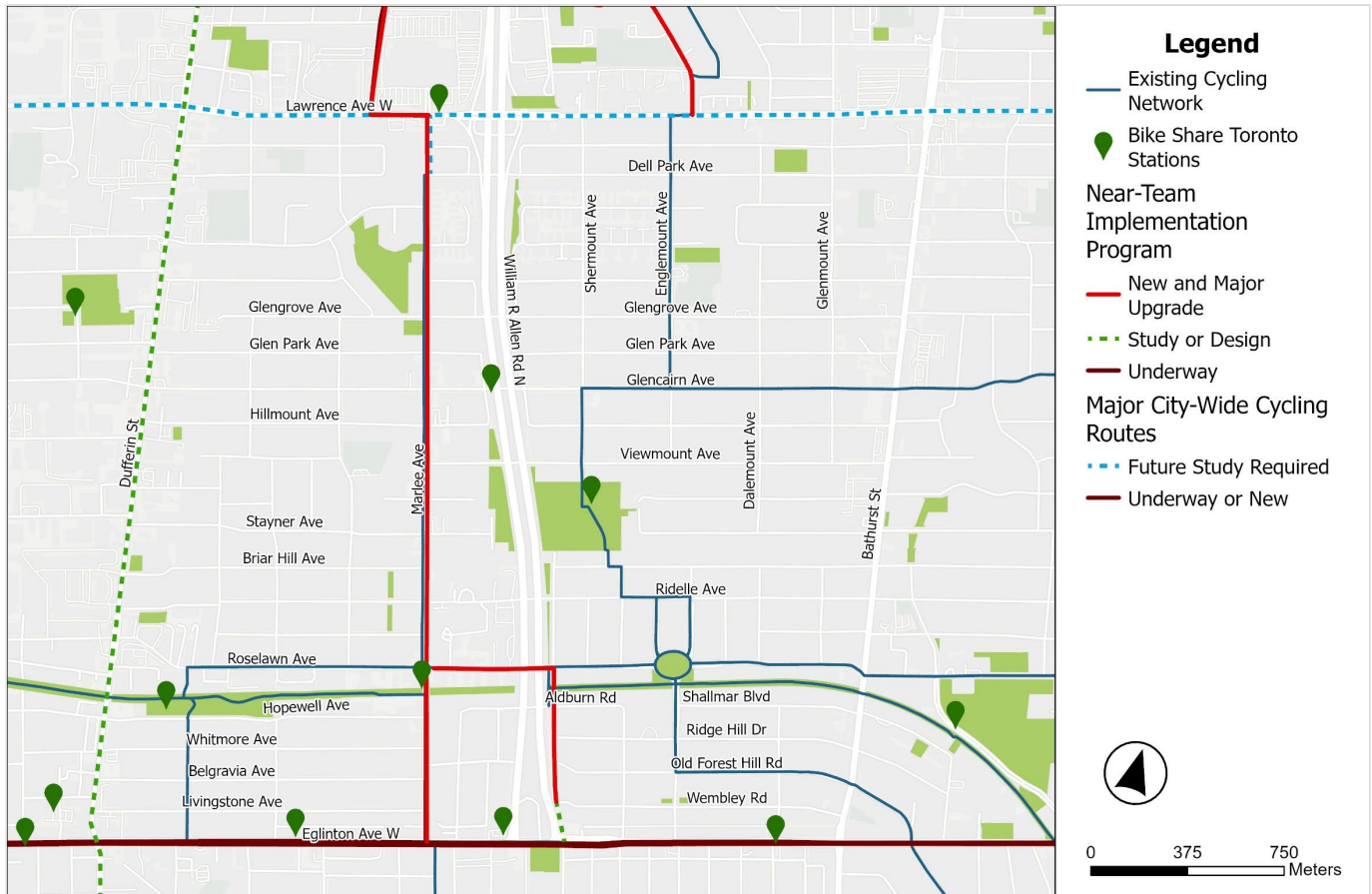


FIGURE 3-11: BIKEWAY ALONG MARLEE AVENUE



The *Cycling Network Plan* (CNP) provides a comprehensive roadmap for planned investments and long-term goals for connecting, growing, and renewing the City's cycling network. The CNP has three main components: the Long-Term Cycling Network Vision, Major City-Wide Cycling Routes, and a three-year rolling Near-Term Implementation Program.

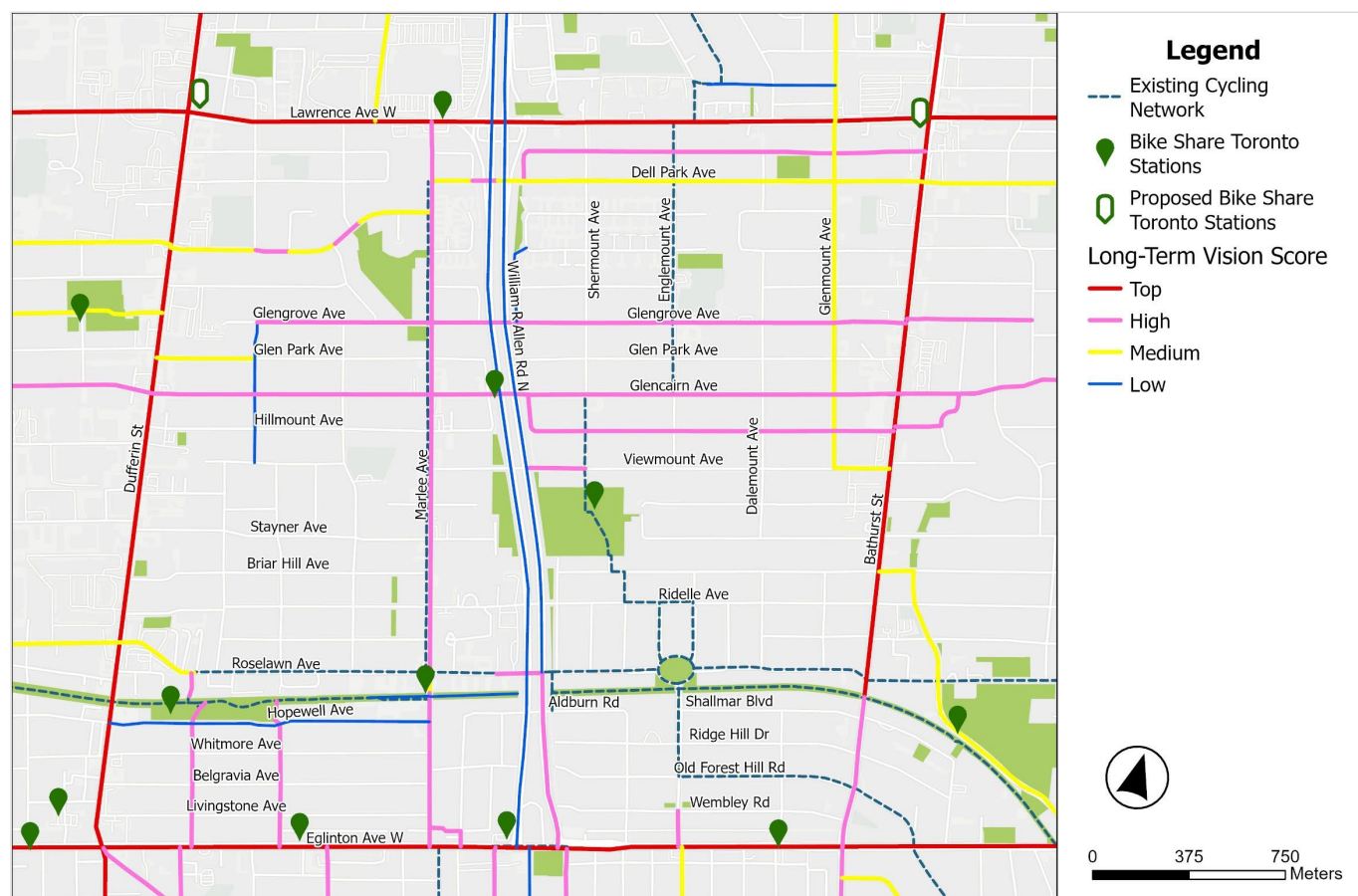
The 2025 – 2027 Near-Term Implementation Program includes the following cycling improvements for the Glencairn Mobility Study Area:

1. Major upgrade of the existing dedicated bicycle lanes on Marlee Avenue (from Roselawn Avenue to Lawrence Avenue West).
2. New dedicated bikeway on Marlee Avenue (from Roselawn Ave to Eglinton Avenue West).
3. New dedicated bikeway on Roselawn Ave/ Elm Ridge Dr (from Marlee Avenue to Allen Greenway).
4. Further Feasibility Study/Design on Allen Greenway (from Wembley Road Eglinton Avenue West).
5. Transit-focused study with cycling scope on Dufferin Street (from Eglinton Avenue West to Wilson Avenue)

The Major City-Wide Cycling Routes support a connected system across the Greater Toronto Area by linking with other cycling routes in neighbouring municipalities. There are three identified City-Wide Cycling Routes within the Mobility Study Area: Eglinton Avenue West, underway as part of the EglintonToday Complete Street Project; Marlee Avenue (from Roselawn Ave to Eglinton Avenue West) underway as part of the Beltline Gap Connections project; and Lawrence Avenue West, which requires future study.

The Long-Term Cycling Network Vision is a result of a cycling impact analysis, which considers current and potential cycling demand, trip generators, transit access, connectivity, coverage, barriers, safety, and Neighbourhood Improvement Areas. As per the 2019 cycling analysis score (shown in **Figure 3-12**), the four corridors bounding the Mobility Study Area are categorized as Top: Lawrence Avenue West, Eglinton Avenue West, Dufferin Street, and Bathurst Street. The following east-west streets are categorized as High: Fairholme Avenue, Glengrove Avenue West, Glencairn Avenue, Hillmount Avenue, and segments of Wenderly Drive/Dell Park Avenue and Roselawn Avenue/Elm Ridge Drive. There are some north-south streets which are categorized as high, most of them linking Eglinton Avenue West and Beltline Trails: Jimmy Wisdom Way, Times Road, Marlee Ave and Allen Greenway, the last two routes underway as part of the Beltline Gap Connections project.

FIGURE 3-12: TORONTO CYCLING NETWORK PLAN - LONG-TERM VISION SCORE



3.4 Transit Network

3.4.1 TRANSIT ROUTES AND STOPS

The TTC system map is displayed in **Figure 3-13** and the MSA's existing and future transit routes and stops/stations are displayed in **Figure 3-14**. The MSA is well served by both local and rapid transit routes, notably the TTC Line 1 (Lawrence West, Glencairn, and Eglinton West Stations) and Bus Routes 14, 109, 52, 29, 7 and 32. Transit service levels and ridership are discussed further in **Section 4.1.4**.

Several future rapid transit routes and improvements are planned to border the MSA, notably the Eglinton LRT and RapidTO Priority Roadways (proposed for roadway-specific studies) on Bathurst Street, Dufferin Street and Lawrence Avenue West. These routes will only expand the area's already strong access to transit.

FIGURE 3-13: GLENCAIRN MSA WITHIN THE TTC SYSTEM MAP

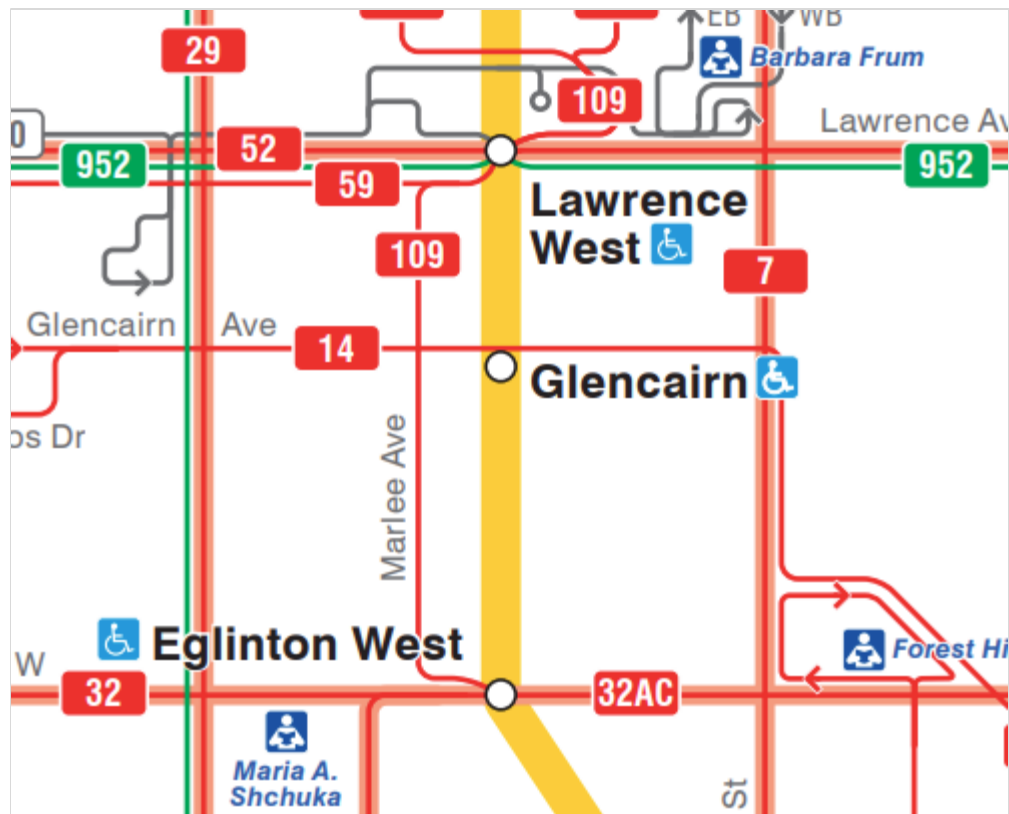
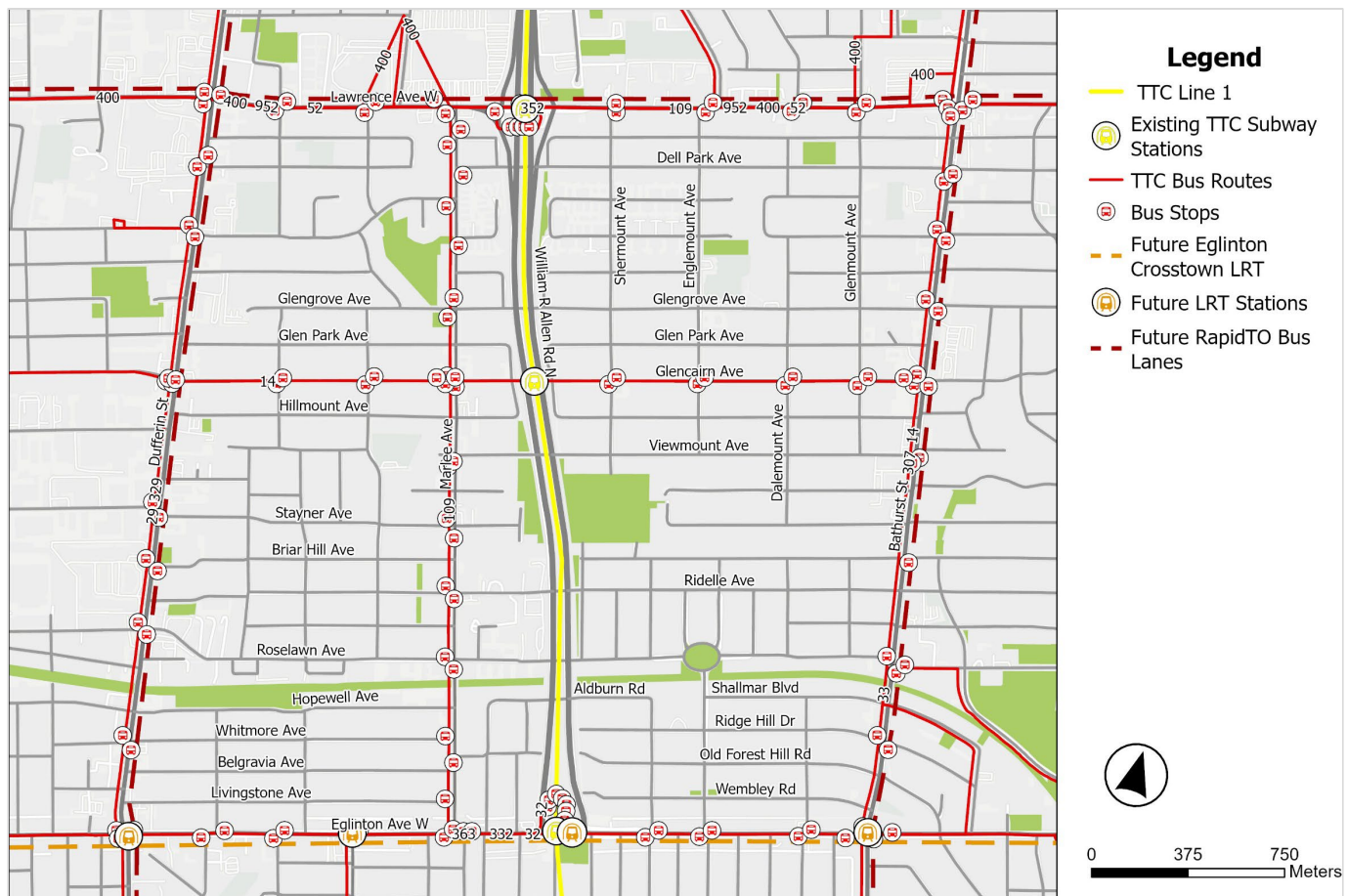


FIGURE 3-14: EXISTING AND FUTURE TRANSIT ROUTES AND STOPS



Access to Glenclaire Subway Station is provided at both Glenclaire Avenue (north entrance) and Viewmount Avenue (south entrance). At Glenclaire Avenue, pick-up and drop-off areas are provided in lay-bys, however, these lay-bys are not present on Viewmount Avenue.

3.4.2 WALK AND CYCLE SHED TO STATIONS

Figure 3-15 and Figure 3-16 display the 10-minute walk shed and 10-minute cycle shed from the MSA's subway stations, respectively. The south entrance of Glenclaire Station was used for the analysis to provide the largest net coverage. The analysis utilizes a distance of approximately 800 metres to represent a 10-minute walk and 2.5 km to represent a 10-minute cycling trip.

The walk sheds illustrate that the east and west edges of the MSA are outside of a comfortable 10-minute walk to a subway station. This is largely due to the geographical extent of the MSA, however as previously noted there are large gaps in the MSA's sidewalk network which impact the ease and connectivity of walking in the MSA. The walkshed analysis indicates the grade-separated crossings over Allen Road generally provide sufficient access to the subway station; however, there are opportunities to improve the design for comfort and safety.

At least one station is accessible by cycling within 10 minutes from all locations within the MSA. This, however, does not measure the ease and safety this journey takes as, previously noted, there are substantial gaps in the MSA's cycling network. While transit availability is strong, the lack of cycling connections and poor pedestrian infrastructure to transit stations diminishes usability. There are opportunities to improve connecting people to this robust transit network and improve access to other regional transit services such as the new Caledonia GO Station and Yorkdale GO Bus Terminal through an improved cycling network in the area.

FIGURE 3-15: 10-MINUTE WALK SHEDS FROM ALL SUBWAY STATIONS (SOURCE: TRAVELTIME)

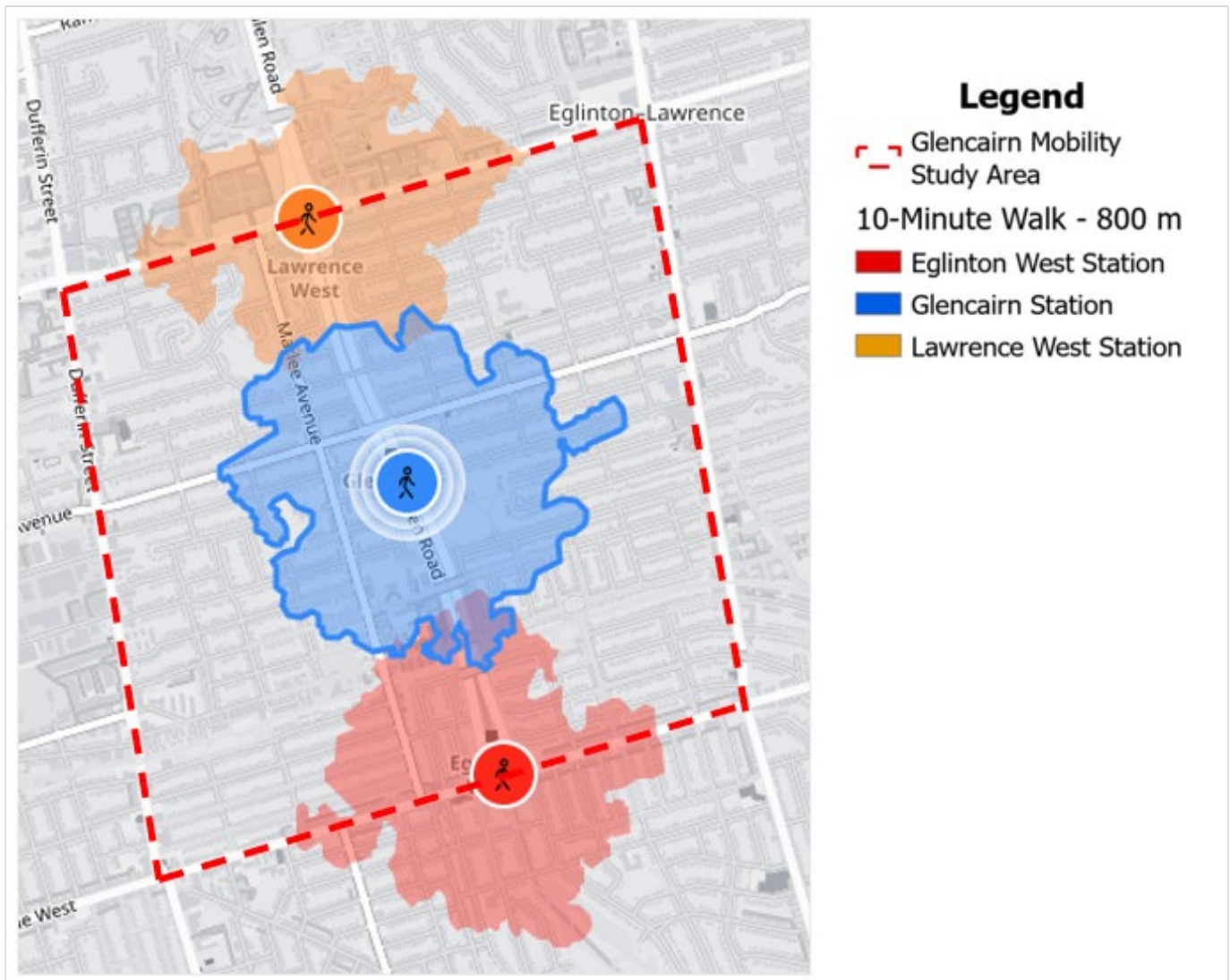
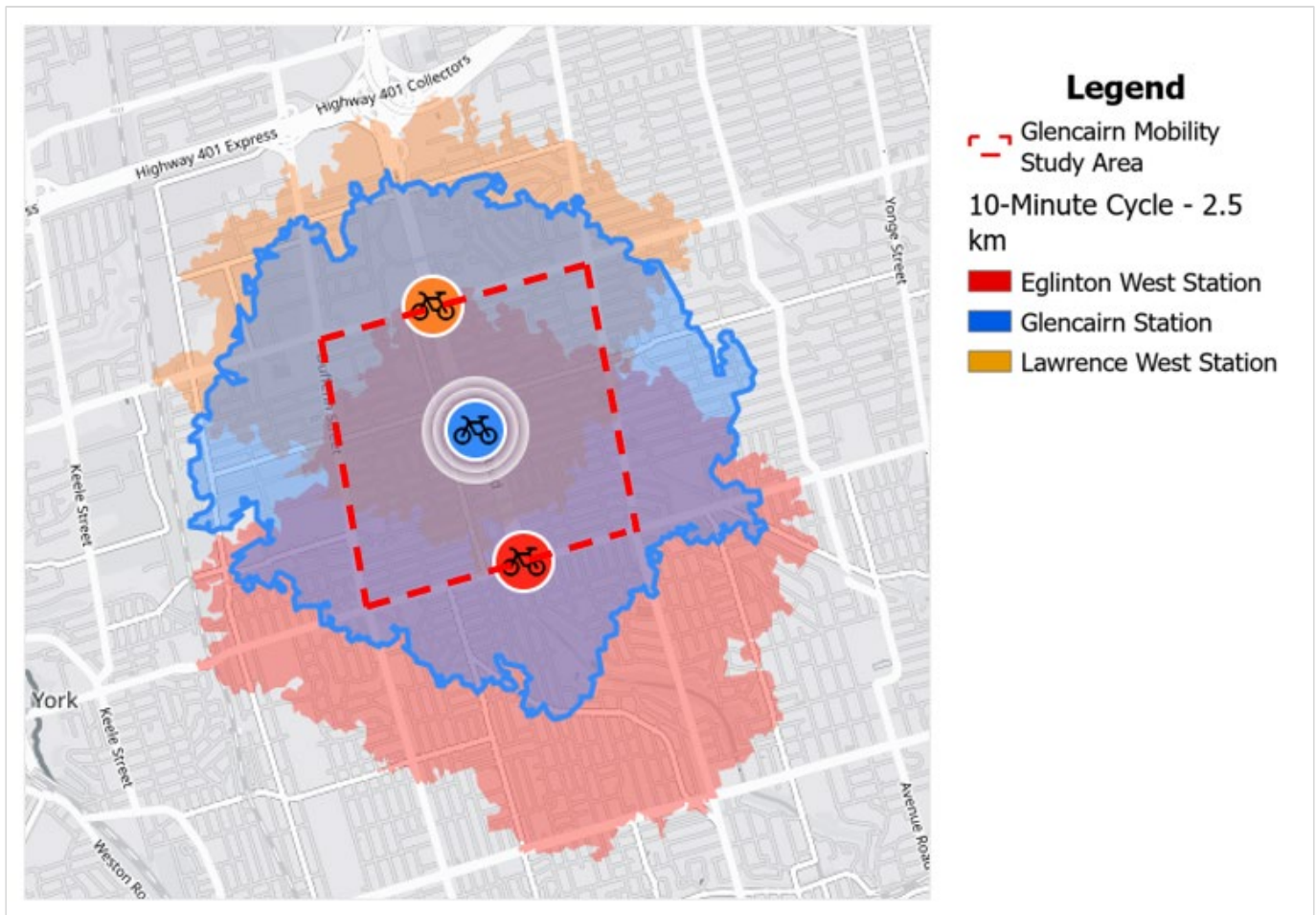


FIGURE 3-16: 10-MINUTE CYCLE SHED FROM ALL SUBWAY STATIONS (SOURCE: TRAVELTIME)



4 Existing Transportation Conditions and Trends

4.1 Road User Trends

This section summarizes historical demographic and travel patterns of the MSA. All data was obtained from the 2022 Transportation Tomorrow Survey (TTS), unless where noted.

The 2022 TTS, which was postponed due to the COVID-19 pandemic, was conducted in the fall of 2022 and the spring of 2023 when travel patterns were still under the influence of the pandemic. Please note that the TTS survey data collection methodology and approach evolve over the years, the historical data summarized below represents a high-level comparison only without adjusting for the nuance between the different surveys.

4.1.1 DEMOGRAPHICS

A summary of high-level demographic data is provided in **Table 4-1**.

TABLE 4-1: SUMMARY OF GENERAL DEMOGRAPHIC TRENDS

	2011	2016	2022
Population	28, 939	28, 306	28, 559
Average Household Size	3.46	3.45	3.35
Average Age	39.3	39.5	40.5

4.1.2 MOBILITY PATTERNS

A summary of MSA mobility characteristics is provided in **Table 4-2**. The MSA on average has one vehicle per household and has historically been an auto-dominant area. This is not surprising given the high prevalence of detached residential housing and the area's close proximity to Allen Road and other major arterials. However, as the average vehicles per household and mode share trends illustrate, the area's mobility patterns are changing. These characteristics and mobility trends are assessed in more detail in the following sections.

TABLE 4-2: SUMMARY OF MSA MOBILITY CHARACTERISTICS

	2011	2016	2022
Average Vehicles per Household	1.13	1.10	1.08
Dominant Mode Share(s)	Auto Driver - 51.6%	Auto Driver - 48.6%	Auto Driver - 42.3%
Average Trip Length (km)	6.2	6.9	7.5
Total MSA Trips/Day	59,096	55,728	60,172

Vehicles per Household

The average vehicles per household by dwelling type is summarized in **Table 4-3**. As expected, house and townhouse households have vehicles at a higher rate compared to apartments. From 2016 to 2022, the house, townhouse, and overall average vehicle rate decreased, indicating less reliance on vehicle ownership.

TABLE 4-3: AVERAGE VEHICLES PER HOUSEHOLD BY DWELLING TYPE

	2011	2016	2022
House	1.47	1.64	1.59
Apartment	0.73	0.80	0.80
Townhouse	1.23	1.51	1.34
Overall	1.13	1.10	1.08

Mode Share

The primary travel mode share for all trips is illustrated in **Figure 4-1** and summarized in **Table 4-4**. Please note in **Figure 4-1** that the “Other” category consists of all other remaining modes. Several key characteristics and trends can be identified:

- Driving has consistently been the highest used mode; however, its share has been steadily decreasing since 2016 (51.6% to 42.3%).
- Transit increased between 2011 and 2016 but decreased in 2022. This recent decrease is consistent with the general decrease in transit ridership as a result of the COVID-19 pandemic. It is expected that transit mode share will rebound, consistent with the rebound seen in Toronto’s general transit ridership.
- Walking saw a major increase in 2022 (6.9% to 15%), indicating it is an emerging mode for residents.
- Cycling, although increasing between 2011 to 2022 (0.6% to 2%), is not a prevalent mode, indicating that the current gaps in the area’s cycling infrastructure and connectivity may limit its use by residents.

FIGURE 4-1: PRIMARY TRAVEL MODE SHARE FOR ALL TRIPS

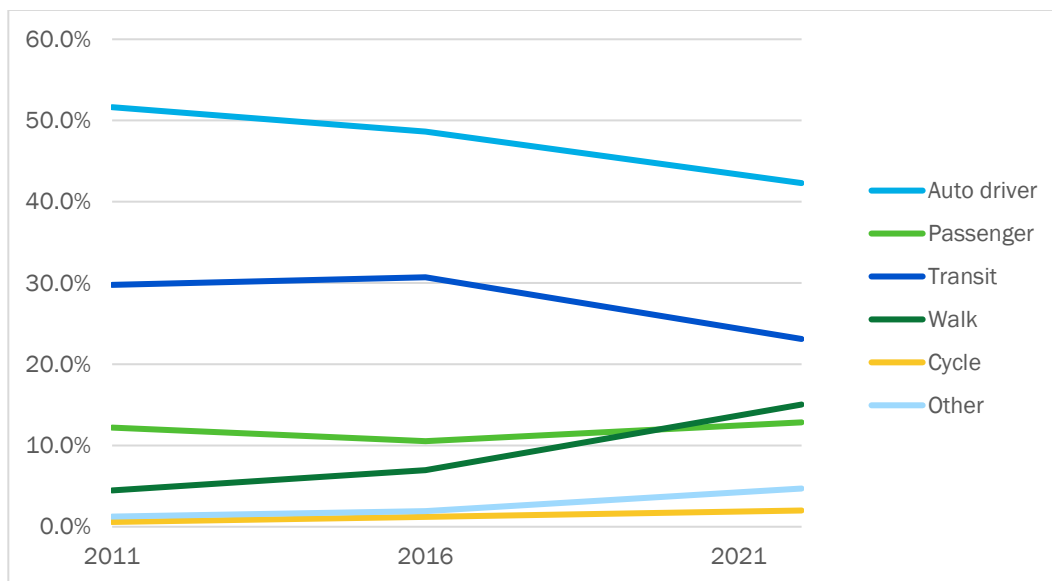


TABLE 4-4: PRIMARY TRAVEL MODE SHARE FOR ALL TRIPS

	2011	2016	2022
Transit excluding GO rail	29.8%	30.7%	23.1%
Cycle	0.6%	1.2%	2.0%
Auto driver	51.6%	48.6%	42.3%

E-scooter	N/A	N/A	0.0%
Motorcycle	0.1%	0.2%	1.2%
Other	0.0%	N/A	0.1%
Auto passenger	12.2%	10.5%	12.8%
School bus	0.5%	0.8%	1.6%
Taxi passenger	0.6%	0.6%	0.1%
Paid rideshare	N/A	0.3%	1.6%
Walk	4.5%	6.9%	15.0%

The primary travel mode by trip purpose is summarized in **Table 4-5**. Several trends can be identified:

- Although vehicles are still the most dominant mode for travelling to work, transit has a substantial share. As previously discussed, the 2022 decrease in transit share can be attributed to impacts of COVID-19.
- Cycling to work saw a considerable increase in 2022 compared to 2016 (1.1% to 3.7%), contrasting with the decrease in walking to work (4% to 2.7%).
- Vehicles were historically the dominant mode for discretionary trips, however in 2022, the share dropped substantially compared to 2016 (61.8% to 49.5%), partly due to the large increase in walking for discretionary trips (7.1 % to 16.2%).

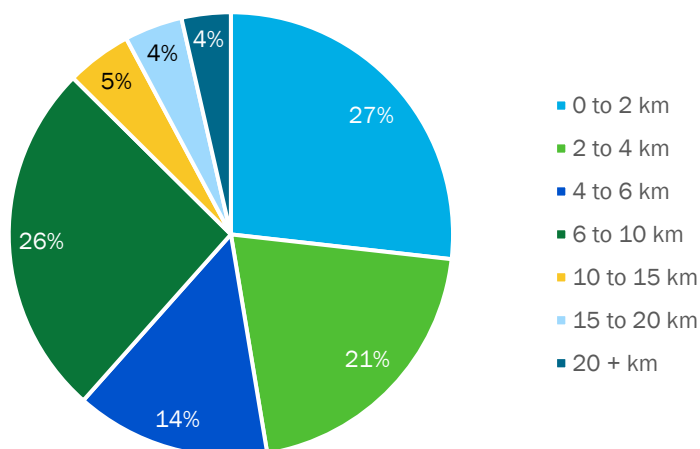
TABLE 4-5: PRIMARY TRAVEL MODEL BY TRIP PURPOSE

	2011	2011	2011	2016	2016	2016	2022	2022	2022
	Work	School	Discretion	Work	School	Discretion	Work	School	Discretion
Transit excluding GO rail	44.0%	61.4%	15.0%	47.9%	47.4%	13.9%	40.4%	23.5%	16.7%
Cycle	0.4%	1.4%	0.7%	1.1%	1.7%	1.0%	3.7%	1.2%	1.2%
Auto driver	45.0%	4.8%	63.3%	43.6%	7.3%	61.8%	46.2%	0.3%	49.5%
E-scooter	N/A	N/A	N/A	N/A	N/A	N/A	0.2%	0.0%	0.0%
Motorcycle	0.0%	0.0%	0.2%	0.5%	0.0%	0.0%	0.4%	0.0%	2.3%
Other	0.2%	0.0%	0.0%	N/A	N/A	N/A	0.0%	0.0%	0.0%
Auto passenger	5.1%	13.9%	18.5%	2.4%	19.6%	14.5%	4.8%	35.5%	11.2%
School bus	0.0%	3.8%	0.0%	0.0%	7.0%	0.0%	0.0%	10.3%	0.0%
Taxi passenger	0.0%	0.0%	0.9%	0.3%	0.0%	1.1%	0.0%	0.0%	0.3%
Paid rideshare	N/A	N/A	N/A	0.2%	0.0%	0.5%	1.5%	0.0%	2.7%
Walk	5.2%	14.7%	1.5%	4.0%	17.0%	7.1%	2.7%	29.2%	16.2%

Trip Length

The breakdown of total trips from the MSA by length in 2022 is illustrated in **Figure 4-2**. Trips below 4 km account for nearly half of the trips, at 48%.

FIGURE 4-2: SHARE OF TRIPS BY LENGTH (KM)



Average trip length by trip purpose is summarized in **Table 4-6**. As expected, work trips require the farthest average distance, however discretionary trips have a comparable distance in 2022.

TABLE 4-6: AVERAGE TRIP LENGTH (KM) BY TRIP PURPOSE

	2011	2016	2022
Work	8.7	9.4	8.8
School	5.4	5.3	3.6
Discretionary	4.5	4.3	7.5
Overall	6.2	6.9	7.5

Average trip length by travel mode is summarized in **Table 4-7**. Notably, cycling has been experiencing a consistent increase in trip length since 2011, suggesting more residents are utilizing cycling for further trips.

TABLE 4-7: AVERAGE TRIP LENGTH (KM) BY PRIMARY TRAVEL MODE

	2011	2016	2022
Transit excluding GO rail	6.9	6.9	7.1
Cycle	1.8	2.3	4.5
Auto driver	6.5	8.1	7.4
E-scooter	N/A	N/A	4.5
Motorcycle	102.0*	6.7	4.2
Auto passenger	5.0	5.3	12.9
School bus	3.9	5.2	7.0
Taxi passenger	9.6	10.0	7.1
Paid rideshare	N/A	13.8	5.0

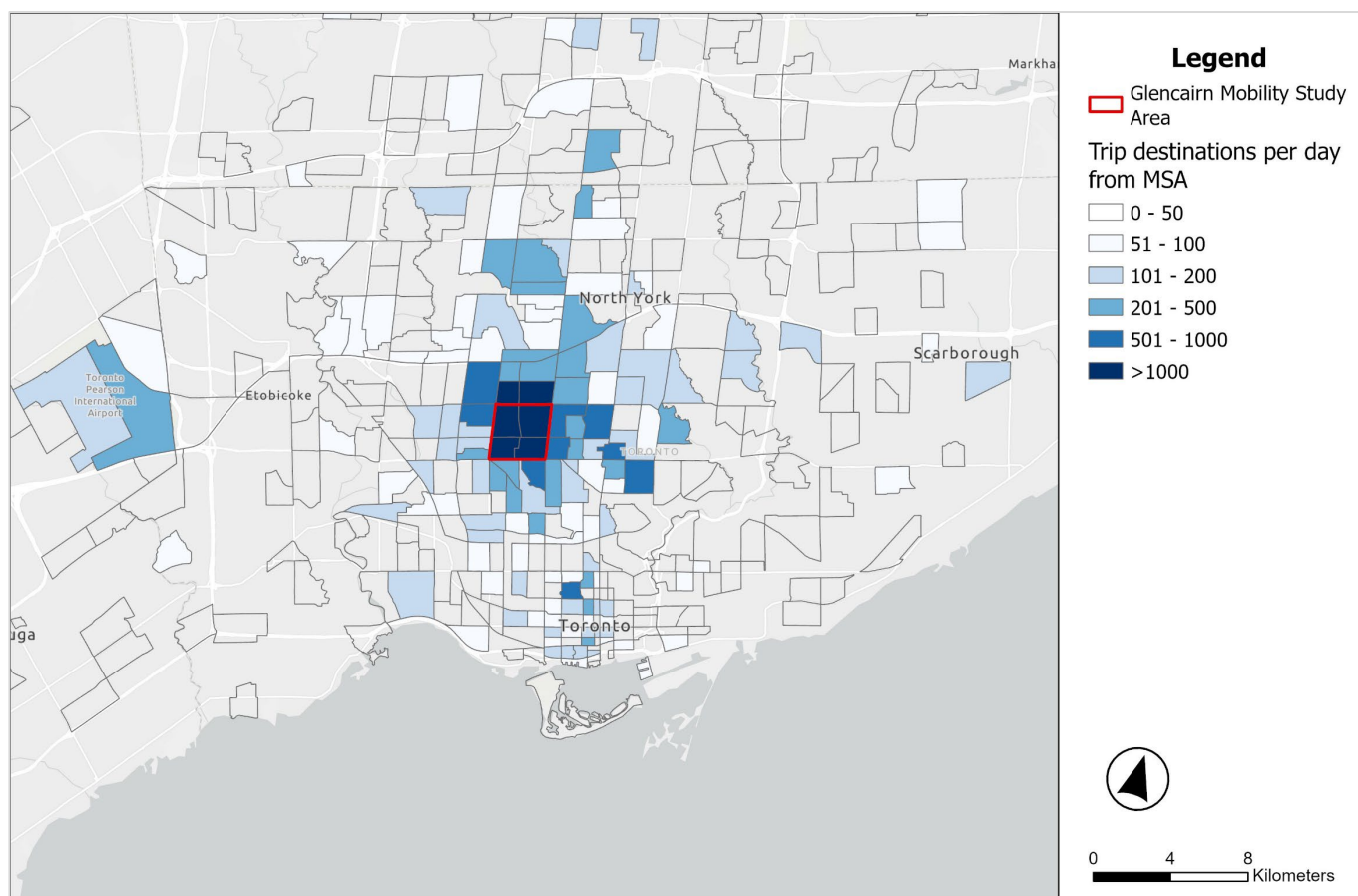
Walk	0.9	0.7	0.8
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*Large value most likely due to small sample size.

The destination of daily trips originating from the MSA is displayed in **Figure 4-3**. A significant number of these trips remain within the MSA (8,045), which is expected given the area's established community, retail, and commercial uses. As the distance from the MSA increases, trip volumes generally decline, however, several areas exhibit relatively high trip volumes. The locations of these clusters, along with their primary trip generators, are detailed below:

- Lawrence-Allen (3,888 trips) – commercial and retail, community and educational facilities
- York University Heights (1,045 trips) – employment uses and community facilities
- Yonge and Eglinton (827 trips) – mixed-use commercial and retail
- Mt Pleasant East (820 trips) – community and educational facilities
- Downtown/CBD (740 trips) – commercial and employment
- University of Toronto (518 trips) – employment, community and educational facilities

FIGURE 4-3: TRIP DESTINATIONS PER DAY FROM MSA (2022)



4.1.3 GOODS MOVEMENT

Heavy vehicles are restricted throughout the local road network in the MSA. Restrictions applying to minor arterial, collector, and roads which bridge over Allen Road are summarized in **Table 4-8**.

TABLE 4-8: HEAVY VEHICLE ROAD RESTRICTIONS - COLLECTOR, MINOR ARTERIAL AND ALLEN BRIDGE ROADS (TORONTO MUNICIPAL CODE CHAPTER 950)

Road	Between	Prohibited Times
Marlee Ave.	Lawrence Avenue West and a point 30.3 metres south of Stayner Avenue, and Roselawn Avenue and a point 77 metres north of Briar Hill Avenue.	Anytime
Glencairn Ave.	Caledonia Road and a point 38.1 metres east of Westgrove Crescent (encompasses whole MSA)	Anytime
Roselawn Ave.	Castlefield Avenue and a point 101.8 metres east of Lyon Court	Anytime
Elm Ridge Dr.	A point 177.9 metres west of Newgate Road and Bathurst Street. Entire length of Elm Ridge Circle.	Anytime
Shermount Ave.	Lawrence Avenue West and the south end of Shermount Avenue	Anytime
Englemount Ave.	Lawrence Avenue West and Viewmount Avenue	Anytime
Glenmount Ave.	Lawrence Avenue West and Viewmount Avenue	Anytime
Viewmount Ave.	Bathurst to West end of Viewmount Avenue	Anytime
Glengrove Ave.	Dufferin Street and Caledonia Road	Anytime
Dell Park Ave.	Marlee Avenue and Bathurst Street	Anytime
Ridelle Ave.	Bathurst Street and a point 156.7 metres west of Newgate Road, and Dufferin Street and a point 189.1 metres east of Marlee Avenue.	Anytime

An analysis of Turning Movement Counts (TMCs) determined that the highest truck volumes are seen at the intersections of Marlee Avenue and Ridelle Avenue, and Marlee Avenue and Viewmount Avenue. This correlates directly to the commercial and mixed-use area along Marlee Avenue. The total daily truck volumes of study intersections are summarized in **Table 4-9**.

TABLE 4-9: DAILY TRUCK VOLUMES ON STUDY INTERSECTIONS

	North Leg	South Leg	East Leg	West Leg
Marlee Ave. & Eglinton Ave. West	47	2	150	182
MSA	81	43	101	106
Marlee Ave. & Ridelle Ave.	320	330	104	74
Marlee Ave. & Viewmount Ave.	375	282	31	7
Marlee Ave. & Glencairn Ave.	59	58	42	41
Marlee Ave. & Lawrence Ave. West	18	80	199	281
Glencairn Ave. & Dufferin St.	179	193	40	27
Glencairn Ave. & Bathurst St.	174	195	20	18

4.1.4 TRANSIT RIDERSHIP

A summary of the MSA transit routes frequency, capacity, and ridership is provided in **Table 4-10**. Glencairn Subway Station is a lightly used station in the TTC's subway system which is exemplified by the much larger volume of customers seen at the adjacent stations of Lawrence West and Eglinton West.

Similarly, the main bus routes serving the MSA, Route 109 – Ranee and Route 14 - Glencairn, see considerably smaller ridership compared to the higher frequency and capacity routes on the surrounding major arterials.

TABLE 4-10: SUMMARY OF MSA TRANSIT ROUTES FREQUENCY, CAPACITY AND RIDERSHIP (TORONTO TRANSIT COMMISSIONS)

Route	Frequency*	Maximum Capacity (Passengers/Hour)**	2023 Customers per day***
TTC Line 1 - Lawrence West Station	2-3 minutes (Peak Hours), 4-5 minutes (Off-Peak Hours)	27,500	17,345
TTC Line 1 - Glencairn Station	2-3 minutes (Peak Hours), 4-5 minutes (Off-Peak Hours)	27,500	5,703
TTC Line 1 - Eglinton West	2-3 minutes (Peak Hours), 4-5 minutes (Off-Peak Hours)	27,500	12,510
TTC Bus Route 109 - Ranee	20 minutes	150	3,952
TTC Bus Route 14 - Glencairn	26 minutes	100	2,162
TTC Bus Route 32 - Eglinton West	3-6 minutes	500	31,922
TTC Bus Route 29 - Dufferin	5-10 minutes	300 (standard bus) to 460 (articulated bus)	22,792
TTC Bus Route 7 - Bathurst	10 minutes	300 (standard bus) to 460 (articulated bus)	19,893
TTC Bus Route 52 - Lawrence West	10 minutes (Peak Hours), 15 minutes (Off-Peak Hours)	300 -	33,989

*Obtained through TTC route schedules

**Capacity was calculated by multiplying the approximate buses per hour by the maximum vehicle capacity. Capacities used were as follows: subways – 1100, buses – 51, and articulated buses – 77.

***Data obtained from TTC weekday boardings and service information for surface routes (bus and streetcar), 2023

4.2 Multi-modal Transportation Assessment

A multi-modal level of service (MMLOS) analysis using the Ontario Traffic Council (OTC) Multi-Modal Level of Service Guidelines was undertaken to assess the current pedestrian, cycling, and transit infrastructure. This assessment utilizes various quantifiable measures to determine a level of service (LOS) score. This score provides a measure of the ease, comfort, and safety provided to pedestrians and people cycling. The methodology assessed both signalized intersections and segments, the latter of which was defined as any segment between two intersections.

The OTC method prescribes targets for varying road typologies, providing a standard to compare performance. These targets are presented in **Figure 4-4**. For the purposes of the study the Urban Main Street typologies have been used for both Marlee Avenue and Glencairn Avenue (minor arterials), and Neighbourhood Connector has been used for Roselawn Avenue/Elm Ridge Drive and Viewmount Avenue (collectors and local roads).

The analysis was aided through the Guidelines Analysis Tool which determines each subject area's LOS through the inputting of specified measures. The grading methodology is summarized in **Figure 4-5** and **Figure 4-6**. Each assessments measures and results are summarized in the following sections.

FIGURE 4-4: OTC MULTI-MODAL LEVEL OF SERVICE GUIDELINES RECOMMENDED TARGETS (ONTARIO TRAFFIC COUNCIL)

Table 4.1: Recommended MMLOS Targets

	LOS Target				
	Peds	Bikes	Transit	Trucks	Cars
Downtown avenue	B	C	D	D	D
Urban main street	C	C	D	D	D
Urban boulevard	C	B	D	n/a	E
Neighbourhood connector	E	D	B	D	D
Neighbourhood main street	C	C	D	D	D
Neighbourhood boulevard	D	B	D	n/a	E
Industrial connector	E	D	D	B	D
Industrial boulevard	D	D	D	B	E
Rural connector	E	E	n/a ¹	D	D
Custom	X	X	X	X	X

1 Rural roads typically do not serve as transit route corridors where buses stop, which is what the Transit LOS is based on

FIGURE 4-5: SEGMENT GRADING SYSTEM (ONTARIO TRAFFIC COUNCIL)

MODE	MEASURE	WEIGHT	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
PEDS ²	Pedestrian Facility Width (m)	33%	> 3.0	2.6 - 3.0	2.1 - 2.5	1.8 - 2.0	1.5 - 1.7	< 1.5
	Pedestrian Buffer Width (m)	33%	> 2.5	2.1 - 2.5	1.6 - 2.0	1.3 - 1.5	1.0 - 1.2	< 1.0
	Max Distance between Controlled Crossings (m)	33%	200 ¹	201 - 230	231 - 260	261 - 290	291 - 320	> 320
BIKES ²	Bike Facility Width per Direction (m)	33%	> 2.4	2.2 - 2.4	1.9 - 2.1	1.6 - 1.8	1.2 - 1.5	< 1.2
	Bike Buffer Width (m)	33%	Has physical measures and buffer width > 1.0	Has physical measure and buffer width is 0.50 - 1.0	n/a ¹	Has physical measures and buffer width is 0.30 - 0.49 OR Has no physical measures and width is ≥ 0.50	n/a ¹	No physical measures and buffer width is < 0.50
	Conflicts with Other Modes (In-lane conflicts and crossing point conflicts)	33%	Two "Low" conflict indicators	One "Low" conflict indicator and one "Moderate" conflict indicator	Two "Moderate" conflict indicators	One "Low" conflict indicator and one "High" conflict indicator	One "Moderate" conflict indicator and one "High" conflict indicator	Two "High" conflict indicators
BUSES	Transit Facility Type	33%	Dedicated lanes	Intersection priority measures	n/a ¹	Mixed traffic with >1 lane/direction	n/a ¹	Mixed traffic with 1 lane
	Transit Passenger Amenities	33%	Abundance of passenger amenities such as shelters, seating, shade trees, etc.	Moderate presence of passenger amenities such as shelters, seating, shade trees, etc.	n/a ¹	Low presence of passenger amenities such as shelters, seating, shade trees, etc.	n/a ¹	No presence of passenger amenities such as shelters, seating, shade trees, etc.
	Pedestrian Level of Service	33%	A	B	C	D	E	F
TRUCKS	Width of the Curb Lane (m)	50%	> 4.0	3.9 - 4.0	3.7 - 3.8	3.4 - 3.6	n/a ¹	< 3.4
	Car Level of Service	50%	A	B	C	D	E	F
CARS	Mid-Block V/C ratio	50%	< 0.60	0.60 - 0.69	0.70 - 0.79	0.80 - 0.89	0.90 - 0.99	> 1.0
	Curb Lane Conflicts (conflicts/km)	50%	None	1 - 2	3 - 4	5 - 6	7 - 8	9 +

FIGURE 4-6: INTERSECTION GRADING SYSTEM (ONTARIO TRAFFIC COUNCIL)

MODE	MEASURE	WEIGHT	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
PEDS	Enhanced Pedestrian Measures	25%	> 1.0	0.76 - 1.0	0.51 - 0.75	0.26 - 0.50	0.01 - 0.25	0
	Average Effective Turning Radius (m)	25%	< 9.0	9.0 - 10.9	11.0 - 12.9	13.0 - 14.9	15.0 - 17.9	≥ 18
	Signal Cycle Length (s)	25%	< 60	61 - 75	76 - 90	91 - 105	106 - 120	> 120
	Number of Uncontrolled Conflicts (conflicts/approach)	25%	1.0	1.1 - 1.5	1.6 - 2.0	2.1 - 2.5	2.6 - 3.0	> 3.0
BIKES	Enhanced Bicycle Measures	25%	> 1.0	0.76 - 1.0	0.51 - 0.75	0.26 - 0.50	0.01 - 0.25	0
	Average Effective Turning Radius (m)	25%	< 9.0	9.0 - 10.9	11.0 - 12.9	13.0 - 14.9	15.0 - 17.9	≥ 18
	Signal Cycle Length (s)	25%	< 60	61 - 75	76 - 90	91 - 105	106 - 120	> 120
	Number of Uncontrolled Conflicts (conflicts/approach)	25%	1.0	1.1 - 1.5	1.6 - 2.0	2.1 - 2.5	2.6 - 3.0	> 3.0
BUSES	Transit Priority Measures	33%	Implementation of transit priority measures at all approaches for transit	n/a ¹	Implementation of transit priority measures at a minimum of one but not all approaches for transit	n/a ¹	n/a ¹	No transit priority measures at any approaches for transit
	Transit Movement Delay (s)	33%	0 - 10	11 - 20	21 - 35	36 - 55	56 - 80	> 80
	Pedestrian Level of Service	33%	A	B	C	D	E	F
TRUCKS	Average Effective Turning Radius (m)	50%	> 18	17 - 18	15 - 16	13 - 14	11 - 12	< 11
	Car Level of Service	50%	A	B	C	D	E	F
CARS	Percentage of Turning Movements with Dedicated Lanes	50%	85 - 100 %	60 - 84 %	35 - 59 %	10 - 34 %	n/a ¹	< 10 %
	Intersection Delay (s)	50%	0 - 10	11 - 20	21 - 35	36 - 55	56 - 80	> 80

4.2.1 SEGMENTS

Pedestrian

The segment LOS assessment results are summarized in **Table 4-11**, deficient LOS have been highlighted. All the segments present the minimum AODA requirements for sidewalk width, however they do not meet the City of Toronto standard, which is that all new sidewalks should aim to be 2.1 m wide. Segments that scored lower (LOS D, E or F) generally did so due to greater distances between controlled crossings (400 - 680 m). Marlee Avenue (from Eglinton Avenue West to Roselawn Avenue) has no buffer between the sidewalk and roadway, presenting the worst level of service (F). In contrast, Marlee Avenue from Roselawn Avenue to Ridelle Avenue and from Viewmount Avenue to Glencairn Avenue presents closer protected crossings, improving the network connectivity and pedestrian experience. These segments present level of service C. Improvements could be made to the pedestrian LOS by ensuring sidewalks meet the city standard of 2.1 m width.

TABLE 4-11: SEGMENT PEDESTRIAN LEVEL OF SERVICE

Road	Between	Pedestrian Facility Width (m)	Pedestrian Buffer Width (m)	Maximum Distance Between Controlled Crossings (m)	Target LOS	LOS
Marlee Ave. (minor arterial)	Eglinton Ave. West to Roselawn Ave.	1.5 - 1.7	0	464	C	F
Marlee Ave. (minor arterial)	Roselawn Ave. to Ridelle Ave.	1.5 - 1.7	1.6 - 2.0	170	C	C
Marlee Ave. (minor arterial)	Ridelle Ave. to Viewmount Ave.	1.5 - 1.7	1.6 - 2.0	370	C	E
Marlee Ave. (minor arterial)	Viewmount Ave. to Glencairn Ave.	1.5 - 1.7	2.1 - 2.5	185	C	C
Marlee Ave. (minor arterial)	Glencairn Ave. to Lawrence Ave. West	1.5 - 1.7	2.1 - 2.5	400	C	D

Glencairn Ave. (minor arterial)	Marlee Ave. to Dufferin St.	1.5 – 1.7	> 2.5	530	C	D
Glencairn Ave. (minor arterial)	Marlee Ave. to Bathurst St.	1.5 – 1.7	> 2.5	415	C	D
Roselawn Ave./Elm Ridge Dr. (collector road)	Marlee Ave. to Dufferin St.	1.5 – 1.7	1.6 – 2.0	450	E	E
Viewmount Ave. (local road)	Marlee Ave. to Bathurst St.	1.5 – 1.7	> 2.5	680	E	D

Cycling

The segment LOS assessment results are summarized in **Table 4-12**, deficient LOS have been highlighted. The low LOS score for all segments are due to substandard bikeway widths, no buffer from the bikeway to the roadway, and high conflicts between the bikeway with other modes of travel. Providing proper bike facility and bike buffer widths and reducing conflict points would improve the cycling LOS.

TABLE 4-12: SEGMENT CYCLING LEVEL OF SERVICE

Road	Between	Bike Facility Width Per Direction (m)	Bike Buffer Width (m)	Conflicts with Other Modes*	Target LOS	LOS
Marlee Ave. (minor arterial)	Eglinton Ave West. to Roselawn Ave.	0	0	2 High	C	F
Marlee Ave. (minor arterial)	Roselawn Ave. to Ridelle Ave.	1.6 - 1.8	0	2 High	C	F
Marlee Ave. (minor arterial)	Ridelle Ave. to Viewmount Ave.	1.6 - 1.8	0	2 High	C	F
Marlee Ave. (minor arterial)	Viewmount Ave. to Glencairn Ave.	1.6 - 1.8	0	2 High	C	F
Marlee Ave. (minor arterial)	Glencairn Ave. to Lawrence Ave. West	1.6 - 1.8	0	2 High	C	F
Glencairn Ave. (minor arterial)	Marlee Ave. to Dufferin St.	0	0	1 Medium, 1 High	C	F
Glencairn Ave. (minor arterial)	Marlee Ave. to Bathurst St.	0	0	1 Medium, 1 High	C	F
Roselawn Ave./Elm Ridge Dr. (collector road)	Marlee Ave. to Dufferin St.	1.6 - 1.8	0	2 High	D	F
Viewmount Ave. (local road)	Marlee Ave. to Bathurst St.	0	0	1 Medium, 1 High	D	E

*Considers the amount of interaction between bikes and other modes in the bicycle facility. It is a quantitative measure based on the quantity of both in-lane conflicts and crossing point conflicts between bicycles and other modes.

Transit

The segment LOS assessment results are summarized in **Table 4-13**. Roselawn Avenue and Viewmount Avenue have been omitted as they do not have transit routes. For transit a target LOS of D is recommended; all segments with deficient LOS have been highlighted. The low LOS scores are attributed to the facility type and lack of passenger amenities and poor pedestrian LOS, improving these categories by providing intersection priority measures and passenger amenities could enhance the transit LOS.

TABLE 4-13: SEGMENT TRANSIT LEVEL OF SERVICE

Road	Between	Facility Type	Passenger Amenities*	Pedestrian LOS	Target LOS	LOS
Marlee Ave. (minor arterial)	Eglinton Ave. West to Roselawn Ave.	Mixed traffic with one lane per direction	Low presence of amenities	F	D	E
Marlee Ave. (minor arterial)	Roselawn Ave. to Ridelle Ave.	Mixed traffic with one lane per direction	Low presence of amenities	C	D	D
Marlee Ave. (minor arterial)	Ridelle Ave. to Viewmount Ave.	Mixed traffic with one lane per direction	Low presence of amenities	E	D	E
Marlee Ave. (minor arterial)	Viewmount Ave. to Glencairn Ave.	Mixed traffic with one lane per direction	No presence of amenities	C	D	E
Marlee Ave. (minor arterial)	Glencairn Ave. to Lawrence Ave. West	Mixed traffic with one lane per direction	No presence of amenities	D	D	E
Glencairn Ave. (minor arterial)	Marlee Ave. to Dufferin St.	Mixed traffic with one lane per direction	No presence of amenities	D	D	E
Glencairn Ave. (minor arterial)	Marlee Ave. to Bathurst St.	Mixed traffic with one lane per direction	Low presence of amenities	D	D	E

*The primary measure of passenger amenities was the presence of a bus shelter

4.2.2 INTERSECTIONS

Pedestrian

The intersection LOS assessment results are summarized **Table 4-14**, deficient LOS have been highlighted. The deficient level of service (D) at Marlee Avenue at Lawrence Avenue West, Glencairn Avenue at Dufferin Street and Glencairn Avenue at Bathurst Street is largely a result of greater signal cycle lengths and a lack of enhanced pedestrian measures. Conflicts points was the worst performing measure as most intersections had three conflict points. Improvements to the LOS could be made by providing safer pedestrian crossing, reducing signal cycle lengths (Marlee Avenue/Lawrence Avenues West and Glencairn Avenue /Bathurst Street) and reducing conflict points.

TABLE 4-14: INTERSECTION PEDESTRIAN LEVEL OF SERVICE

Intersection	Enhanced Pedestrian Measures*	Average Effective Turning Radius (m)	Signal Cycle Length (s)	Pedestrian Uncontrolled Conflict Points**	Target LOS	LOS
Marlee Ave. & Eglinton Ave. West	0	8	90	2	C	C
Marlee Ave. & Roselawn Ave.	1	10.125	80	3	C	C
Marlee Ave. & Ridelle Ave.	0.5	8.5	90	3	C	C
Marlee Ave. & Viewmount Ave.	1	7.875	80	3	C	C
Marlee Ave. & Glencairn Ave.	1	9.375	80	3	C	C
Marlee Ave. & Lawrence Ave. West	0.5	8.75	130	2.75	C	D
Glencairn Ave. & Dufferin St.	0	9.25	80	3	C	D

Glencairn Ave. & Bathurst St.	0	10	110	3	C	D
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*Number of enhanced pedestrian measures divided by the number of intersection legs. Enhanced facilities are considered anything beyond the presence of a standard pedestrian facility, and can include refuge islands, pedestrian storage space, raised intersections, leading pedestrian intervals (LPIs) and protected phases.

**Number of uncontrolled pedestrian conflicts divided by the number of intersection legs

Cycling

The intersection LOS assessment results are summarized **Table 4-15**, deficient LOS have been highlighted. The deficient LOS (E and D) at Marlee Avenue at Lawrence Avenue West, Glencairn Avenue at Dufferin Street and Glencairn Avenue at Bathurst Street is largely a result of greater signal cycle lengths and more uncontrolled cyclist conflict points. Enhanced cyclist measure was the worst performing category as there were zero measure at any of the intersections. Improvements to the LOS could be made by providing enhanced cyclist measures, reducing conflict points, and reducing signal lengths (Marlee/Lawrence and Glencairn/Bathurst)

TABLE 4-15: INTERSECTION CYCLING LEVEL OF SERVICE

Intersection	Enhanced Cyclist Measures*	Average Effective Turning Radius (m)	Signal Cycle Length (s)	Cyclist Uncontrolled Conflict Points**	Target LOS	LOS
Marlee Ave. & Eglinton Ave. West	0	8	90	2.33	C	C
Marlee Ave. & Roselawn Ave.	0	10.125	80	2	C	C
Marlee Ave. & Ridelle Ave.	0	8.5	90	1.5	C	C
Marlee Ave. & Viewmount Ave.	0	7.875	80	1.5	C	C
Marlee Ave. & Glencairn Ave.	0	9.375	80	2	C	C
Marlee Ave. & Lawrence Ave. West	0	8.75	130	3.25	C	E
Glencairn Ave. & Dufferin St.	0	9.25	80	3	C	D
Glencairn Ave. & Bathurst St.	0	10	110	2.5	C	D

*Number of enhanced cycling measures divided by the number of intersection legs. Enhanced facilities are considered anything beyond the presence of a basic bike facility, and can include crossrides, green conflict markings, dedicated intersection features, protected intersection features, bicycle signal heads, leading bike intervals (LBIs) and protected phases.

**Number of uncontrolled cycling conflicts divided by the number of intersection legs

Transit

The intersection LOS assessment results are summarized **Table 4-16**. For transit, a target LOS of D is recommended; all analyzed intersections meet the target, however Marlee Avenue and Lawrence Avenue West and all the intersections with Glencairn Avenue present greater Transit Movement Delays, most of them combined with deficient Pedestrian LOS. Improvements to the LOS could be made by reducing transit movement delays through transit priority measures and increasing the pedestrian LOS.

TABLE 4-16: INTERSECTION TRANSIT LEVEL OF SERVICE

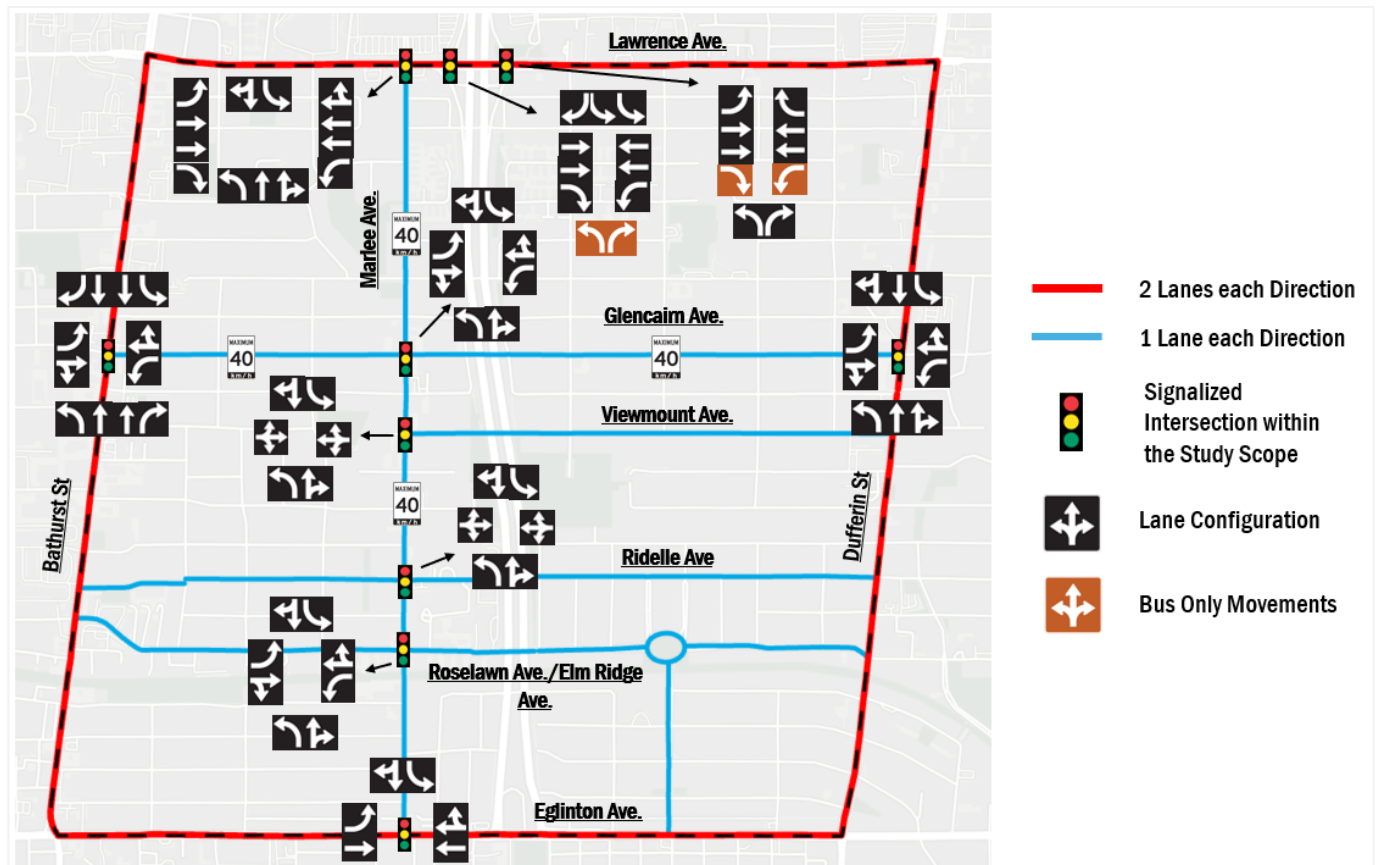
Intersection	Transit Priority Measures	Transit Movement Delay (s)	Pedestrian LOS	Target LOS	LOS
Marlee Ave. & Eglinton Ave. West	No transit priority measures	21.80	C	D	D
Marlee Ave. & Roselawn Ave.	No transit priority measures	20.25	C	D	D
Marlee Ave. & Ridelle Ave.	No transit priority measures	21.25	C	D	D
Marlee Ave. & Viewmount Ave.	No transit priority measures	13.65	C	D	D
Marlee Ave. & Glencairn Ave.	No transit priority measures	23.63	C	D	D
Marlee Ave. & Lawrence Ave. West	No transit priority measures	30.05	D	D	D
Glencairn Ave. & Dufferin St.	No transit priority measures	24.30	D	D	D
Glencairn Ave. & Bathurst St.	No transit priority measures	26.70	D	D	D

4.3 Intersection Operational Analysis

4.3.1 ROAD NETWORK

The intersection capacity analysis focused on the minor arterials of Marlee Avenue and Glencairn Avenue, as well as the Lawrence Avenue West and Allen Road ramp intersections. Marlee Avenue and Glencairn Avenue have a typical cross section of two lanes, with one through lane in each direction. The signalized intersection configurations are depicted in Figure 4-7.

FIGURE 4-7: ROAD NETWORK AND INTERSECTION CONFIGURATIONS



4.3.2 TURNING MOVEMENT COUNTS

Most of the intersection turning movement counts (TMCs) were provided by the City, and additional data were collected through the City's Open Data Portal, as needed. A summary of the date TMCs were collected is shown in **Table 4-17**.

TABLE 4-17: SUMMARY OF TURNING MOVEMENT COUNTS

Intersection	Date
Lawrence Ave. West & Allen Rd. Southbound Off-Ramp	Tuesday November 15, 2022
Lawrence Ave. West & Allen Rd. Northbound Off-Ramp	Tuesday November 15, 2022
Marlee Ave. & Eglinton Ave. West	Thursday January 18, 2024
Marlee Ave. & Roselawn Ave.	Tuesday July 18, 2023
Marlee Ave. & Ridelle Ave.	Thursday June 13, 2019
Marlee Ave. & Viewmount Ave.	Wednesday May 15, 2019
Marlee Ave. & Glencairn Ave.	Thursday May 30, 2024
Marlee Ave. & Lawrence Ave. West	Tuesday November 15, 2022
Glencairn Ave. & Dufferin St.	Wednesday May 29, 2024
Glencairn Ave. & Bathurst St.	Wednesday May 29, 2024

Several intersections had TMCs dated between 2019 and 2022 which represent pre-COVID-19 and COVID-19 traffic patterns. To adjust for these, an analysis of 2019, 2022 and 2024 volumes at Marlee Avenue and Eglinton Avenue West was undertaken to determine traffic growth patterns. Marlee Avenue and Eglinton Avenue West was chosen as it was the only intersection in the MSA which had 2024, 2019 and 2022 TMCs. The analysis assessed the south bound movements on Marlee Avenue to determine the traffic patterns on Marlee specifically. This assessment is summarized in **Table 4-18**.

TABLE 4-18: SUMMARY OF MARLEE AVENUE AND EGLINTON AVENUE WEST TRAFFIC PATTERNS, 2019 TO 2024

Period		Southbound Right (SBR)	Southbound Through (SBT)	Southbound Left (SBL)
2022		271	0	154
2019		253	0	156
2024		241	57	122
AM	2019-2024 Annual Growth	-2%		-5%
AM	2022-2024 Annual Growth	-1%		-3%
PM	2019-2024 Annual Growth	-1%		-5%
PM	2022-2024 Annual Growth	-2%		-1%
Average Annual Growth (All movements, both AM and PM)		-3%		
Average Annual Growth (All movements, both AM and PM)		-2%		

Based on the results of the analysis, an adjustment of -3% annual growth over five years (2019 to 2024) was applied to the north and south movements of the intersections of Marlee Avenue and Ridelle Avenue, and Marlee Avenue and Viewmount Avenue. An adjustment of -2% was also applied to the north and south movements of Marlee Avenue and Roselawn Avenue to reduce the volume imbalance between Marlee Avenue and Eglinton Avenue West, and Marlee Avenue and Roselawn Avenue.

The resulting AM and PM peak turning movement volumes are depicted in **Figure 4-8** and **Figure 4-9**, respectively. Volumes on the minor arterials are within the City's designated range of 8,000 to 20,000 vehicles per day; with Glencairn Avenue having approximately 14,000 vehicles and Marlee Avenue having 9,000 vehicles per day. Additionally, the data reveals small volumes on the Allen Road Southbound (SB) On-Ramp and Allen Road Northbound (NB) Off-Ramp.

FIGURE 4-8: TURNING MOVEMENT VOLUMES - AM PEAK

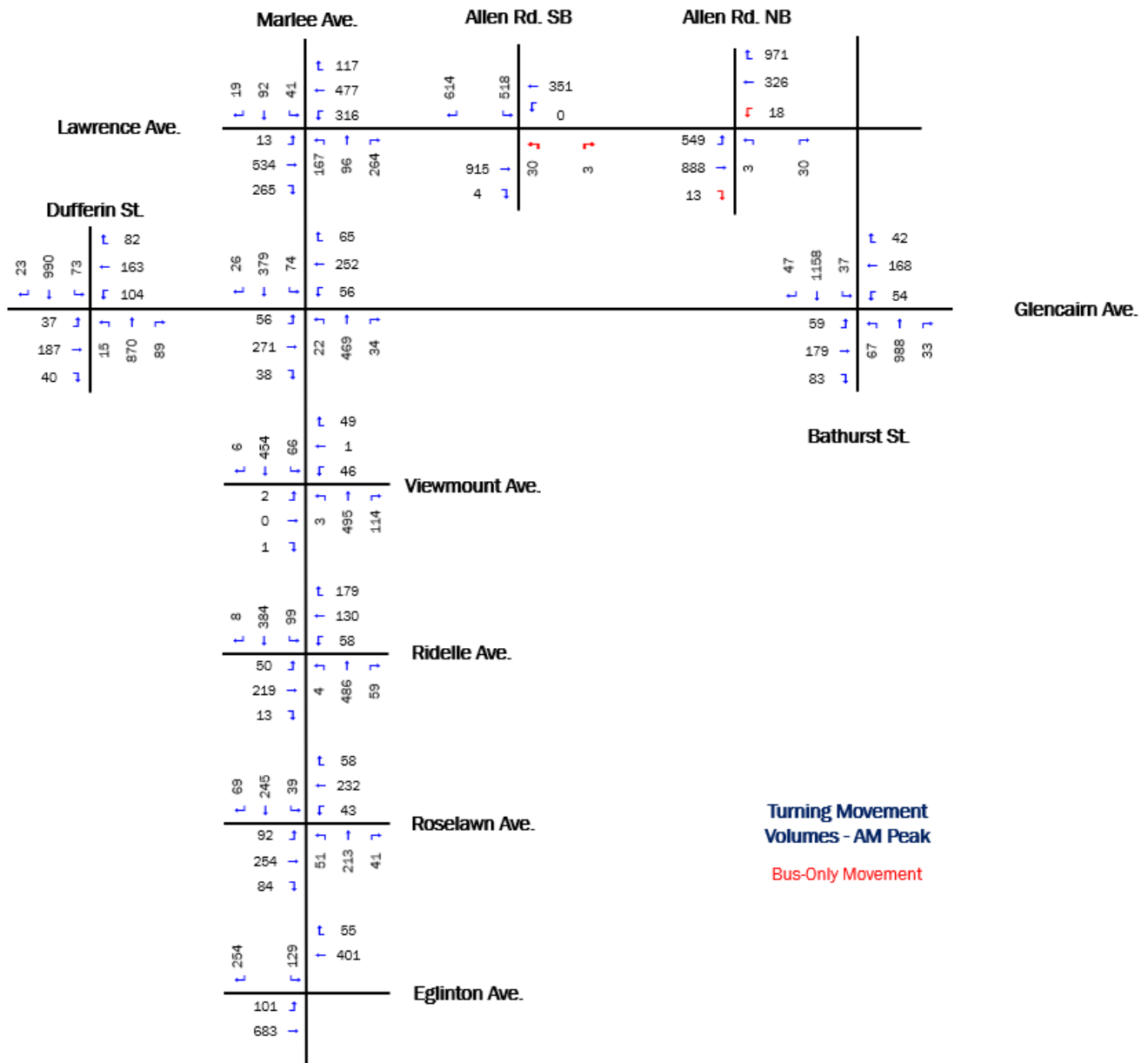
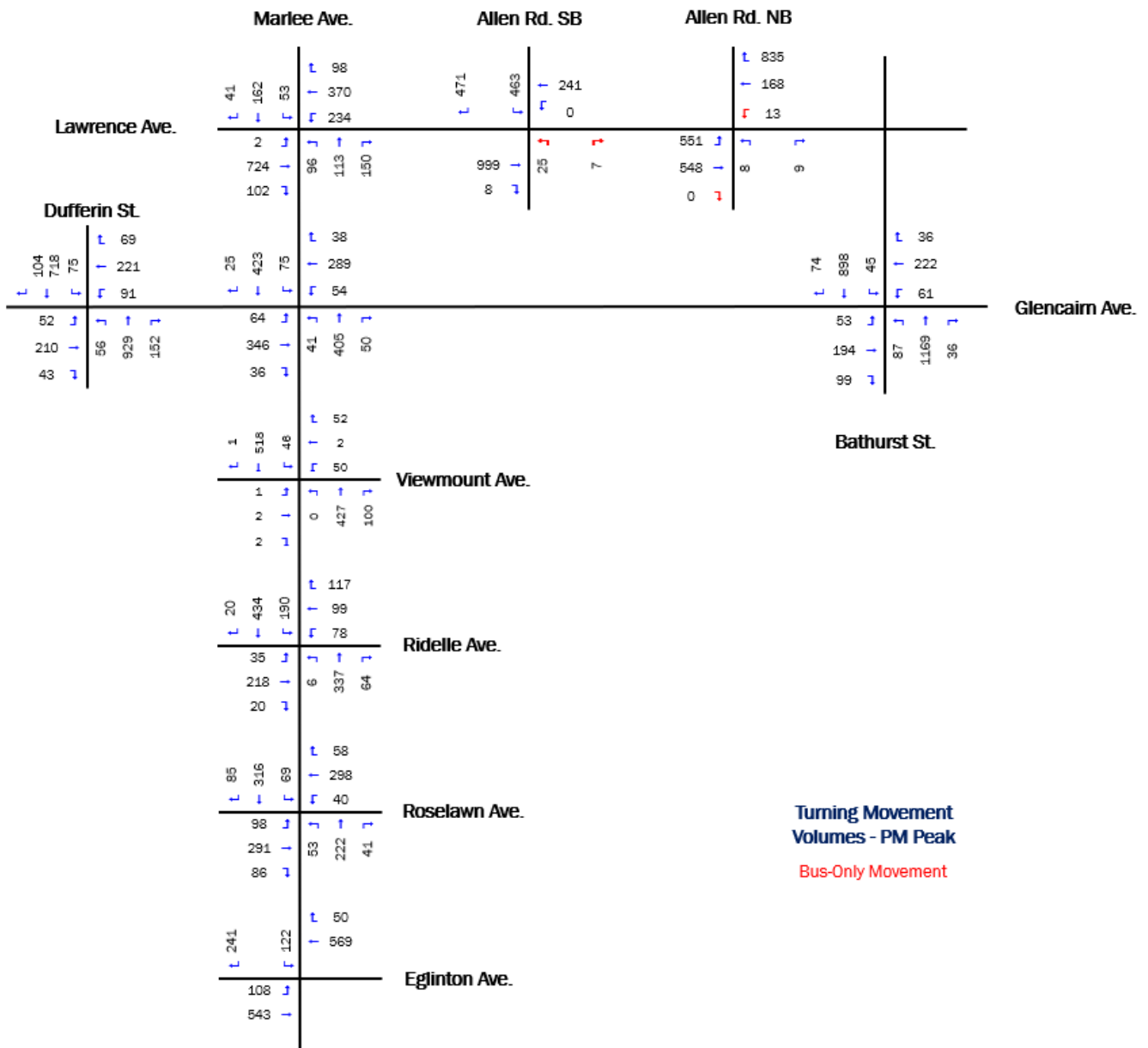


FIGURE 4-9: TURNING MOVEMENT VOLUMES - PM PEAK



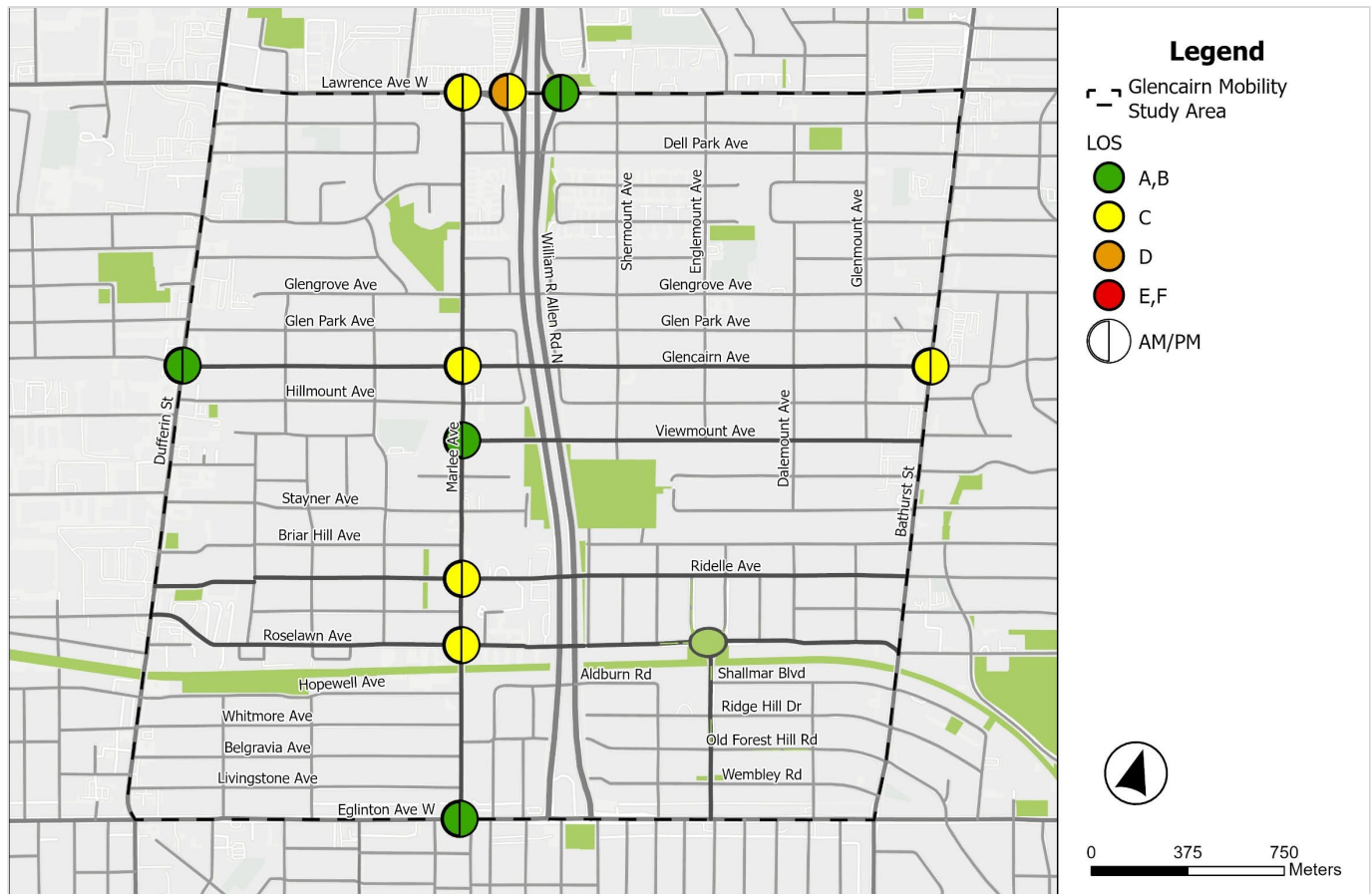
4.3.3 INTERSECTION CAPACITY ANALYSIS

An intersection capacity assessment was undertaken using Synchro, the results of which are summarized in **Table 4-19** and displayed in **Figure 4-10**. All intersections are generally currently operating at an acceptable overall level of service (LOS); however, both the Northbound Left and Southbound Left at Lawrence Avenue West and Allen Road Southbound Off-Ramp experience an LOS of E or F in both the AM and PM peak periods. This, however, is due to controlled delay time from the signal timing as well as the high competing demands (i.e. vehicles and pedestrians) at this intersection during peak hours. The detailed Synchro reports are provided in **Appendix A**.

TABLE 4-19: INTERSECTION CAPACITY ANALYSIS RESULTS

Intersection/ Critical Movements	AM Peak	AM Peak	AM Peak	PM Peak	PM Peak	PM Peak
	LOS	Delay (s)*	Max V/C	LOS	Delay (s)*	Max V/C
Lawrence Ave. West & Allen Rd. Southbound Ramp	D	35.1	0.88	C	27.6	0.93
NBL	E	78.6	0.48	F	90.4	0.49
SBL	E	56.2	0.88	E	71.4	0.93
Lawrence Ave. West & Allen Rd. Northbound Ramp	B	14.2	0.73	A	8.5	0.61
Marlee Ave. & Eglinton Ave. West	B	12.1	0.47	B	13.8	0.45
Marlee Ave. & Roselawn Ave.	C	24.9	0.65	C	24.8	0.68
Marlee Ave. & Ridelle Ave.	C	26.5	0.84	C	26.3	0.84
Marlee Ave. & Viewmount Ave.	B	16.5	0.72	B	14.3	0.6
Marlee Ave. & Glencairn Ave.	C	23.1	0.76	C	22.5	0.77
Marlee Ave. & Lawrence Ave. West	C	27.1	0.76	C	26.9	0.64
Glencairn Ave. & Dufferin St.	B	17.2	0.65	B	16.7	0.6
Glencairn Ave. & Bathurst St.	C	24.6	0.8	C	22.9	0.63

FIGURE 4-10: INTERSECTION CAPACITY ANALYSIS LEVEL OF SERVICE



4.3.4 SITE OBSERVATIONS

In conjunction with the capacity analysis, site conditions have been observed through several site visits. Several key observations have been made:

- Marlee Avenue and Lawrence Avenue West – due to large volumes at the Lawrence Avenue West and the Allen Road ramp intersections, there are queues which spillback to the Marlee Avenue and Lawrence Avenue West intersection, impacting the intersection operations and causing delays.
- Marlee Avenue and Eglinton Avenue West – there are large volumes at the Eglinton Avenue West and the Allen Road ramp terminal intersections, resulting in queues on Eglinton Avenue West which may spillback to Marlee Avenue and other roads intersecting Eglinton Avenue West.

4.4 Safety Assessment

4.4.1 COLLISION ANALYSIS

Identifying collision trends is key to establishing effective strategies in reducing traffic-related fatalities and serious injuries on Toronto's streets in alignment with the City's Vision Zero Road Safety Plan. Collision data of the past 10 years (period ending on March, 2024) was provided by the City to further understand the trend and cause of the incidents in the study area and making plans to reduce incidents in the future. The 10-year collision history is displayed in **Figure 4-11** and a breakdown of all collisions by severity and vulnerable road user is provided in **Table 4-20**. In the last 10 years 10,109 collisions have occurred in and immediately adjacent to the MSA, resulting in 59 Killed or Seriously Injured (KSI)

collisions (17 killed, 42 seriously injured). Excluding the major arterials, there were two fatalities in the MSA; one was a driver and the other a motorcyclist, the motorist being a senior.

Of the total 10,109 reported collisions over the last 10 years, 349 involved a Vulnerable Road user (VRU); 267 pedestrians (24 children and 61 seniors) and 81 persons cycling. Of the 59 KSI collisions, 44 involved a VRU (75%); 5 persons cycling and 39 pedestrians (3 children and 17 seniors).

FIGURE 4-11: LOCATIONS AND SEVERITY OF COLLISIONS (2014-2024)

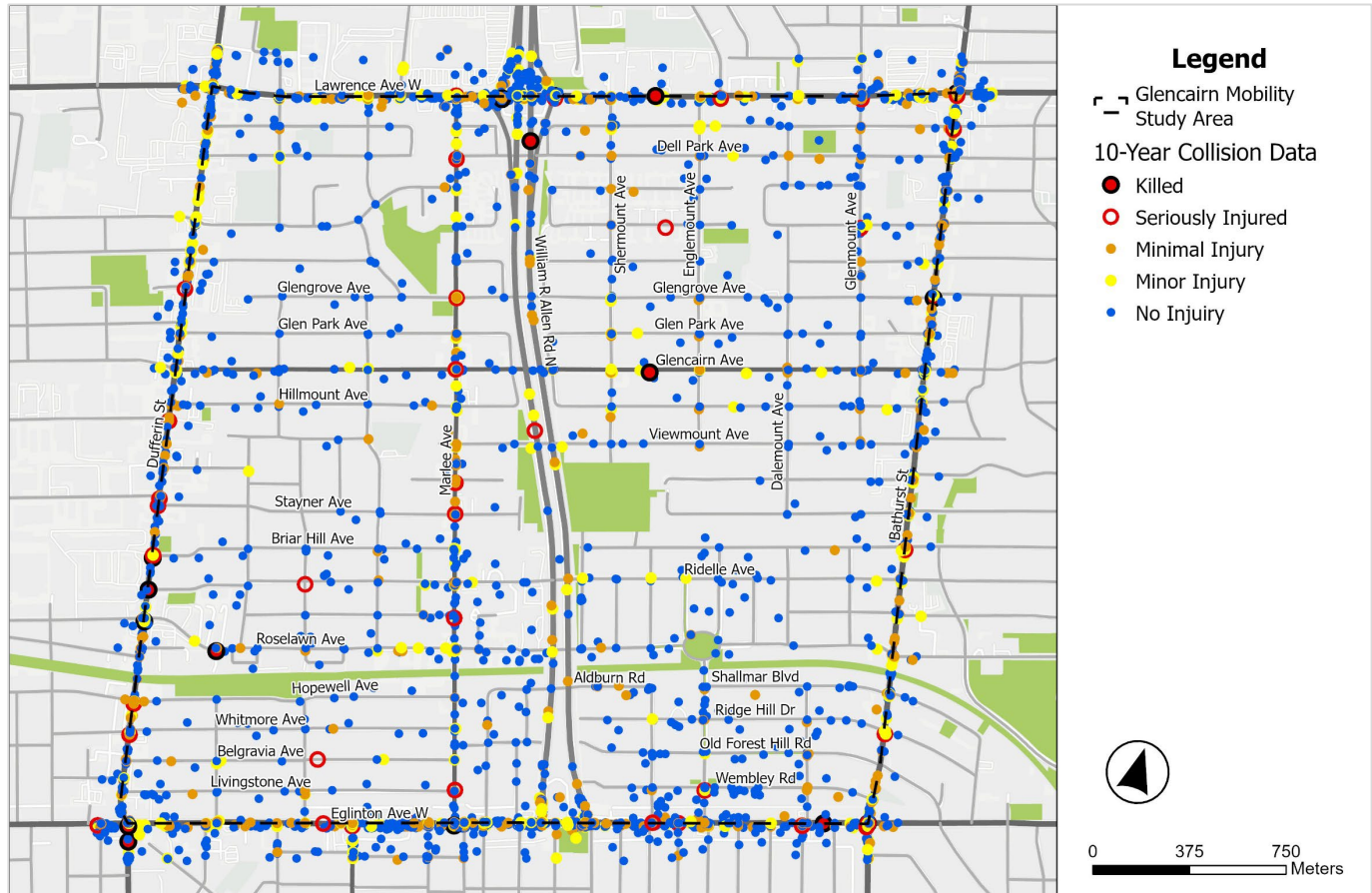


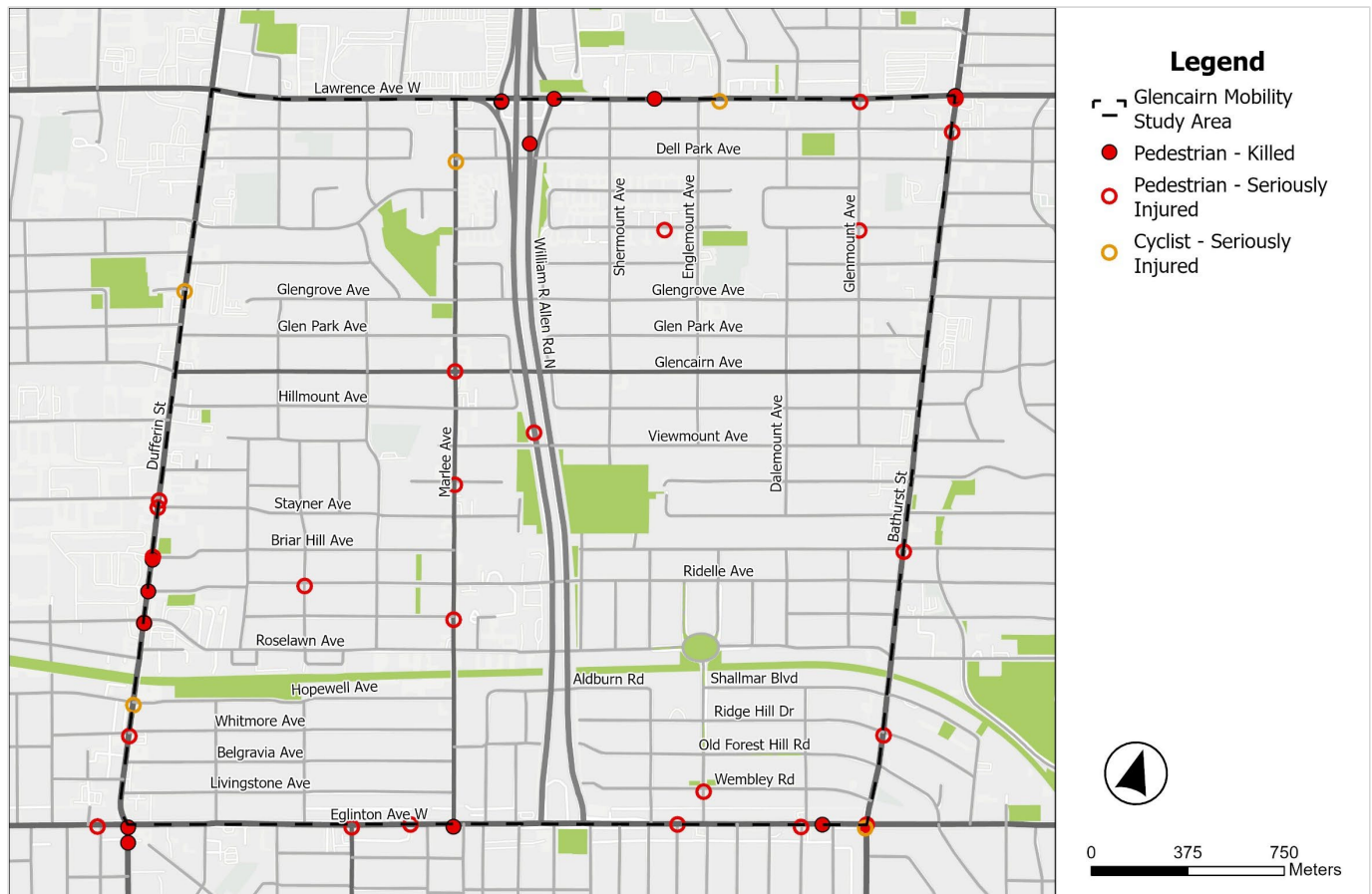
TABLE 4-20: BREAKDOWN OF COLLISIONS BY SEVERITY AND VULNERABLE ROAD USERS

Breakdown		Collisions	Rate
Total		10,109	100%
Killed or Seriously Injured	Killed	17	0.17%
	Seriously Injured	42	0.42%
Involving Vulnerable Road User	Pedestrian	267	2.64%
	Cyclist	81	0.80%
	Person who uses a wheelchair	1	0.01%

KSI collisions involving a VRU are displayed in **Figure 4-12**. Excluding the major arterial intersections, there is a higher number of pedestrian KSI collisions along Marlee Avenue and the Lawrence Avenue West and Allen Road ramp

intersections. Both locations were subject to further review, which broadened the analysis to all VRU collisions resulting in injury.

FIGURE 4-12: KILLED OR SERIOUSLY INJURED COLLISIONS INVOLVING A VULNERABLE ROAD USER



Marlee Avenue

An analysis of the VRU collisions resulting in a fatality or injury (minor to serious) along Marlee Avenue revealed several patterns. There was a total of 18 pedestrian collisions, the majority of which were at intersections with vehicles turning into pedestrians (**Table 4-21**); the highest number occurred at Ridelle Avenue and Roselawn Avenue (**Table 4-22**). Of these pedestrian collisions, two involved children and four involved seniors. This indicates a need for improved design and pedestrian safety measures on intersections along Marlee Avenue.

There was a total of 13 people cycling collisions with the majority resulting from motorists turning into the people cycling's path at intersections (**Table 4-23**). The highest number of people cycling injury collisions occurred at Glencairn Avenue (4), however, there is no specific pattern for the other collisions suggesting the safety constraints are more systemic to the corridor in general (**Table 4-24**). Notably Marlee Avenue does not provide any buffer or physical barrier for the cycling facility.

TABLE 4-21: IMPACT TYPE FOR PEDESTRIAN COLLISIONS ALONG MARLEE AVENUE

Impact Type	Count
Vehicle turns left while ped crosses with ROW at inter.	5
Vehicle turns right while ped crosses with ROW at inter.	4
Vehicle is going straight thru intersection while ped cross without ROW	3
Pedestrian hit at mid-block	2
Pedestrian hit at private driveway	2
Vehicle turns left while ped crosses without ROW at inter.	2

TABLE 4-22: PEDESTRIAN COLLISIONS LOCATIONS ALONG MARLEE AVENUE

Intersecting Road	Count
Ridelle Ave.	5
Roselawn Ave.	4
Lawrence Ave. West	3
Viewmount Ave.	2
Belgravia Ave., Castlefield Ave., Enid Cresc., Glencairn Ave., Romar Cresc., & Whitmore Av.	1 (each)

TABLE 4-23: IMPACT TYPE OF PEOPLE CYCLING COLLISIONS ALONG MARLEE AVENUE

Impact Type	Count
N/A	5
Motorist turns right at non-signal Inter.(stop, yield, no cont.,& driveway) & strikes cyclist.	3
Motorist turned left across cyclist's path.	2
Cyclist and Driver travelling in same direction. One vehicle sideswipes the other.	1
Motorist turning right on green or amber at signalized intersection strikes cyclist.	1
Motorist without ROW drives into path of cyclist at inter, laneway, driveway-Driver not turn.	1

TABLE 4-24: PEOPLE CYCLING COLLISIONS LOCATIONS ALONG MARLEE AVENUE

Intersecting Road	Count
Glencairn Ave.	4
Viewmount Ave.	2
Dell Park Ave., Fairholme Ave. Roselawn Ave., Stayner Ave., & Whitmore Ave.	1 (each)

Lawrence Avenue West and Allen Road Ramps

There were 10 pedestrian collisions resulting in a fatality or injury (minor to serious) at the Lawrence Avenue West and Allen Road ramp intersections: three fatalities and seven minor to minimal injuries. Four have occurred at the Allen Road

Northbound Ramp, and the remaining six occurred at the Southbound Ramp. Three of these collisions involved seniors, with one being a fatality. Most of these collisions were resulting from vehicles turning while the pedestrian crosses with the ROW (**Table 4-25**). Given the high number of pedestrians at these intersections due to the Lawrence West station, it is a pedestrian priority location and enhanced pedestrian safety measures should be explored.

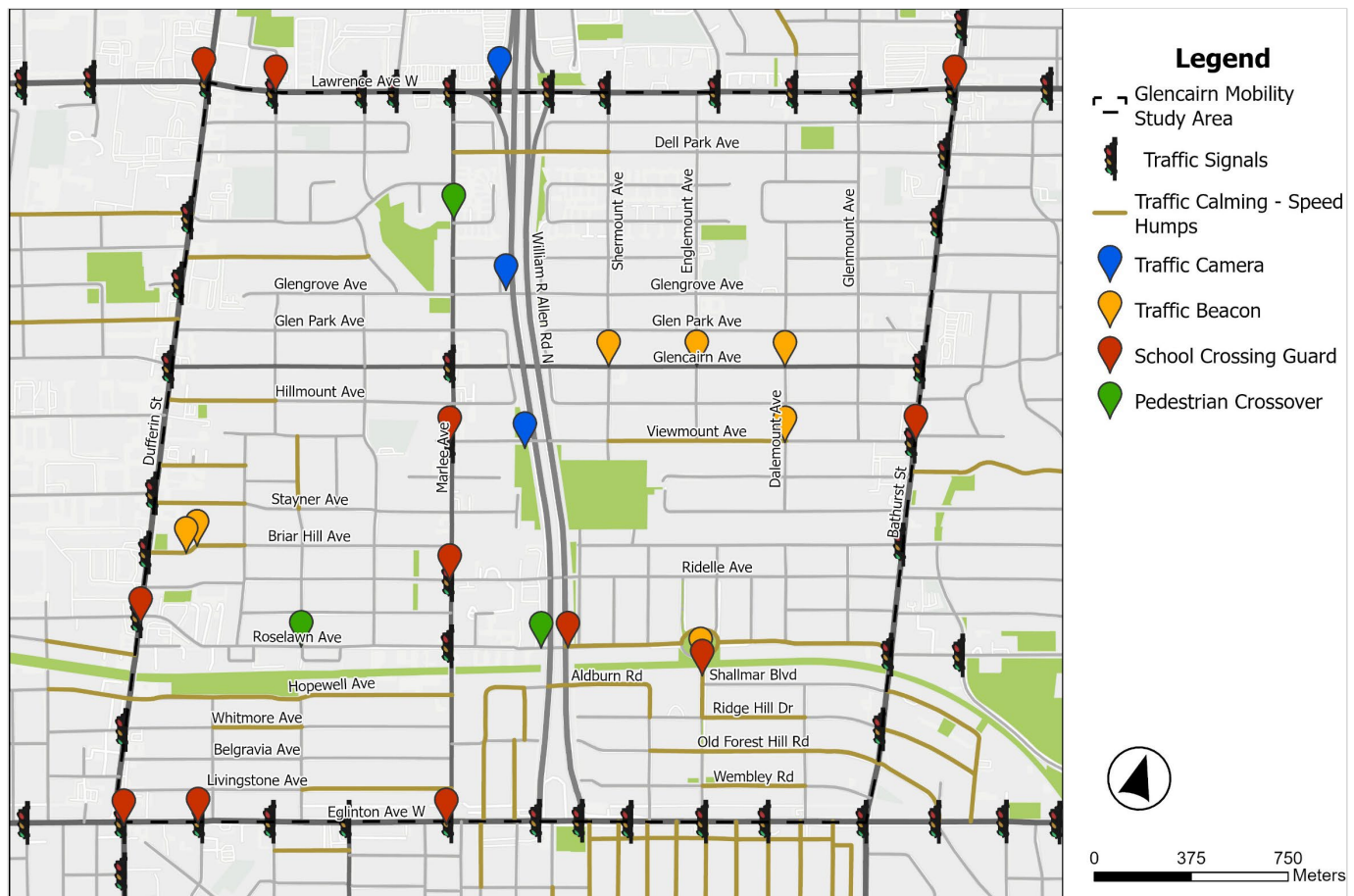
TABLE 4-25: IMPACT TYPE OF PEDESTRIAN COLLISIONS AT LAWRENCE AVENUE WEST AND THE ALLEN ROAD RAMP

Impact Type	Count
Vehicle turns right while ped crosses with ROW at inter.	5
Vehicle turns left while ped crosses with ROW at inter.	1
Pedestrian involved in a collision with transit vehicle anywhere along roadway	2
N/A	2

4.4.2 TRAFFIC CONTROL AND SAFETY MEASURES IN PLACE

The existing traffic controls and calming measures are displayed in **Figure 4-13**. Excluding all of the major arterial intersections, there are eight signalized intersections of focus for this study along Marlee Avenue and Glencairn Avenue. There are several school crossing guard locations, however there are limited pedestrian crossings, with only three in the MSA. Speed humps have been installed on several of the local roads as traffic calming measures.

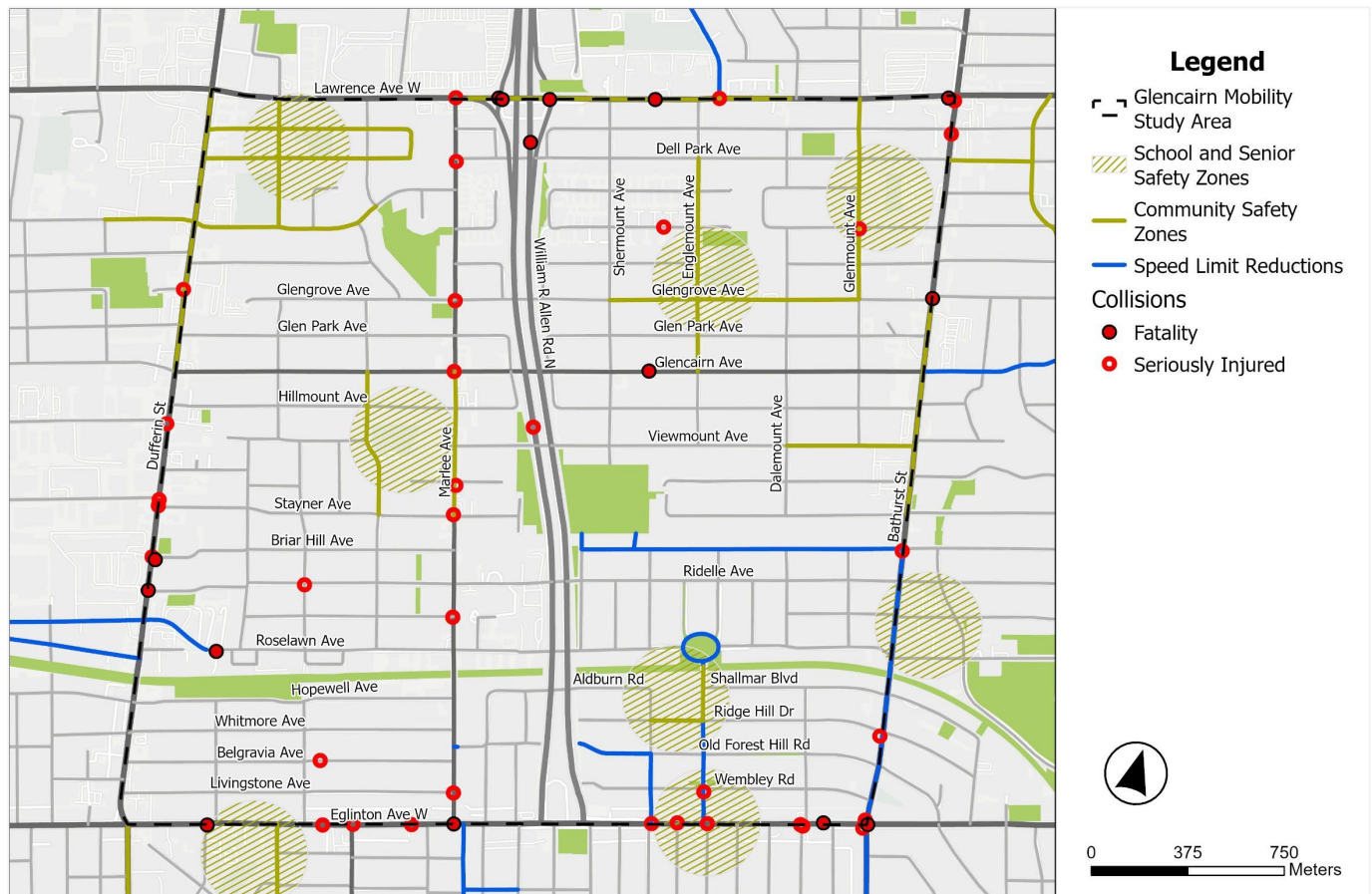
FIGURE 4-13: EXISTING TRAFFIC CONTROL AND CALMING MEASURES



The City has implemented Community, Senior, and School Safety Zones as displayed in **Figure 4-14**. Community Safety Zones are designated stretches of roadway that are marked with community safety zone signs where the doubling of fines associated with speeding is allowed under provincial legislation. In certain applications the use of an automated speed enforcement system is also permitted. School and Senior Safety Zones are designated stretches of roadway which include safety zone signs and a variety of measures such as increased crossing times, watch your speed signs, improved pavement markings, flashing beacons, and other safety measures to reduce vehicle speeds and improve pedestrian safety.

Additionally, as part of ongoing Vision Zero initiatives the City has instituted speed limit reductions of 40 km/h to 30 km/h on Briar Hill Avenue, Old Park Road, Old Forest Hill Road, and Glenarden Road, and of 50 km/h to 40 km/h on Castlefield Avenue.

FIGURE 4-14: FATAL AND SERIOUSLY INJURED COLLISIONS AND SAFETY MEASURES



5 Summary and Next Steps

The existing conditions review has identified the following key gaps and opportunities within the MSA:

- **Street Network**
 - Marlee Avenue (minor arterial with a planned ROW of 27 m between Lawrence Avenue West and Stayner Avenue; and a planned ROW of 20 m between Stayner Avenue and Eglinton Avenue West) is the main north-south connection and there are no equivalent streets within the MSA, as continuous north-south connections are lacking, especially in the east side of Allen Road.
 - Glencairn Avenue (minor arterial, ROW 20 m) and Roselawn Avenue (collector, ROW 20 m) provide the primary east-west connections between Dufferin Street and Bathurst Street.
 - The seven bridges over Allen Road between Lawrence Avenue West and Eglinton Avenue West provide critical east-west connections over the Allen Road and help retain the grid structure of the street network.
 - The analysis of existing conditions shows that the overall corridor volumes are not high and have not yet reached or exceeded capacity. However, key constraints are identified at Marlee Avenue and Lawrence Avenue West, and Marlee Avenue and Eglinton Avenue West, as these are intersections with key major arterials that currently experience high vehicle volumes. Given the signal cycle length priority given to major arterials, substantial increases to the vehicle volumes on the minor arterials may necessitate signal timing adjustments. Potential growth in the future will be explored in the next phase of the project, and the needs for multi-modal improvements or measures to mitigate the impacts will be identified accordingly.
 - The Lawrence Avenue West and Allen Road southbound off-ramp intersection was found to have high multi-modal demand with vehicular delays and queuing on the off-ramp during peak hours. Small vehicle volumes on the southbound on-ramp prompt the opportunity to explore design or operational changes to improve traffic flow and safety for vulnerable road users.
 - The ROW space of the bridges over Allen Road will be further assessed for potential improvement in safety, curbside management, and multi-modal transportation facilities, where appropriate and feasible.
 - It was noted that various clusters of local streets provide access to Public Facilities, especially to schools, parks and to the Glencairn Subway Station. Traffic, parking, and curbside management, including pick-up and drop-off areas require further attention and recommendations. This analysis will take into consideration multi-modal transportation network and level of services.
- **Pedestrian Network**
 - Notable pedestrian network gaps are located predominantly in the outward corners of the MSA, impeding access to the central area and Glencairn Station.
 - The areas around Glencairn Station on the Allen Road bridges have narrow sidewalks and there are no north-south pedestrian crossings near the station.
 - There are opportunities for design improvements to create more pedestrian friendly infrastructure and improve safety and access to community facilities and transit stations.
 - The walkshed analysis indicates the grade-separated crossings over Allen Road generally provide sufficient access to the subway stations; however, there are opportunities to improve the design for comfort and safety.
 - The assessment of the pedestrian network in the area revealed that most sidewalks (including those along Marlee Avenue and Glencairn Avenue) are narrower than the City's current design standard to provide a minimum 2.1 m pedestrian clearway. Additionally, there are long distances between protected crossings, a lack of pedestrian safety measures, and a high number of pedestrian conflict points.
- **Cycling Network**
 - Existing cycling routes include Marlee Avenue, the signed route east of Allen Road, and the York Beltline and Kay Gardner Beltline Trails. Both Marlee Avenue and signed route east of Allen Road lack dedicated safety features – future consideration will be required to improve these facilities.

- Planned near-term improvements, such as the EglintonToday Complete Streets project, York Beltline Extension, and Beltline Gap Connections will improve cycling connectivity within the southern portion of the MSA and to the broader parts of the City, however there will still be a lack of east-west cycling routes in the central and north areas of the MSA, a direct north-south route east of Allen Road, and cycling connections to the subway stations in the MSA. There are opportunities to address these connectivity gaps.
- The Lawrence Allen Secondary Plan identifies dedicated cycling facilities on Dufferin Street, Bathurst Street, and collector streets north of Lawrence Avenue West, there are opportunities to extend this cycling network south to the Marlee-Glencairn community.
- The City's Long-Term Cycling Network Vision and Analyses identified opportunities to use local streets to provide improved access to the major arterials, especially Dufferin Street and Bathurst Street.
- The assessment of the cycling network in the area revealed substandard bikeway widths, a lack of buffers between bikeways and roadways, insufficient cycling safety measures, and a high number of cycling conflict points.
- **Transit Network**
 - The area is well served by multiple transit options, including TTC Line 1 and both high frequency and local bus routes. Future transit enhancements, including the Eglinton Crosstown LRT and RapidTO transit priority measures, will improve the MSA's already strong transit availability.
 - Ridership at Glencairn Station and the MSA's local bus routes (109 – Ranee and 14 – Glencairn) is relatively low compared to neighboring stations and high-frequency bus routes and there are opportunities for improved access to transit stations/stops and more connected local transit routes.
 - While transit availability is strong, the lack of cycling connections and poor pedestrian infrastructure to transit stations diminishes usability. There are opportunities to improve connections to this robust transit network in the area.
 - There are opportunities to access other regional transit services, such as the new Caledonia GO Station, and Yorkdale GO Bus Terminal, through an improved cycling network.
 - The assessment of the transit network in the area showed a lack of transit priority measures and limited passenger amenities at transit stops.
- **Mobility Trends**
 - Low density residential areas in the MSA have created an auto-dominated environment, however, overall car ownership per household is decreasing and the percentage of auto-driver trips as the primary travel mode has declined while walking saw a major increase between 2016 to 2022 (6.9% to 15%). The decreasing car ownership rates and the updated policy requirements that remove car parking minimums in new developments suggest that the population growth within the MSA will contribute to more sustainable mobility patterns.
 - Cycling as the primary travel mode share has slightly increased between 2011 to 2022 (0.6% to 2%) and cycling trips to work had a considerable increase in 2022 compared to 2016 (1.1% to 3.7%). Furthermore, the trip length for cycling also increased from 1.8 km in 2011 to 4.5 km in 2022, suggesting that people now ride bicycles for further distances and/or destinations.
 - The percentage of school trips completed by walking increased from 14.7% to 29.2% between 2011 and 2022, further highlighting the opportunity for local trips to be completed through active transportation.
 - The daily trip data for the MSA showed that a significant number of trips were internal to the MSA or to nearby areas such as Lawrence-Allen. This aligns with the trend of relatively short average trip length (7.5 km) and a large share of trips being under 4 km (48%). These patterns, as well as the increasing share of walking trips, suggest some of these trips could potentially be completed through active modes of transportation by enhancing the connectivity and accessibility of the pedestrian and cycling network.
- **Safety Assessment**

- The 75% of Killed or Seriously Injured (KIS) collisions, involved a Vulnerable Road User (VRU), highlighting the need to improve the safety of pedestrian and cycling infrastructure in the MSA (e.g. Marlee Avenue).
- The Lawrence Avenue West and Allen Road Ramps area has a relatively higher number of pedestrian collisions resulting in fatality or serious injury. These collisions are predominantly caused by vehicles striking pedestrians while in the ROW; enhanced safety measures for pedestrians are needed at this location, especially given the high volume of pedestrians due to Lawrence West Station.

The next phase of the project will be options development and assessment. Three land use and growth options will be developed, and the associated future multimodal transportation network conditions will be reviewed to project and identify future operational issues with each option. The future transportation conditions assessment will inform the evaluation of the land use options, one of which will be selected as the preferred option. With the preferred option identified, the road network strategy and functional design concept will be developed to address the existing and future issues and improve the MSA's mobility network.

Appendix A – Synchro Reports