Appendix B

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Laird in Focus – Mobility Report

Final Report
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City of Toronto

23023501

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1 Executive Summary

The Laird Study Area and its surroundings were originally planned for cars and trucks. The major investment into the Eglinton Crosstown LRT (ECLRT) line will significantly improve regional and local mobility, directly with enhanced higher-order and feeder bus transit options, and indirectly with supportive multi-modal and shared mobility strategies. Corresponding City-building opportunities are emerging, allowing better integration of new residential and employment intensification, including an enhanced public realm.

This mobility plan supplements the overall planning study, in providing a multi-modal transportation approach that is sustainable and balanced. In embracing this multi-modal transportation approach, redefining the transportation mode structure is required. The following transportation mode hierarchy has been adopted, consistent with the City's policies:

- **Active transportation:** walking and cycling modes provide both health and infrastructure capital and operating cost benefits;
- **Transit network:** higher-order transit lines, such as the Eglinton Crosstown, provide significant opportunities to not only draw regional trip choices away from vehicles, but also to facilitate development that is supportive of active transportation. Furthermore, feeder bus networks can be effectively planned to connect higher-order transit lines with residential communities and employment districts;
- **Transportation demand management (TDM) and innovative mobility strategies:** adopting TDM and technological advances, accepting emerging governance structures, supporting shared arrangements, and encouraging/incentivizing modifications in societal behaviour leads directly to infrastructure cost benefits, while also fulfilling a need for non-peak travel periods;
- **Goods movement:** supporting the vitality of employment lands is critical to an economically sustainable city; and,
- **Vehicular movement and associated parking:** vehicles and parking will remain essential elements of the transportation network; however, major infrastructure costs and decisions affecting personal convenience will be required to accommodate future transportation demands. The shift away from vehicular trips is necessary in order to achieve a sustainable and balanced transportation system within a vibrant city.

Opportunities

Based on the identified key findings derived from the consultation activities, policy review, and a multi-modal analysis, opportunities to improve access and mobility options have been outlined in the Phase 1 – Existing Conditions Report. These mobility opportunities were considered in the identification of the overall study vision and supporting goals, and in the assessment of land use / built form development scenarios (Phase 2) for Study Area A and Study Area B. Ultimately, the vision and goals guided the overall development of the recommended mobility plan for the study area (Phase 3).

A summary of the major potential mobility opportunities is presented as follows.

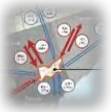
- Despite a poor environment, physical barriers, and low connectivity to existing and future destinations, there are sufficient ROW spaces, growth potential, and land availability to create an attractive and safe pedestrian network.

- Despite a poor environment, physical barriers, and lack of a cycling network, opportunities to build on the latent demand and support new growth is demonstrated.

- ECLRT implementation will transform mobility access and options in the study area, it requires a balanced and coordinated plan to provide first and last mile solution by maximizing active transportation and transit connectivity, while maintaining vehicle access and goods movement in a balanced manner.
- Arterial and collector roadways experience capacity issues during peak hours and a significant portion of vehicle trips made are at a short distance within the study area. Travel demand management strategies, to reduce single occupancy vehicles and allow other mobility options to have the opportunity to flourish in this environment in the future. Significant potential presented given the size and intensity of mixed use development scenarios for carpooling, car-share, bike-share, variable parking strategies, and trip planning.

- A coordinated goods movement strategy is required to support the on-going vitality of the Leaside employment lands, while co-existing with the increasing mobility demand for transit and active transportation for employees and residents.

- Physical barriers and lack of grid street network contribute significantly to arterial and collector roadways operating at / near capacity, but perhaps most importantly to the significant queuing at key boundary locations of the study area.



- As future mobility continues to shift away from vehicular uses, there are strong opportunities for comprehensive parking strategies to create a balance environment to accommodate future vehicle demand with appropriate policies to control parking supplies in partnership with Toronto Parking Authority.

Analysis and Testing

An iterative and integrated process between land use / built form, and transportation was conducted. This allowed fine-tuning, and careful consideration of each incremental change, allowing a solution that is balanced between an ideal built form, while ensuring mobility in the area is suitable for all modes and available infrastructure.

The multi-modal analysis and iterative approach indicated that the vehicular capacity was the limiting constraint. As such, the overall multi-modal demand and associated policies/strategies will be important to a successful mobility plan solution.

To address the established overall objectives and guiding principles, additional analyses and testing of potential impacts for different strategies on the draft built form alternative were undertaken.

Key Testing Finding - Development Phasing

The multi-modal analysis was based on a modest 5% TDM-related trip reduction presenting in the AM peak hour 4,400 additional trips due to the planned development, with a corresponding modal split of 41% vehicles, 41% transit, and 18% active transportation (existing modal split of 69% vehicles, 10% transit, and 21% active transportation without the Eglinton Crosstown in operation). In addition, it was determined that approximately 80% of the full build-out scenario could be accommodated with the proposed transportation network.

Given that a relatively modest TDM-related trip reduction rate was adopted, potential for a higher rate is considered highly feasible with innovative technologies, evolving societal behaviour, and emerging programs supported by development policies. As such, a higher trip reduction rate of 10% rate was tested, which is realistic given characteristics of similar transit corridors within the City. Based on these tests, a 10% reduction to peak hour total person trips, and an additional increase in transit mode share of 10%, would allow for the planned development to be built in full, and be supportable by existing infrastructure.

Shifting Away from Vehicles – A Balanced Approach

The transportation review and multi-modal analysis confirms that the major investment into the Eglinton Crosstown LRT (ECLRT) line will significantly improve regional and local mobility, directly with enhanced higher-order and connected feeder bus transit options, and indirectly with supportive multi-modal access and shared mobility strategies.

Short-term opportunities for the area include the introduction of cycling facilities, which currently do not exist. A network of dedicated cycle tracks and multi-use pathways can provide efficient connections between key local destinations such as the future LRT station, community facility, and new and existing parks. The network should also connect to the larger cycling system that is comprised of the future Eglinton Avenue cycle track, the existing Millwood Road bicycle lanes, and the Don Valley ravine system.

Support for employment land uses includes the identification of specific truck routes to facilitate movement within and beyond the Leaside Business Park. These routes tie into the larger arterial and highway road system and should be designed to minimize pedestrian and cyclist conflicts with heavy vehicles while also ensuring truck movement is efficiently realized.

Correspondingly, emerging City-building initiatives will present opportunities to integrate new residential and employment intensification, including an enhanced public realm and community facilities. As such, this integrated planning process considered safe mobility access and choice in the development of the overall planning framework. This is evidenced by the several transportation-related references in the Laird in Focus Vision Statement and the associated principles, and in five of the ten identified “Big Moves” for the study.

Recommendations

Once ECLRT is operational, a transformation in travel modes will occur, locally and regionally. The degree which future travel moves away from vehicles however, will be measured by how well a balanced and integrated multi-modal transportation network is achieved. Critical for success will be enhanced access and connections to ECLRT, that includes reliable and convenient local transit, and safe and comfortable walking and cycling facilities.

Laird Drive will become a central spine in the area, unifying existing residential neighbourhoods, retail uses, and employment areas with an attractive multi-modal transportation corridor. It connects existing and planned community centres, has major bus routes and provides access to the vital employment lands.

The re-imagined Laird Drive is highlighted by implementing continuous grade separated cycle track facility and wide sidewalks on both sides. Boulevard widths are optimized for streetscape greening and street furniture, with additional width generally provided along the west side to integrate with emerging mixed-use development. Another key design component is integrating the bus stops into the boulevards, ensuring that shelters, street furniture / seating, shade, lighting, and bike parking, are incorporated to enhance the comfort of transit patrons. This is being achieved while maintaining reasonable traffic operations, including goods movement via trucks, within the established right-of-way.

The emerging neighbourhood along Eglinton Avenue is largely founded on implementing a finer grain street network to provide choice for how people will move around and access to where people want to go. Additional safe and comfortable mid-block connections will be encouraged through the development blocks to improve permeability. With a green and attractive setting and a resulting lower speed environment the following attributes will be achieved:

- increased pedestrian and cycling activity with safe, comfortable and attractive conditions;
- enhanced and convenient access and connectivity to transit; and,
- alternative routing choices that connect to the surrounding street network, that will distribute vehicular trips within the study area.

The extent of a mode shift to active transportation and transit will be magnified by the success of a travel demand management (TDM) program and associated innovative mobility strategies. The recommended mobility plan promotes TDM to promote travel demand measures and technological advances that will ensure additional travel choice to single occupant vehicular travel, including adding capacity to the network without expansion. Smart Commute programs, school trip planning, parking maximums and development-related benefits should be the minimal expectations to provide modest reduction on vehicle trips. Enhanced and progressive TDM measures are continuously being advanced with technology, presenting significant opportunities. Monitoring of the transportation network as development occurs is critical, to ensure that trips are being diverted to transit and the effectiveness of the adopted TDM program, but also when / if further transportation infrastructure is required.

In embracing a multi-modal transportation approach that is sustainable and balanced, redefining the transportation mode hierarchy has been adopted, consistent with the City's policies:

- **Active transportation** – walking and cycling modes provide both health, infrastructure capital and operating cost benefits.

- **Transit network** – higher-order transit lines, such as the Eglinton Crosstown, provide significant opportunities to not only impact regional trip choices away from vehicles, but also to facilitate development that is active transportation supportive. Further, feeder bus networks should be effectively planned to connect higher-order transit lines with residential communities and employment districts.
- **Transportation demand management (TDM) and innovative mobility strategies** – adopting TDM and technological advances, accepting emerging governance structures, supporting shared arrangements, and encouraging / incentivizing societal behaviour changes directly present infrastructure cost benefits, but also fulfils a need for non-peak travel periods.
- **Goods movement** – supporting the vitality of employment lands is critical to an economically sustainable City.
- **Vehicular movement and associated parking** – it is recognized that vehicles and parking will remain essential elements of a transportation network, however to accommodate future transportation demands, major infrastructure costs and quality of life impacts will be presented. Shifting away from vehicular trips is necessary for a sustainable and balanced transportation system within a vibrant City.

Recognizing the benefits of an integrated multi-modal transportation system, the recommended mobility plan also reinforces low-carbon options, while addressing environmental and health benefits, and societal equity in mobility planning for all users.

Based on analysis and extensive consultation, 50 mobility recommendations covering all transportation modes are presented, that will transform the study area from car-dependent travel to other modes, and most predominantly to transit.

2 Introduction

The major investment into the Eglinton Crosstown LRT (ECLRT) line will significantly improve regional and local mobility, directly with enhanced higher-order and feeder bus transit options, and indirectly with supportive multi-modal and shared mobility strategies. Correspondingly, City-building opportunities will emerge, presenting opportunities to integrate new residential and employment intensification, including an enhanced public realm.

To manage this growth, the City of Toronto completed EGLINNTONconnects, a comprehensive planning study along the Eglinton Avenue corridor. EGLINTONconnects focussed on planning for the future Eglinton Avenue and how to best leverage transit investment for the benefit of local communities and the City. In addition, the EGLINTONconnects study identified Laird Drive and Eglinton Avenue area as one of six focus areas with larger parcels of land fronting Eglinton Avenue that could have greater opportunity to accommodate future population and employment growth.

City Council recommended the Laird Drive and Eglinton Avenue area as a specific Focus Area for intensification around the future LRT station through the adoption of the EGLINTONconnects Implementation Report in 2014. This came with a direction to develop a Secondary Plan to implement site-specific planning objectives.

2.1 About Laird in Focus Study

As part of EGLINTONconnects, a conceptual demonstration plan was developed for the Laird Drive and Eglinton Avenue area, referenced as the Laird Focus Area, showing the potential arrangement of streets, development blocks, building massing, and open spaces. Over-arching principles were also proposed that would guide the development of subsequent study and public consultation as shown in Figure 2-1.

This Laird Focus Area, identified as Study Area A for this study, would include the properties located on the south side of Eglinton Avenue between Vanderhoof Avenue, Laird Drive, and to the western limit of Aerodrome Crescent. Currently, this area generally consists of large lots with low-rise employment buildings with significant amount of surface parking.

Building on this Laird Focus Area opportunity, the City also included the properties located on the west side of Laird Drive that are designated as Mixed-Use Areas. These properties between Vanderhoof Avenue south to Millwood Road were identified as Study Area B for this study. Presently, these smaller properties consist of mostly commercial uses in 1-2 storey buildings.

An integrated planning process was undertaken for Study Areas A and B to support the development of a planning framework, including a transportation and servicing study, to guide future development.

To encompass Study Areas A and B and to address broader travel issues in the Leaside neighbourhood, both the residential and employment areas, a larger transportation study area extended the geographic area that includes Laird Drive on the west, the CPR tracks to the

south and east, and Eglinton Avenue to the north. The transportation study area includes the review of key intersections and corridors along Laird Drive and Eglinton Avenue.

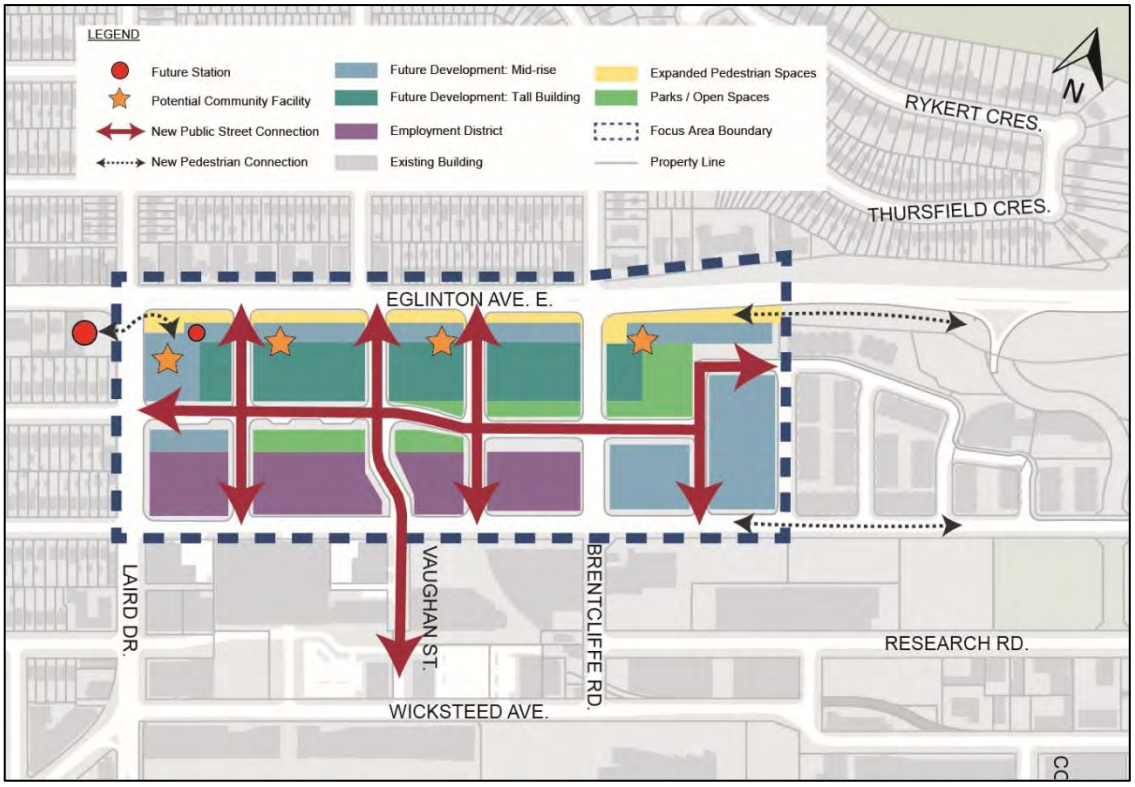
Together, Study Area A (original Laird Focus Area), Study Area B (Mixed Used Areas along the west side of Laird Drive), and the larger transportation study area form this study's overall Laird in Focus study area. For this Mobility Report, the term "study area" shall refer to the transportation study area as shown in Figure 2-2.

To be noted, although a core transportation study area has been identified, for the purposes of transportation analysis, a larger area of influence was selected to investigate the Leaside community travel behaviours and trends. This is discussed later in the report.

The Laird in Focus study was conducted in three phases:

- Phase 1 – Study Initiation, Background Analysis, Consultation and Visioning
- Phase 2 – Design, Analysis, and Testing of Alternatives
- Phase 3 – Final Consultation Report and Plan Development.

Figure 2-1: Guiding Principles



The Laird in Focus study sets out a new planning framework to support residential intensification and continued employment investment. Multi-modal transportation strategies and key infrastructure improvements have been defined for the study area, as well as a street and block plan and integrated public realm improvements for Study Areas A and B. The emphasis will be to develop a multi-modal transportation strategy / network to:

- support the long-term vitality of the Laird Employment District and residential growth;
- promote the use of the Eglinton Crosstown LRT; and
- improve overall transportation conditions.

This report documents the works completed through all three phases of the Laird in Focus Study.

Figure 2-2: Study Areas

2.2 Approach and Principles

In embracing a multi-modal transportation approach that is sustainable and balanced, redefining the transportation mode hierarchy is required. The following transportation mode hierarchy has been adopted, consistent with the City's policies:

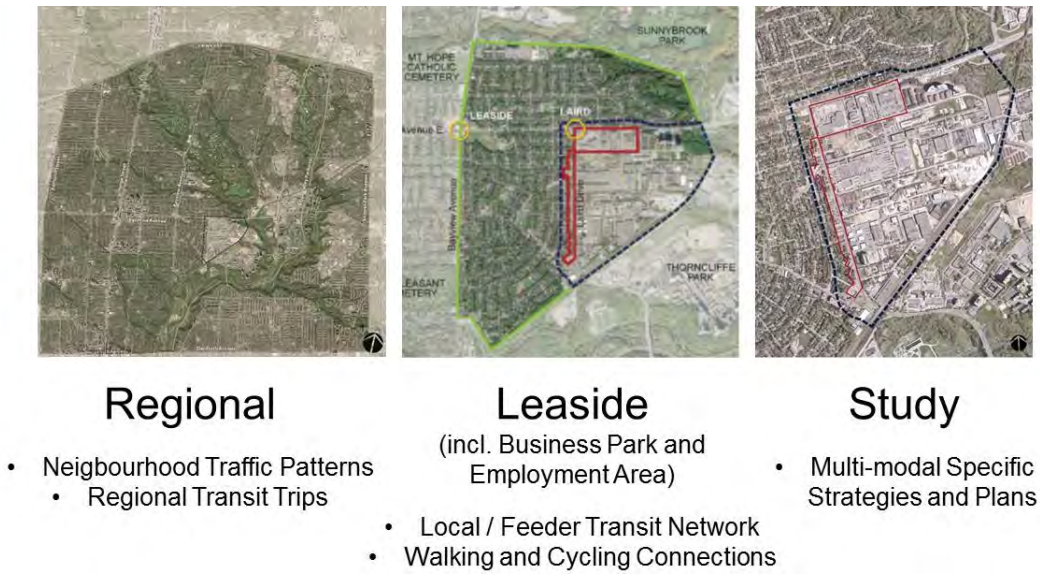
- **Active transportation** – walking and cycling modes provide both health and infrastructure capital and operating cost benefits.
- **Transit network** – higher-order transit lines, such as the Eglinton Crosstown, provide significant opportunities to not only impact regional trip choices away from vehicles, but also to facilitate development that is active transportation supportive. Further, feeder bus networks can be effectively planned to connect higher-order transit lines with residential communities and employment districts.

- **Transportation demand management and innovative mobility strategies** – adopting technological advances, accepting emerging governance structures, supporting shared arrangements, and encouraging / incentivizing societal behaviour changes directly present infrastructure cost benefits, but also fulfils a need for non-peak travel periods.
- **Goods movement** – supporting the vitality of employment lands is critical to an economically sustainable City.
- **Vehicular movement and associated parking** – it is recognized that vehicles and parking will remain important elements of a transportation network. However, to accommodate future transportation demands, these represent major infrastructure costs and quality of life impacts. Shifting away from vehicular trips is necessary for a sustainable and balanced transportation system within a vibrant City.

Recognizing the benefits of an integrated multi-modal transportation system, the future mobility framework should reinforce the low-carbon option while addressing environmental and health benefits, and societal equity in mobility planning for all users. Adopting this mobility framework, from planning through to implementation, will reallocate space and financial commitment to sustainable and shared mobility facilities, thereby improving the urban quality of life.

A hierarchical transportation approach was considered through three study lenses that will appropriately capture the broader area of influence, as depicted below.

Figure 2-3: Local and Regional Contexts



Based on established City policies and best practices (see Section 3), the following principles were adopted as the foundation for the integrated transportation planning framework:

Safety – promote a safety-first mindset that addresses all users of all ages and abilities, and the interaction between all modes with perquisite priority to those vulnerable modes.

Accessibility – ensure a range of movement choices that work together to provide seamless mobility in keeping with the multi-modal policies in Toronto's Official Plan that ultimately improves the quality of life and accessibility to desired destinations for area residents of all ages and abilities.

Connectivity – provide better connectivity as a key element component of good neighbourhood design, such as fine-grained grid network patterns, to support multi-modal access.

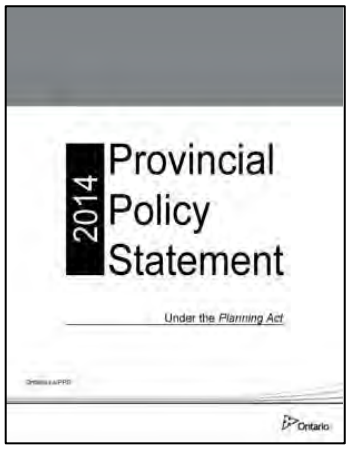
Complete Streets – promote a multi-modal solution that strives to balance the needs and priorities of various users, while reflecting local context and character.

3 Planning Policies and Guidance

There are numerous guiding principles and policies from the City and Provincial government that provide direction and guidance on the future mobility objectives in the study area. Below is a summary of the key background documents relevant to the Laird in Focus transportation study.

3.1 Provincial Planning Context

3.1.1 Provincial Policy Statement, 2014



The 2014 Provincial Policy Statement, was a province-wide vision for the province's land use vision. It develops landscapes, built environments, and manages resources over a long term, to achieve a liveable and resilient community. The directions include:

- Provide appropriate development while protecting resources, public health and safety, and the natural and built environments;
- Build strong, healthy communities by supporting density and land uses which support active transportation, are transit-supportive, and freight-supportive;
- Develop supporting land use patterns where transit is planned or expected;
- Safe, energy efficient, transportation systems that move people and goods;
- Integrated transportation and land use considerations at all stages of the planning process;
- Use of TDM strategies to maximize transportation network efficiency; and
- Land use pattern, density, and mix of uses to minimize length and number of vehicle trips, support current and future use of transit and active transportation.

3.1.2 Growth Plan for the Greater Golden Horseshoe, 2017

In the updated 2017 Growth Plan, some of the relevant guiding principles are:

- Design complete communities to meet people's needs for daily living throughout an entire lifetime;
- Prioritize intensification and higher densities to make efficient use of land and infrastructure and support transit viability;
- Offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services;
- Provide for the safety of all system users; and
- Municipalities will develop and implement transportation demand management policies in official plans or other planned documents or programs.

3.1.3 The Big Move, 2008 (2017 Update)

GTHA's first Regional Transportation Plan (RTP), *The Big Move*, identifies a 25-year plan for the Regional Rapid Transit and Highway Network. The RTP provides policies, goals, and directions to support active transportation and safer environments for all mobility users. The focus of the RTP is to leverage transit investment and integrating all transit systems. One of the identified *Big Move* projects was the Crosstown Regional Rail line, which would utilize the existing CPR corridor that is along the east side of the study area.

The RTP was being reviewed and updated, with a new update published in March of 2018. The RTP update provides direction on advancing mobility including new opportunities such as, car-sharing, ride-sharing, bike-sharing, and autonomous vehicles for a horizon year of 2041.

3.1.4 #CycleON: Ontario's Cycling Strategy, 2013

Ontario's Cycling Strategy provides a route map to support and encourage this growth in cycling over the next 20 years. Key strategic directions include:

- Design healthy, active and prosperous communities;
- Improve cycling infrastructure;
- Make highways and streets safer;
- Promote cycling awareness and behavioral shifts; and
- Increase cycling tourism opportunities.

3.1.5 Ontario's Five Year: Climate Change Action Plan (2016-2020)

Ontario's Climate Change Action Plan is a five-year plan that will help Ontario fight climate change over the long term. The plan calls for a cleaner transportation system by:

- Increase the availability and use of lower-carbon fuel;
- Increase the use of electric vehicles;
- Support cycling and walking;
- Increase the use of low-carbon trucks and buses; and
- Support the accelerated construction of Go Regional Express Rail.

3.2 City of Toronto Context

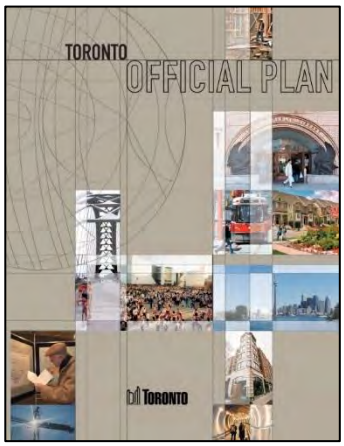
3.2.1 Road Safety Plan (Vision Zero), 2017

The City of Toronto released it Road Safety Plan, based on Vision Zero principles, in 2017 for the next 5 years. The philosophy of Vision Zero is to eliminate fatalities and serious injuries within the transportation system in contrast to the traditional approach in reducing all collisions. Vision Zero is a long-term strategy, aimed at eliminating fatalities and serious injuries on city streets through:

- Engineered safety measures;

- Technological improvements;
- Education; and
- Enforcement.

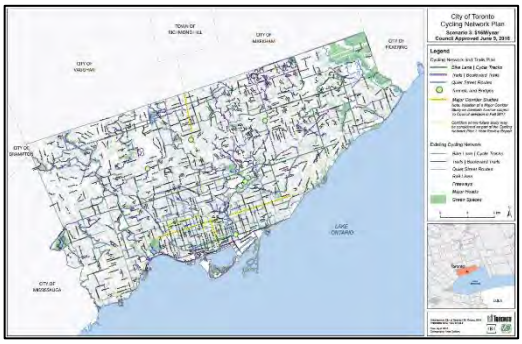
3.2.2 Official Plan, 2015



The City of Toronto Official Plan provides new transportation policies (By-law No. 1009-2014) adopted by City Council that addresses developing mobility systems for the future. The key items include:

- Importance of transportation and land use that is mutually supportive and integrated;
- Mixed-use proximity to maximize accessibility;
- Reduced impact on public realm during development process;
- A new Complete Streets Framework, discussed further in Section 3.4.1;
- Supportive of expanding TDM initiatives; and
- Achieving a balanced and multi-modal network.

3.2.3 Cycling Network 10 Year Plan, 2016



Toronto City Council approved the City's Cycling Network Ten Year Plan, serving as a roadmap and workplan for investments in cycling infrastructure over 2016-2025. The plan identified opportunities for cycling infrastructure investments throughout Toronto. This includes recommendations for cycle tracks, bike lanes, and cycling wayfinding signage.

3.3 Eglinton Crosstown

The Eglinton Crosstown LRT (ECLRT) is currently under construction. In 2014, the City of Toronto adopted the EGLINTONconnects Planning Study, with the intent to leverage the major investment in higher order transit with redevelopment and city building opportunities along the corridor.

3.3.1 EGLINTONconnects Planning Study, 2014

The EGLINTONconnects Planning Study was initiated by the City of Toronto to examine the future land uses, built form, public realm and street layout on Eglinton Avenue in anticipation of the opening of the Eglinton Crosstown LRT in 2021.

Eglinton Avenue is identified as an intensification corridor in Metrolinx's Regional Transportation Plan. The Eglinton Crosstown, which is a light rail transit (LRT) line that will run across Eglinton Avenue between Mount Dennis (Weston Road) and Kennedy Station, is

currently under construction. From Mount Dennis Station to Laird Station, the line will operate underground and will transfer to an at-grade alignment just east of Brentcliffe Road.

The intersection of Laird Drive and Eglinton Avenue East has been identified as a location for an LRT station. The main entrance will be at the southwest corner of Laird Drive and Eglinton Avenue East and the secondary entrance will be in the southeast corner.

3.3.2 Laird Focus Area, 2014

Through the EGLINTOconnects Planning Study, the area around the intersection of Laird Drive and Eglinton Avenue was identified as a key focus area. The following main objectives and principles related to transportation were identified:

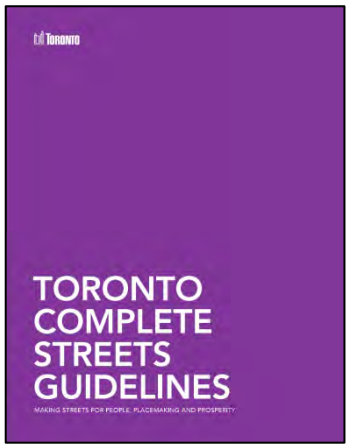
- Provide finer grain of public streets and blocks, by introducing new north-south and east-west public streets;
- Enhance permeability of the site for pedestrians by creating connections throughout larger blocks including direct linkages to station entrances;
- Integrate LRT access points into new developments to provide seamless and integrated access to rapid transit; and
- Provide a new pedestrian crossing of the future extension of Vaughan Street and Wicksteed Avenue.

This resulted in the recommendation to conduct this current study, to consider potential road networks, connect surrounding areas, and manage traffic operations.

3.4 Guidelines, Policies and Design Guidance

Further to the specific policies that influence the study area directly, there are several other provincial and municipal guidelines that provide guidance on a range of active transportation, design, and development related best practices. The follow sections present the relevant documents that will guide elements of this study as applicable.

3.4.1 City of Toronto Complete Streets, 2017



As part of the City's Official Plan, with the objective to ensure new and existing City Streets will incorporate a "complete streets" approach, designed to preform diverse roles by:

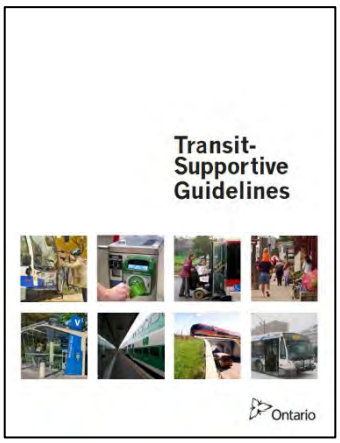
- Balancing the needs and priorities of various users and uses within the right-of-way;
- Improving the quality and convenience of active transportation options within all communities by considering the needs of pedestrians, cyclists, and public transit users;
- Reflect the differences in local context and character;
- Provide building access and address, as well as amenities such as view corridors, sky view, and sunlight; and
- Serve community destinations and public gathering places.

These key guiding principles are to be incorporated in various elements throughout this study, ensuring that streets are for people, placemaking, and prosperity.

3.4.2 MTO Transit Supportive Guidelines, 2012

The guidelines identify best practices in Ontario, North America and abroad for transit-friendly land-use planning, urban design and operations that look to create an environment that is supportive of transit, and developing services and programs to increase transit ridership. Strategies identified include:

- Layout of local streets and open spaces to enhance access to transit and create a more positive user experience;
- Creating complete streets that support all road users;
- Enhancing access to transit to ensure that stations and stops facilitate access and transfers;
- Creating a transit-supportive urban form; and
- Parking management to ensure parking resources are adequately utilities and encourage a shift away from single-occupant vehicles.



These guidelines help provide starting points and ideas that combined with localized context, will ensure transportation plan that is supportive of transit ensure.

3.4.3 Design Guidelines

There are numerous design guidelines provided by the City of Toronto and Province of Ontario, that will be relevant to proposed transportation solutions in this study. These include:

- **City of Toronto Curb Radii Guidelines, 2017** - While Transportation Association of Canada (TAC) Guidelines are typically relied upon for design, the City of Toronto Curb Radii Guidelines were developed to better incorporate the needs of all road users, including pedestrians and cyclists of all ages and abilities.
- **City of Toronto Curb Extension Guidelines, 2017** - The City of Toronto Curb Extension Guidelines were developed to better address site-specific conditions encountered in Toronto.
- **City of Toronto Vehicle Travel Lane Width Guidelines, 2017** - The City's Travel Lane Width Guidelines were reviewed and updated, and will become part of the future Toronto-specific street design guidelines. The new guidelines rebalance safety, access, and comfort of all road users, including cyclists and pedestrians, when recommending lane widths.
- **OTM Books 15 and 18** - The Ontario Traffic Manual (OTM) is comprised of several books which provide guidance for the "planning, design, construction, and operation of traffic control devices and systems" thus promoting uniformity of approaches across Ontario. There are two recently updated Books which provide the latest innovation and guidance on active transportation: Book 15 - Pedestrian Crossing Facilities, and Book 18 - Cycling Facilities.

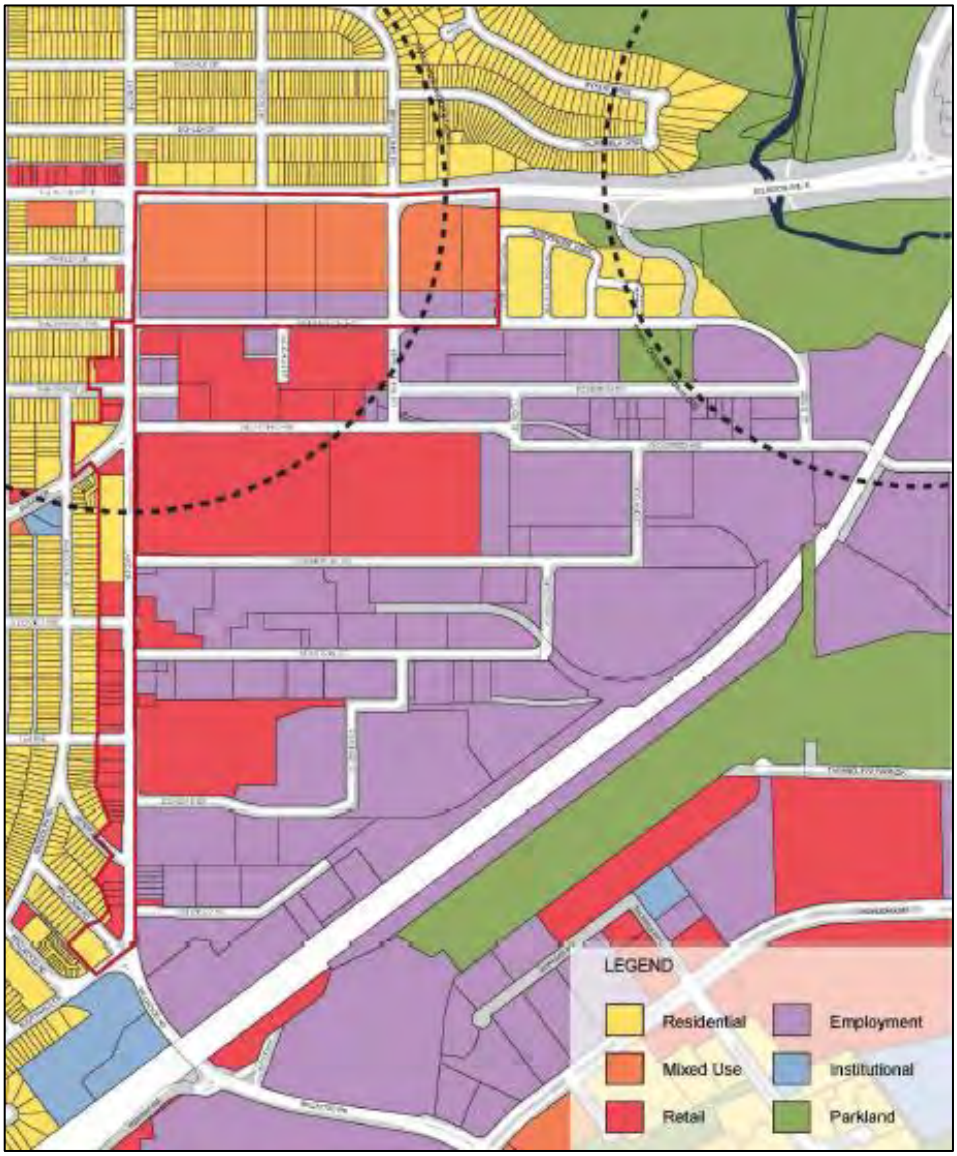
4 Existing Conditions

4.1 Land Use and Travel Context

4.1.1 Land Use

The current land use designations within the study area is primarily employment with some mixed-use areas along Eglinton Avenue and Laird Drive. North and west of the study area, within the communities of Leaside and North Leaside, it is primarily comprised of residential communities. East of the site, there are natural areas as part of the Don Valley ravine system.

Figure 4-1: Existing Land Use Designations within Study Area



4.1.2 Car Ownership Trends

Transportation Tomorrow Survey (TTS) data was used to observe historical trends for the following:

- Employment and household trends within the Leaside employment lands area (i.e. area bounded by Laird Drive, CPR and Eglinton Avenue – to be noted, Leaside residential areas exhibited relatively stable population and employment between 1991 and 2011); and
- Vehicle ownership trends within the Leaside residential and employment areas between 1991 and 2011.

It was found for the Leaside employment lands area that in 1991 there was a peak in employment, followed by a decline that reached its lowest point in 2001. By that point, employment in the area had more than halved, from just under 5,000 people to less than 2,000. Employment has returned to the Leaside employment lands area, with figures reaching 4,000 people in the latest 2011 TTS survey. This trend is illustrated can be seen in Figure 4-2.

Given that the area is primarily for employment use, there is a limited number of households. Some residential developments have been constructed within the last decade, with just over 100 households observed in 2011 as shown in Figure 4-2.

Given the low number of households within the employment lands area, vehicle ownership was assessed with the inclusion of the nearby North Leaside and Leaside neighbourhoods to reflect trends in the general area. It was found that car ownership has increased over time, with the average number of vehicles per household increasing from 1.21 in 1991, to 1.45 in 2011 with a greater share of households now having 2-3 vehicles as shown in Figure 4-3. This is likely a reflection of lowered employment in the study area and the increase in dual worker households.

Figure 4-2: TTS Historical Employment and Residents for Employment Lands Area

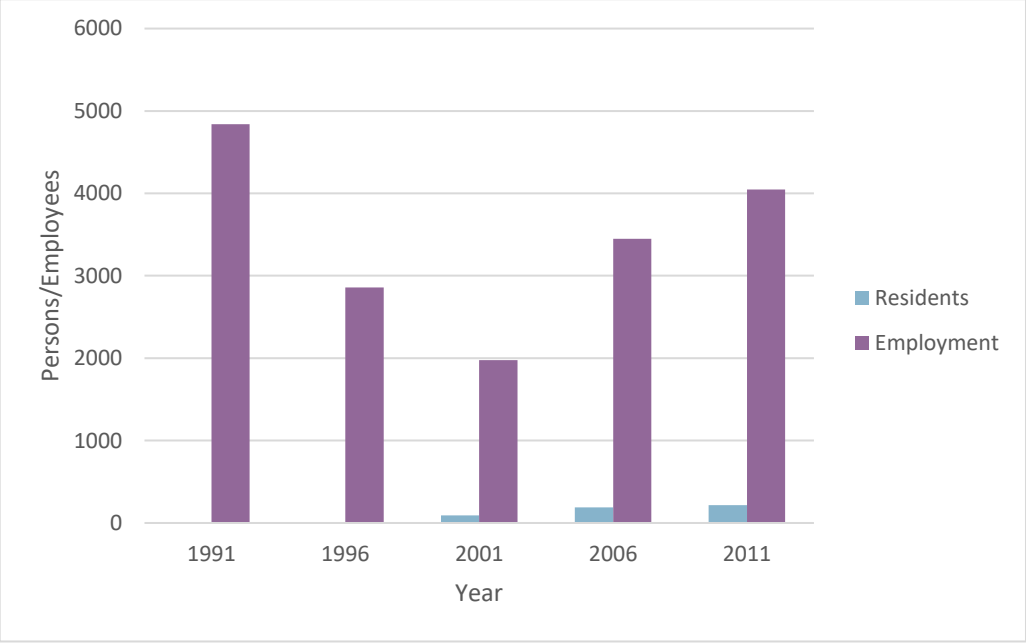
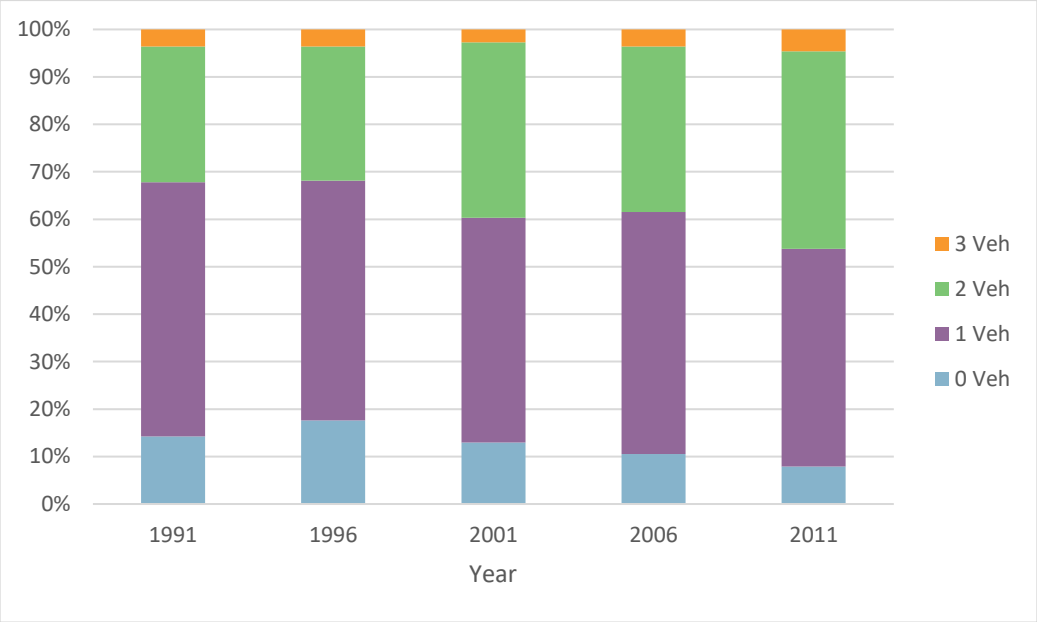


Figure 4-3: Vehicle Ownership Within Leaside Study Area

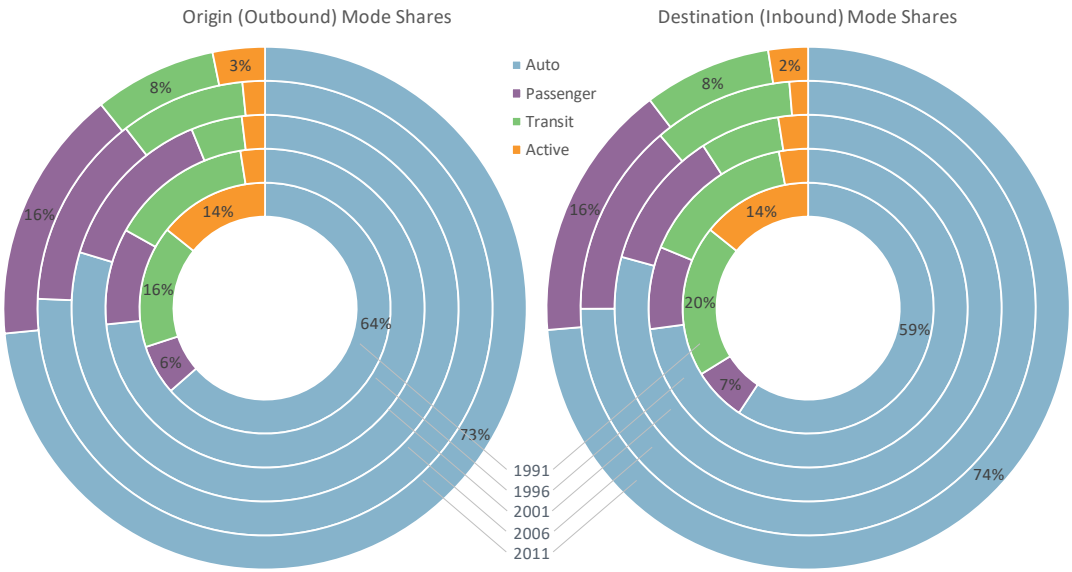


4.1.3 Travel Patterns

Mode Splits

Trips into and out of the study area have significantly changed in travel mode shares since 1991. Initially, trips to the area had a low number of auto trips, with significant use of active modes. However, active mode share use has dropped significantly since then, with an increasing reliance on auto, both as a primary driver and passenger. This is also reflective of the trend in nearby areas for increased vehicle ownership as shown in the previous section. There has been a marginal decline in transit trips due to the lack of new infrastructure in the area.

Figure 4-4: Travel Mode Shares



Peaking

The distribution of trips throughout the day is generally consistent with the land use in the area (commercial/industrial), based on 2011 TTS data. Most of the inbound work trips occur during the morning peak hour, and leave during the afternoon peak hour. Other trips, primarily retail related, tend to occur starting at 10 AM and end around 8 PM, and reflect the operating hours of the establishments. These trends are shown in Figure 4-5 and Figure 4-6 for trips out of and into the study area respectively. Each trip type, home based work (HBW), home based school (HBS), home based other (HBO), and non-home based (NHB) are showing separately.

Figure 4-5: Outbound Trip Distribution

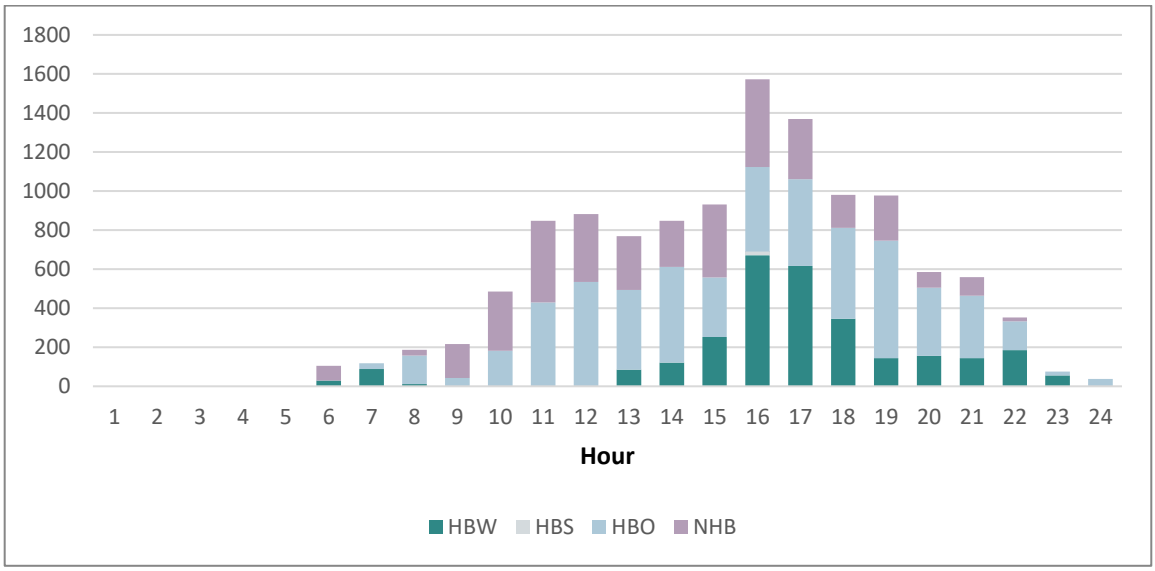
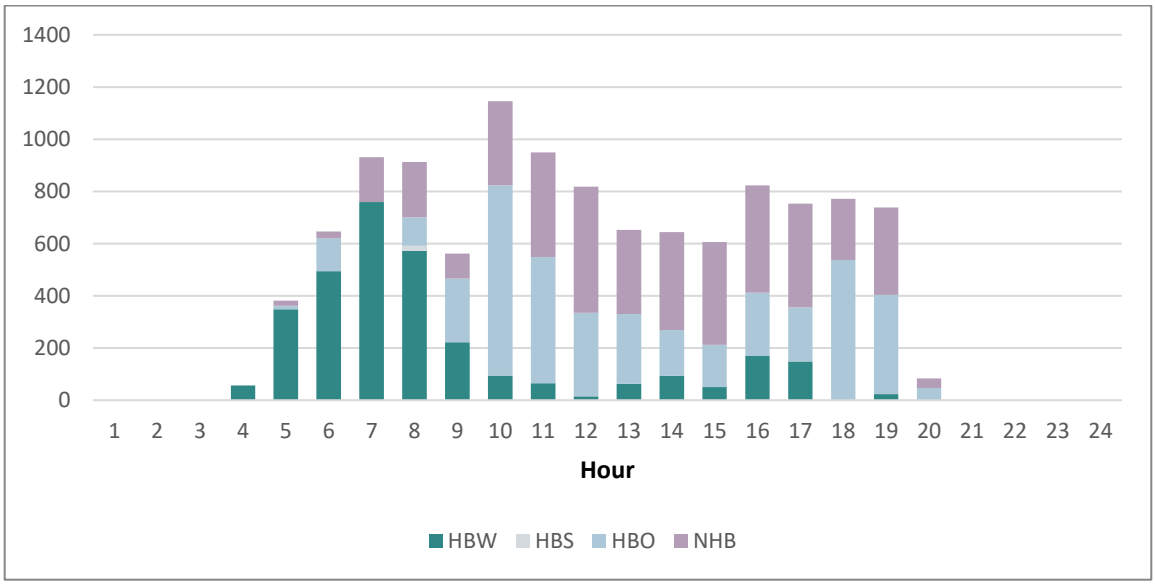


Figure 4-6: Inbound Trip Distribution

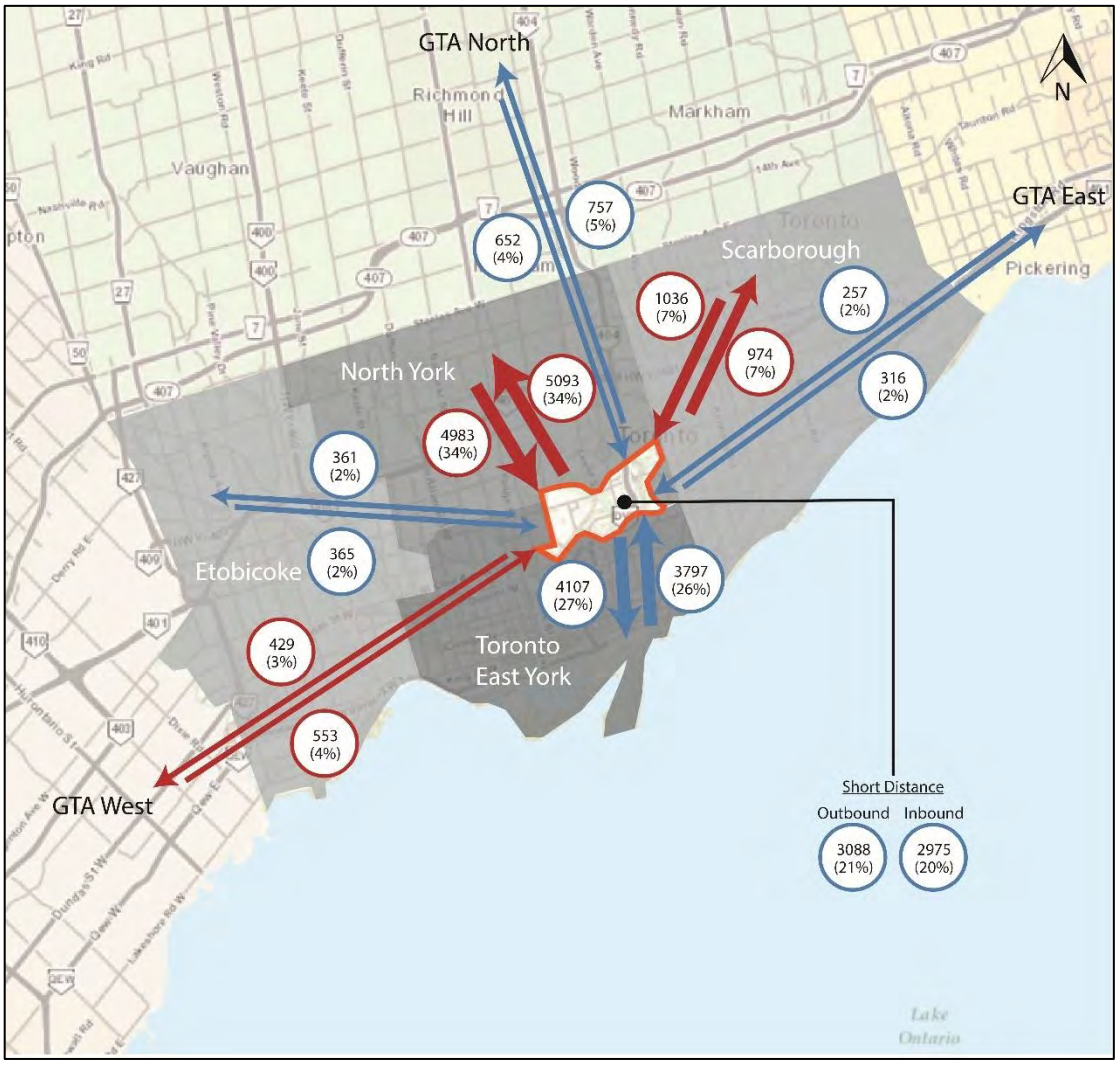


4.1.4 Regional Travel

Regional travel patterns were assessed, and overall travel to and from the study area through all modes was determined using TTS 2011 data. It was found that approximately 20% of the trips were localized within Ward 26 which the study area is a part of. This ward is bounded

approximately by Bayview Avenue to the west, Eglinton Avenue to the north, and the Don Valley Parkway to the east/south. Around 60% of the trips occur to and from the North York, and central Toronto regions. Etobicoke, Scarborough, and other areas in the GTA accounted for only 20% of the total trips as shown in Figure 4-7. Over half of all trips remain within the overall North York area. These high-level TTS findings are consistent with location-based data findings provided in the next section.

Figure 4-7: Regional Travel Patterns



4.1.5 Location-Based Data

In addition to the travel context analysis done with Transportation Tomorrow Survey (TTS) data, analysis using StreetLight Data Inc. location-based data was also conducted. Streetlight uses archived GPS data from connected cars, trucks, traffic apps, and other similar data sources to develop metrics for travel behavior. This allows for unique assessments of specific zones, locations, and routing of personal and commercial vehicle traffic. To be noted, Streetlight data captures analytics for over 20% of the adult Canadian population, while TTS data generally has only a 5% sample size.

For the purposes of this report, Streetlight data was used to assess vehicular travel patterns from a regional context, neighbourhood travel patterns and potential infiltration findings. Local commercial vehicle travel patterns were also assessed.

To fully appreciate the vehicle travel patterns, six origin-destination zones were setup that started at the local level with the Leaside and employment lands areas, and expanded to regional scales of the entire Greater Golden Horseshoe, as shown in Figure 4-8. The zones were strategically developed to appreciate potential mobility solutions in subsequent study phases (i.e. Zone 3 was established to be 2-3 km from the transportation study area to assess potential mode shifts to active transportation; Zone 4 was developed to assess potential TDM, feeder bus, and cycling initiatives). Data is collected by identifying gates or zones where traffic is tracked to and from, as shown in Figure 4-9.

The assessment from a regional perspective shows that approximately 50% of peak period traffic on a typical fall day in 2016 travelled to and from the study area, either internally or from nearby areas (i.e. Zones 1, 2 and 3 - less than 3 km), and that 7-8% of total traffic was to and from areas outside the City of Toronto boundaries as shown in Figure 4-10.

Local study area analysis and findings are presented in Section 4.7.2 of this report, and additional details and maps of the approach are provided in the Appendix A.

Figure 4-8: Traffic Zones for Location-Based Data Collection

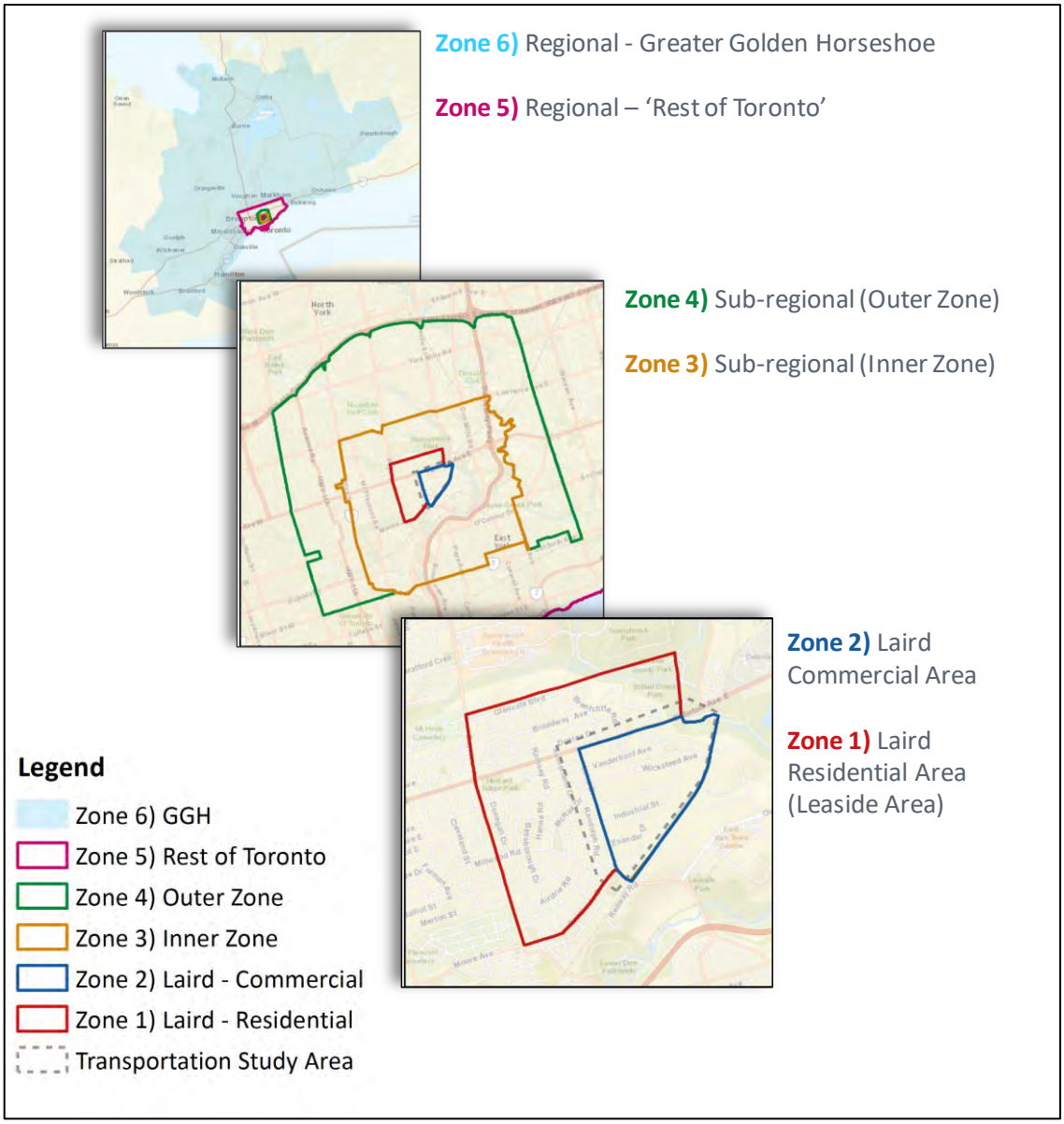


Figure 4-9: Zones and Gates

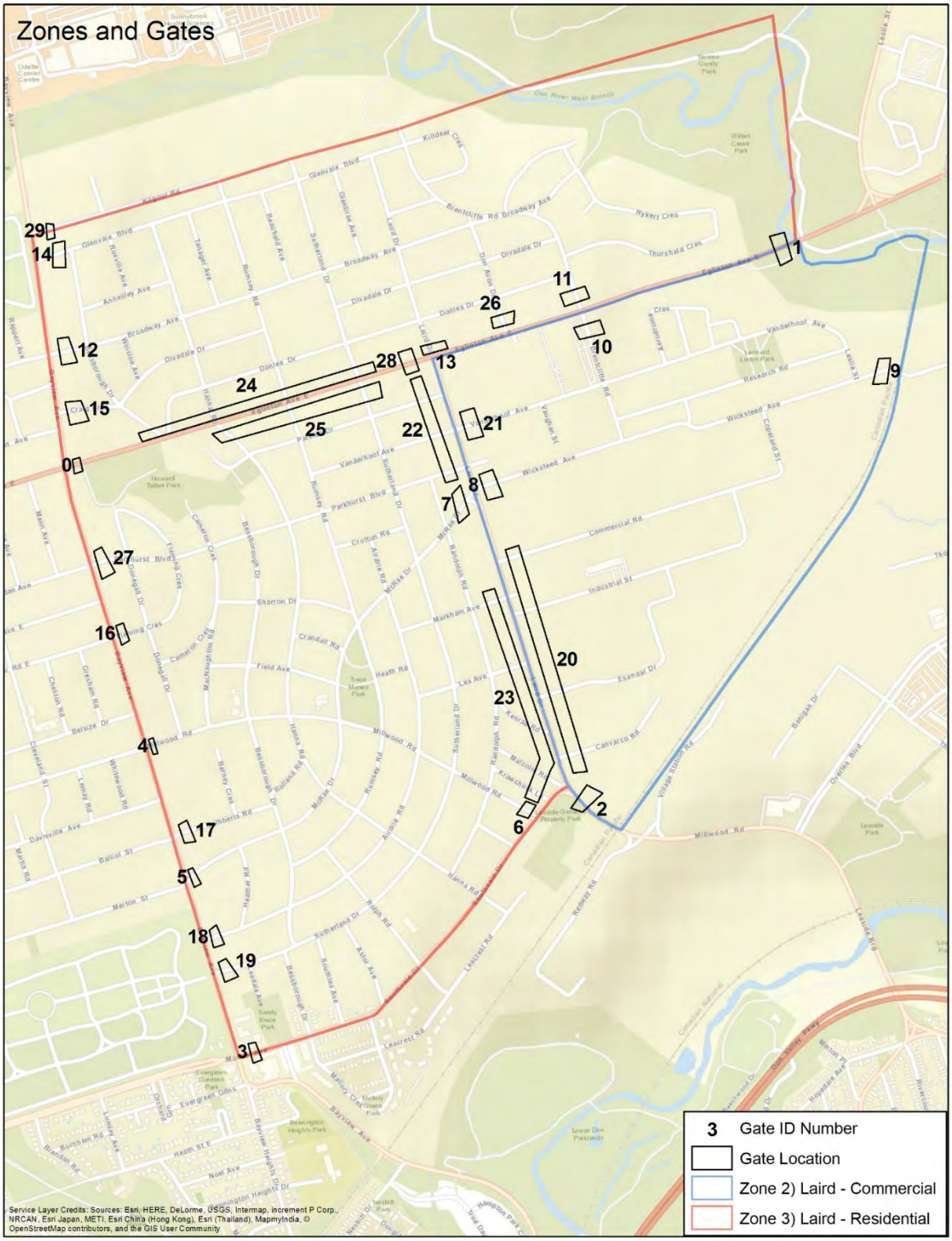
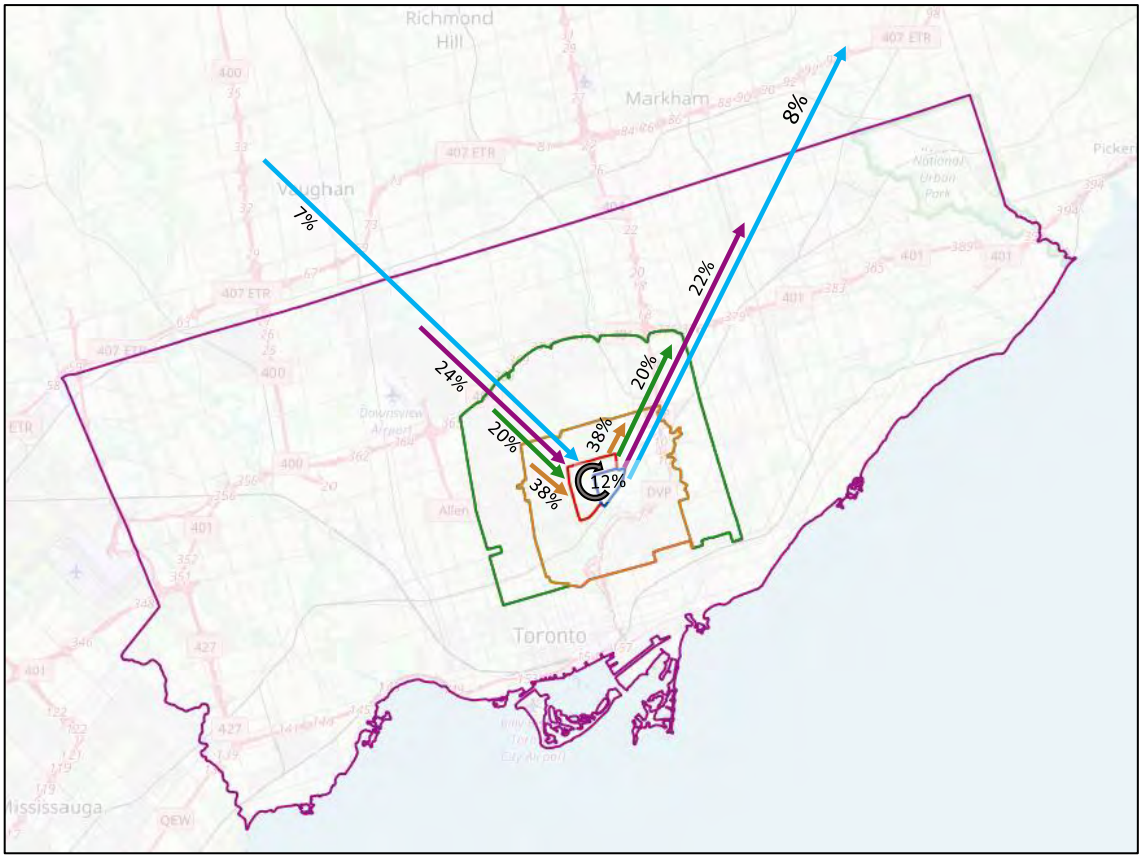


Figure 4-10: Streetlight 2016 Daily Regional Travel Patterns



4.2 Road Network

The road network within the transportation study area has not significantly changed since Eglinton Avenue East was extended easterly to cross both the CPR corridor and the Don River ravine system to connect to Don Mills Road and the Don Valley Parkway in the mid-1950's.

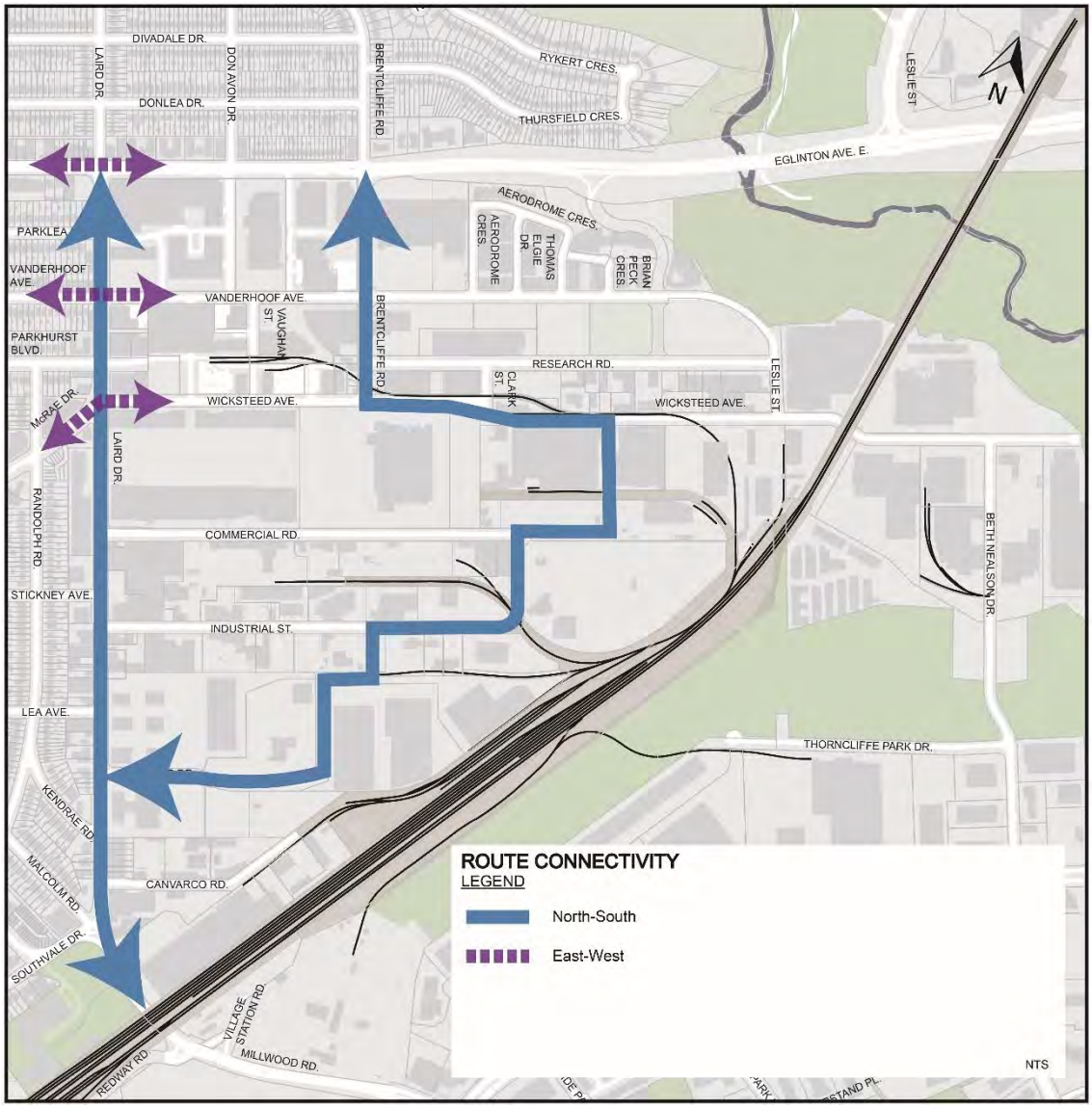
4.2.1 Connectivity

Connectivity within the study area is limited, the road network lacks granularity that is largely attributable to the current big box retail / industrial land uses. Other than Laird Drive, there are no north-south connections that extend through the study area. Also within the employment lands area, many of the roadways have 90° bends rather than intersections and transition from east-west to north-south roadways for short segments, as shown in Figure 4-11.

Laird Drive is a barrier for vehicles moving east-west, as side streets are offset, and/or there is a median to prevent through traffic. As a result, the east-west connectivity is limited to Eglinton Avenue, Vanderhoof Avenue, and Wicksteed Avenue. This leaves a significant lack of east-west connectivity for all users south of Wicksteed Avenue, as shown in Figure 4-11.

West of Laird Drive, the road network is suited for the residential land uses, and thus provide a much finer grain road network.

Figure 4-11: North-South and East-West Connectivity



4.2.2 Regional Connections

There are limited connections from the study area to adjacent regional areas due to the barrier effect created by the CPR corridor, and the Don Valley ravine system. The main connections into and out of the area are shown in Figure 4-12.

Figure 4-12: Regional Road Network Connections

4.2.3 Road Classification and Right-of-Way Width

In the transportation study area, there are two major arterial roads, Eglinton Avenue East, and Laird Drive south of Eglinton Avenue. Wicksteed Avenue and Brentcliffe Road serve as two minor arterials, while key collector streets include McRae Drive, Southvale Drive, and Wicksteed Avenue east of Brentcliffe Road. All other streets are classified as local. Figure 4-13 shows the relevant collector and local roadways in the study area. The traffic volumes, and commercial vehicle activity on these roads are further explored in Section 4.7 and 4.8 respectively.

Right-of-way widths are provided in Figure 4-14. There is a lack of consistent right-of-way widths on most roadways within the study area. Although there may be opportunity to normalize right-of-way widths as development occurs along each street, transportation improvements and adopting the City's complete street principles will be challenging given the existing conditions.

Figure 4-13: Road Classification Map

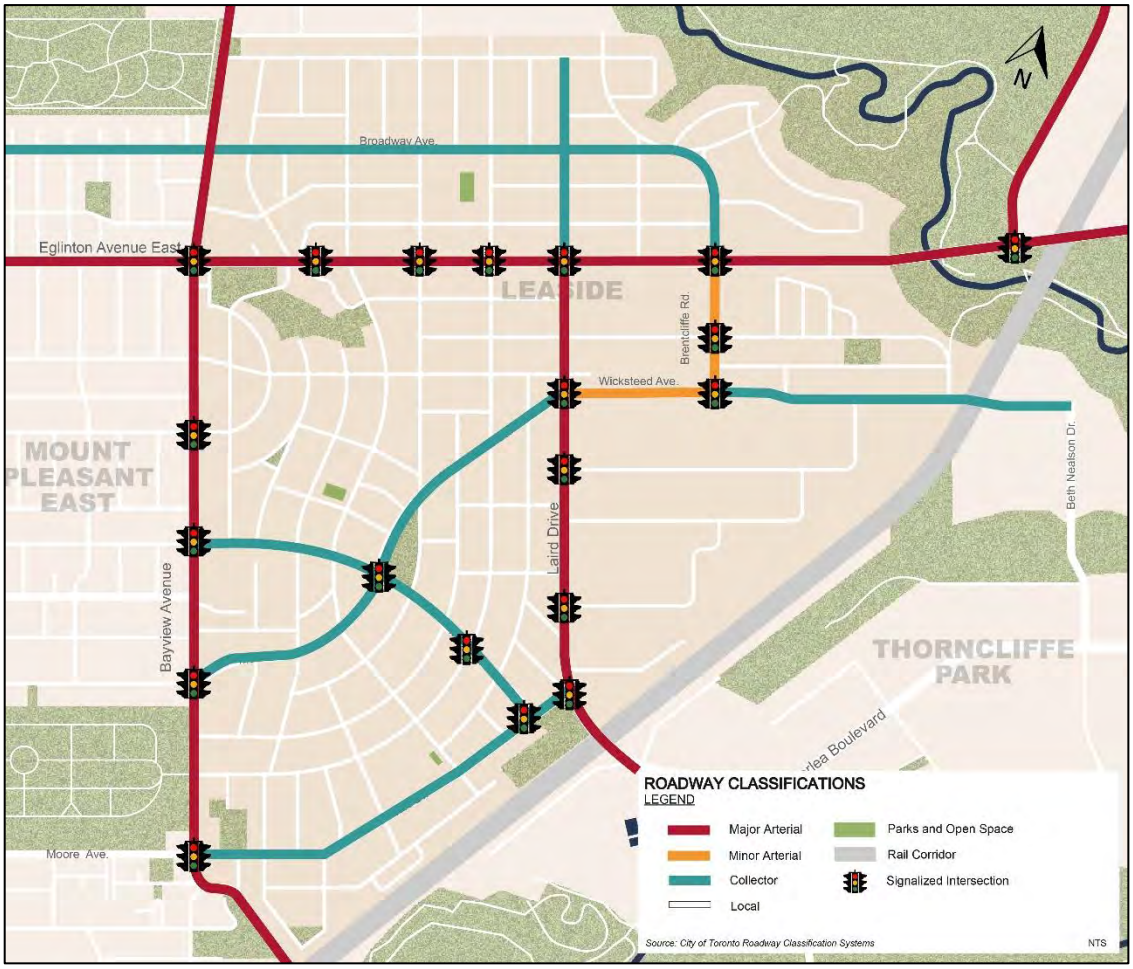
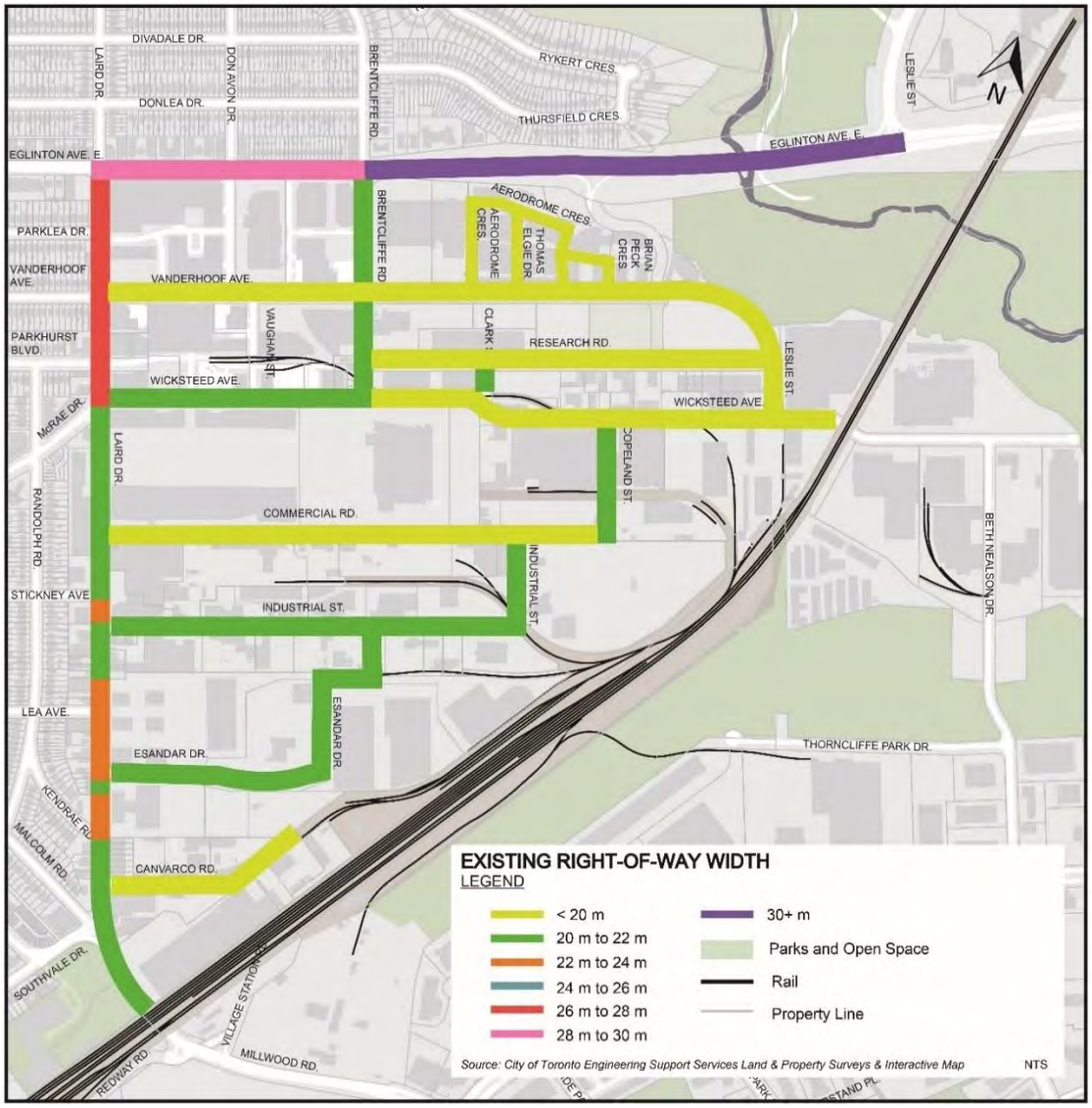


Figure 4-14: R.O.W. Widths



4.2.4 Safety

Collision data provided by the City was assessed for a 10-year period (2005-2016). In total, the study area was broken down into 23 roadway segments, and 8 intersections. The total collisions, separated by severity type (property damage only, personal injury, and fatality), is provided in Figure 4-15 and Figure 4-16. Only one fatality occurred in the study area, along Eglinton Avenue from Leslie Street to 7362 Eglinton Avenue East.

It was found the mid-block segments, Laird Drive from Vanderhoof Avenue to Wicksteed Avenue, and Eglinton Avenue from Laird Drive to Don Avon Drive, has the highest number of collisions within the study area. This is like due to the significant number of driveways and stop controlled side-streets which generates conflicts with vehicles along the main roadways. Additional formal street crossings and/or improved functional street designs to minimize potential turning conflicts can be one of the solutions. At signalized intersections, Eglinton Avenue and Laird Drive, and Eglinton Avenue and Brentcliffe Road had the highest number of

collisions, which might be due to the high percentage of turning movements, including truck volumes.

This presents an opportunity to better enhance the intersections designs and roadway elements, to ensure a safer environment for all users as per the City of Toronto's Vision Zero Plan. Cycling and pedestrian related collisions are low as shown in Figure 4-17.

Figure 4-15: Collisions at Signalized Intersections (2005-2016)

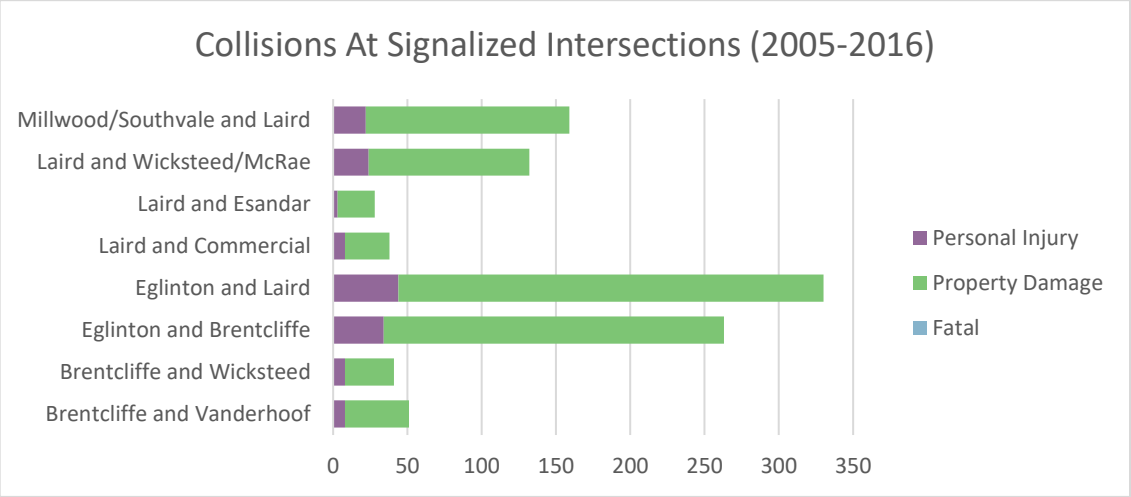


Figure 4-16: Collisions at Mid-Block Segments (2005-2016)

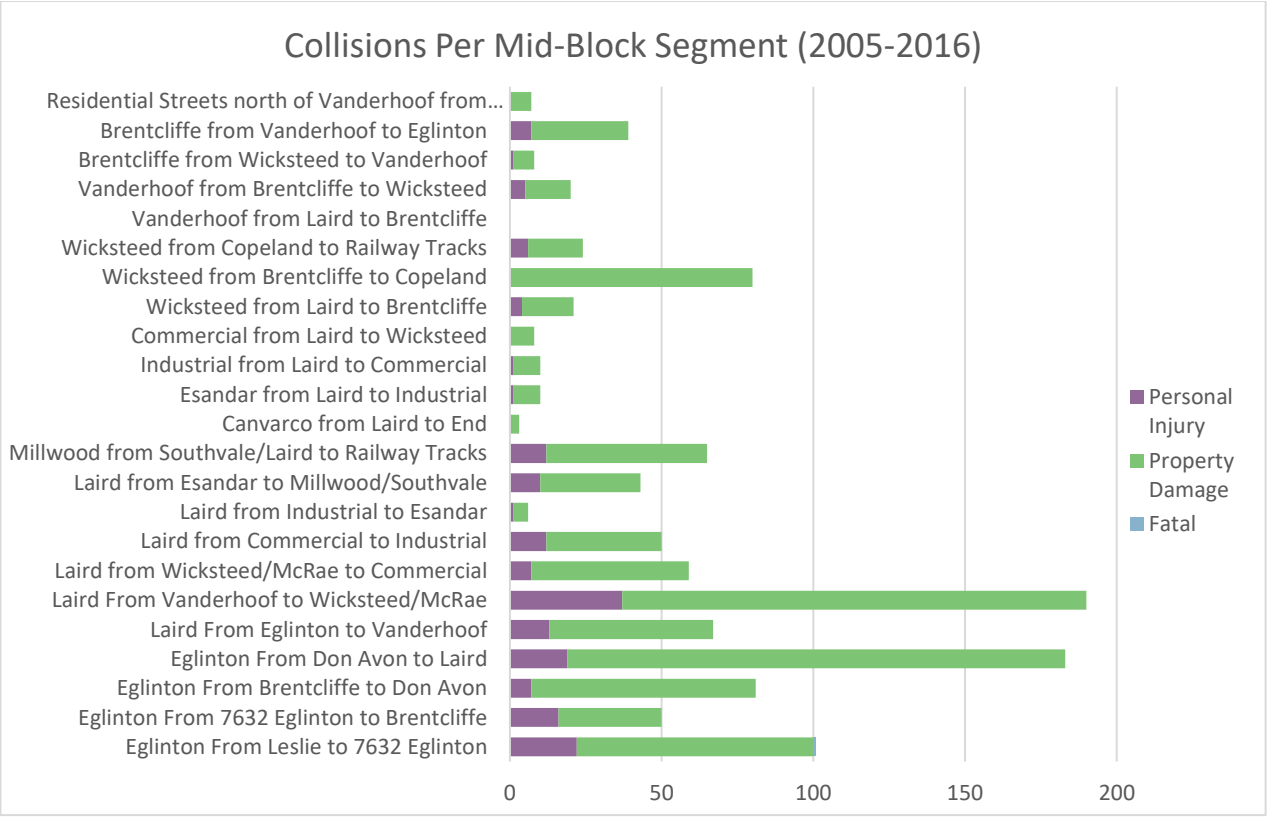
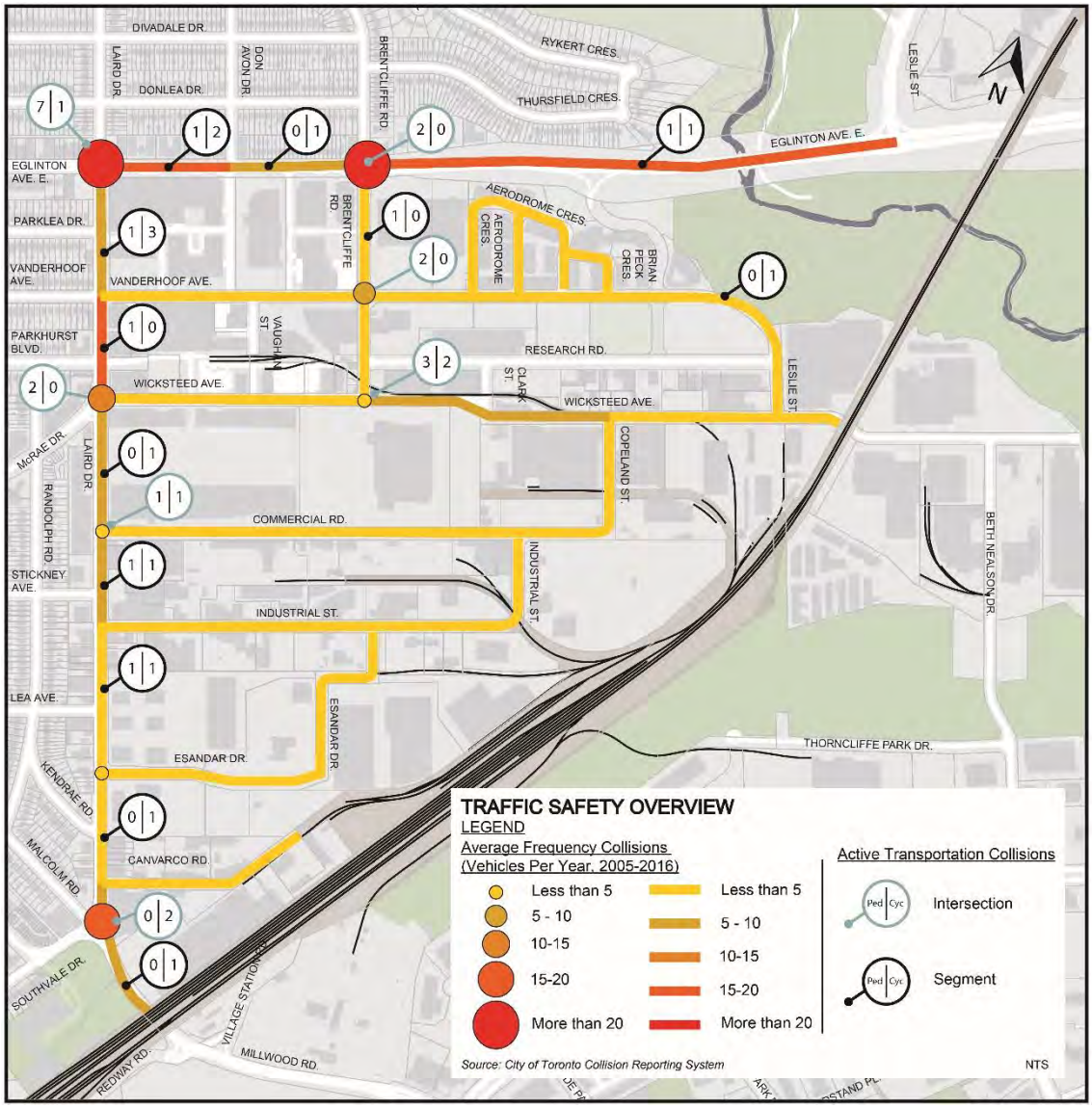


Figure 4-17: Collision Summary



4.3 Transit

Transit is served locally by the TTC. GO Transit service is provided along the Don Valley Parkway to the east of the study area. The study area is well served by the local TTC transit system, with 5 different bus routes passing through and stopping. The route information is provided in Table 4-1, and the routes themselves, including bus stop locations, are shown in Figure 4-18.

As previously noted, transit usage has marginally declined since 1991 based on TTS data. The changing character of the employment lands, transitioning from primarily industrial to big box mixed commercial / retail uses have significantly contributed to the lack of transit usage growth over the years.

Figure 4-18: TTC Routes and Bus Stop Locations

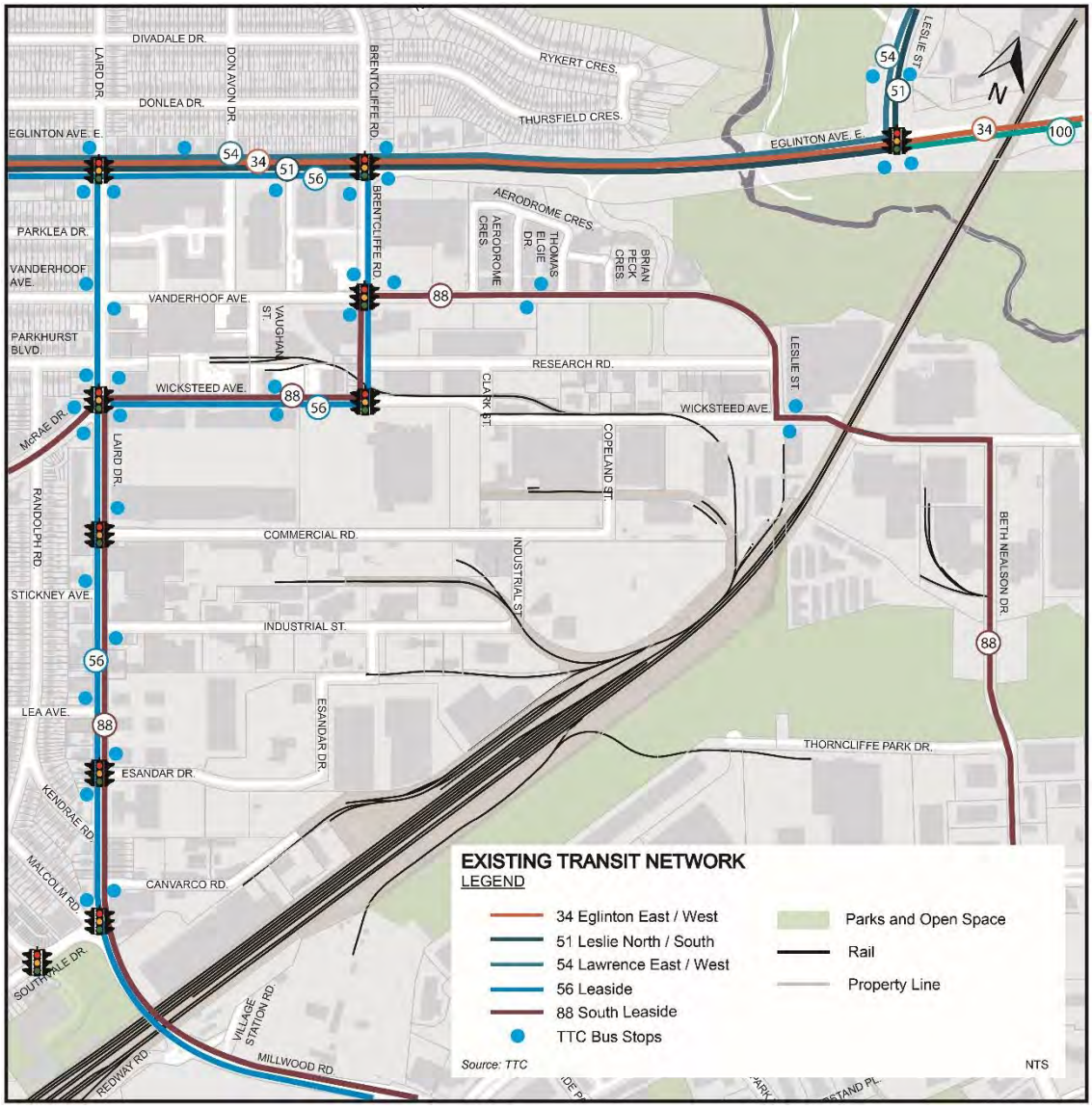


Table 4-1: TTC Route Information

51	Leslie	4	200	50	50
56	Leaside	6	300	200	100

*based on TTC Vehicle Crowding Standards, 2015 (Rounded to 50 persons/vehicle)

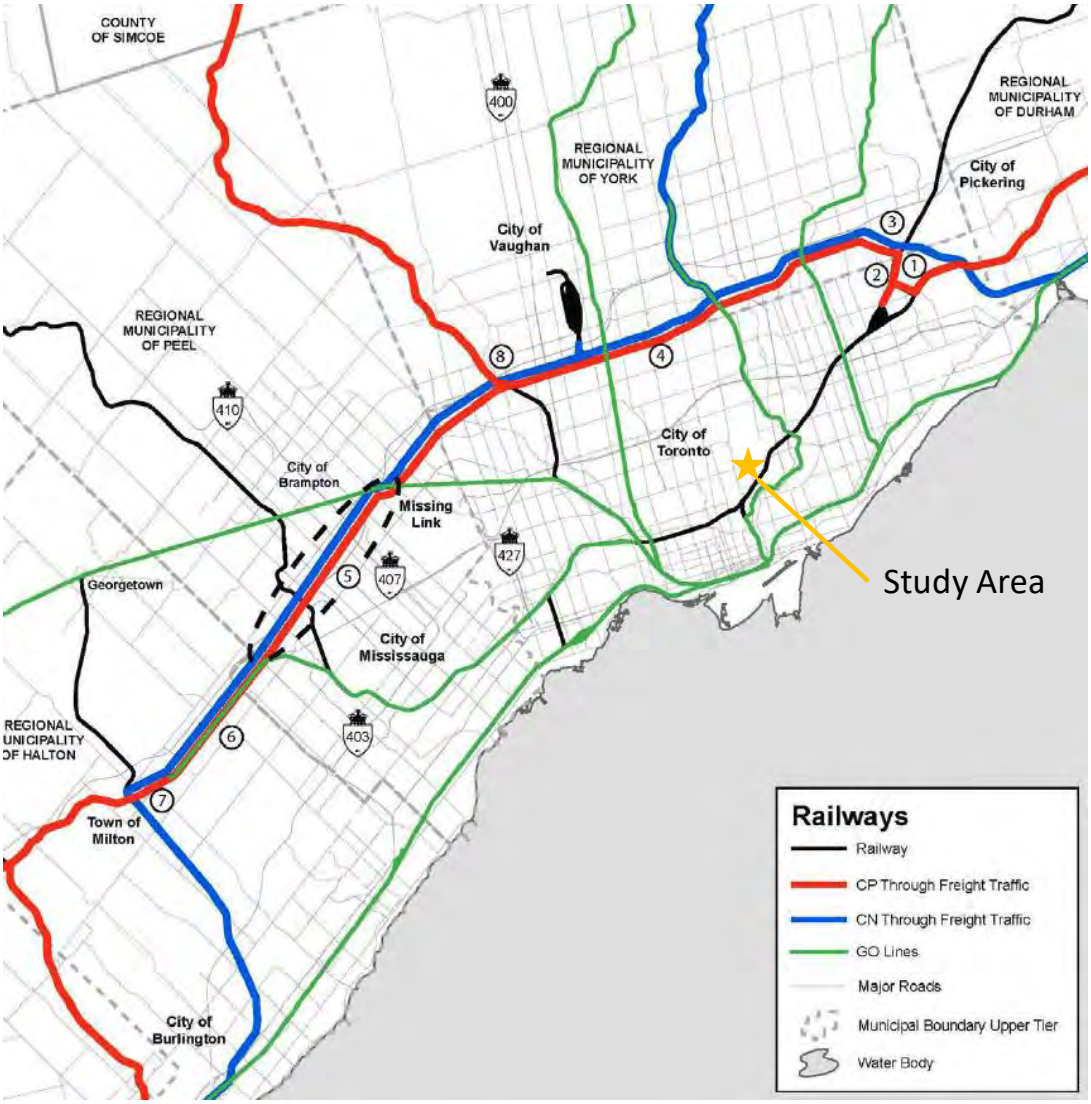
4.4 Rail

Historically, Leaside had a rail station located adjacent to the study area owned by Canadian Pacific (CP) Rail. Originally built to serve the developing Leaside community, passenger service ended in 1982. The current rail corridor that passes through the study area, is used for freight rail traffic from CP Rail that connects through the central areas of Toronto. Existing freight traffic amounts to approximately 30-50 trains per day.

There is a potential for adding the "Missing Link", as shown in Figure 4-19, which if constructed would enable the diversion of freight traffic around Toronto. This would free up the existing rail corridor to be used for commuter / passenger travel, including allowing for a potential station within the vicinity of the study area, and/or further east at Don Mills Road. This is considered a longer-term plan, with no committed timelines and funding.

Currently there are three CPR corridor crossing points in the study area, Eglinton Avenue, Millwood Road and Wicksteed Avenue. Both Eglinton Avenue and Millwood Road are grade separated, while Wicksteed Avenue is not. The need for grade separation along Wicksteed Avenue will need to be investigated for both future rail traffic and other road users.

Figure 4-19: Rail Corridor Missing Link



4.5 Cycling Environment

There are no existing dedicated cycling facilities within the study area, however cycling traffic is still prevalent, based on the limited data available and through community consultation. Cycling amenities for bike storage / parking are very limited in the study area based on site visits.

Cycling within the study area will be an integral part to the success of the future LRT Laird Station. This section documents the presently planned cycling network, existing cycling environment and user experience.

4.5.1 Planned Cycling Network

Based on the City of Toronto's 10-Year Cycling Plan, Eglinton Avenue, Leslie Street, Brentcliffe Road, Wicksteed Avenue, Southvale Drive, and Millwood Road will have dedicated cycling lanes in the future. These proposed routes are shown in Figure 4-20, along with the existing cycling volumes at signalized intersections within the area. There are opportunities to add additional cycling infrastructure within the study area in conjunction with the emerging development scenario.

4.5.2 Cycling Comfort

Cycling comfort was evaluated using the two following criteria that provide high-level considerations of the cycling level of service along roadways and for crossings:

- Midblock Segments –Multi-Modal Level-of-Service (LOS) Guidelines (City of Ottawa, 2015)

  Originally developed by Charlotte NC, cycling LOS for mid-block segments have been adopted by use by the City of Ottawa as part of their Complete Streets Framework. This methodology will allow for a preliminary overview of the conditions faced by cyclists when travelling along the corridor.

- Signalized Intersections – Pedestrian and Bicyclist Intersection Safety Indices (U.S. Department of Transportation, Federal Highway Administration, 2007)

  Developed in 2007, the intersection safety indices allow for an evaluation of the safety for cycling movements crossing a signalized intersection. The values range from 1 to 6, with 1 being the safest, and 6 being the least safe, and highest priority for more detailed evaluation/consideration.

The resulting LOS and safety indices are shown in Figure 4-23. Eglinton Avenue presents an unfriendly cycling environment, which will be addressed through its redesign, as outlined in the EGLINTONconnects planning study. Laird Drive, although adequate, has significant opportunity for improvement when considering the future connections to / from the ECLRT Laird Station, and existing and planned community facilities / parks.

4.5.3 Other Cycling Considerations

Other considerations that emerged from site visits and community consultation include:

- No existing cycling facilities presently near the study area except in the Don Valley ravine system, which has high usage;
- Not a strongly integrated cycling network that is supportive of the ECLRT investment and that serves the local community;
- Latent cycling travel demand along Laird and Eglinton corridors, with a local community desire to connect to the Don Valley, despite the existing lack of a connected network;

- Need to consider the number of commercial driveways and heavy truck movements for good cycling environment; and,
- Increased vehicle-cycling collisions have occurred at intersections with significant vehicle turning volumes and queueing (i.e. Wicksteed / Brenticliffe intersection, Southvale / Millwood / Laird intersection).

Figure 4-20: Existing and Proposed Cycling Facilities

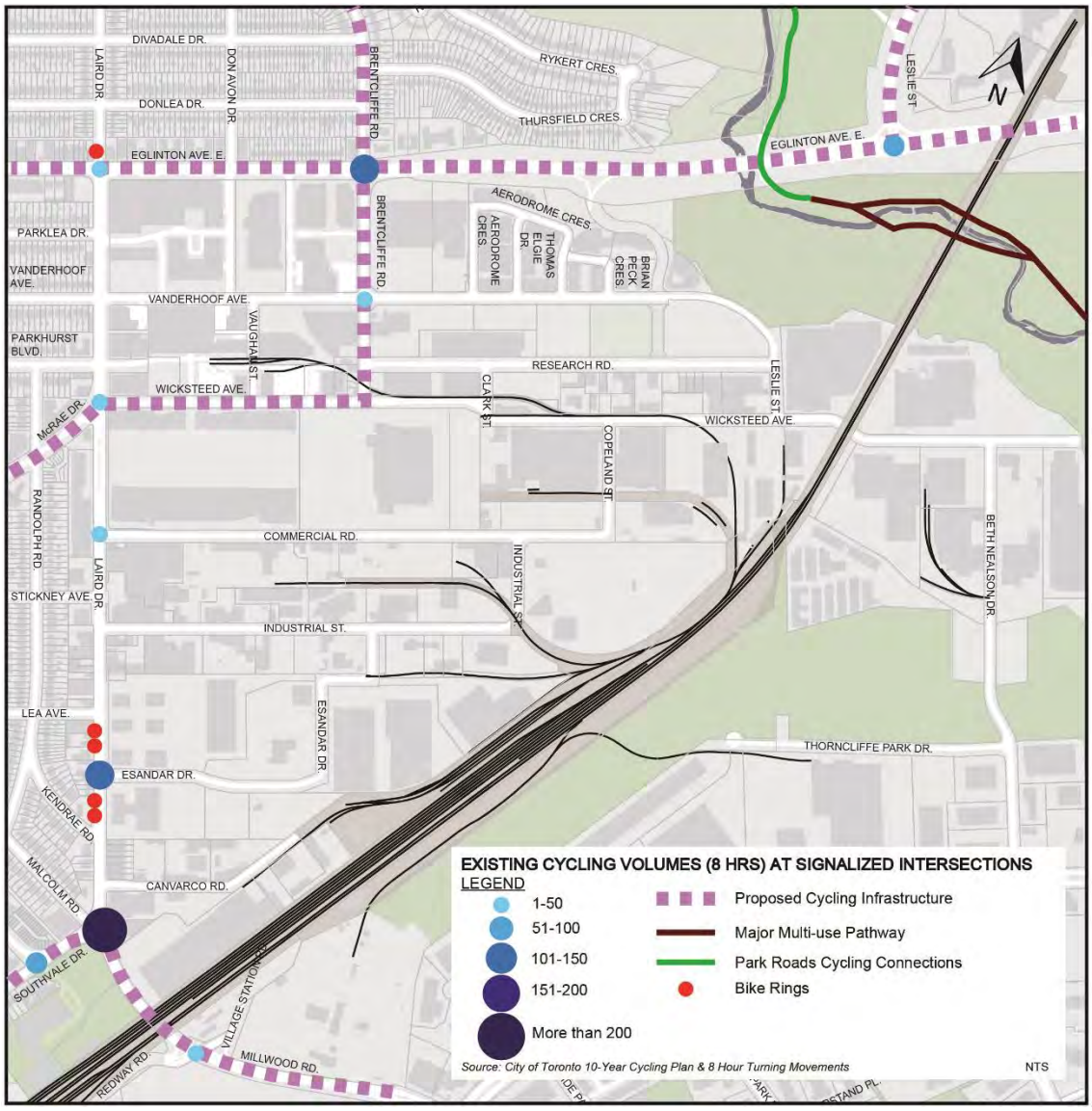
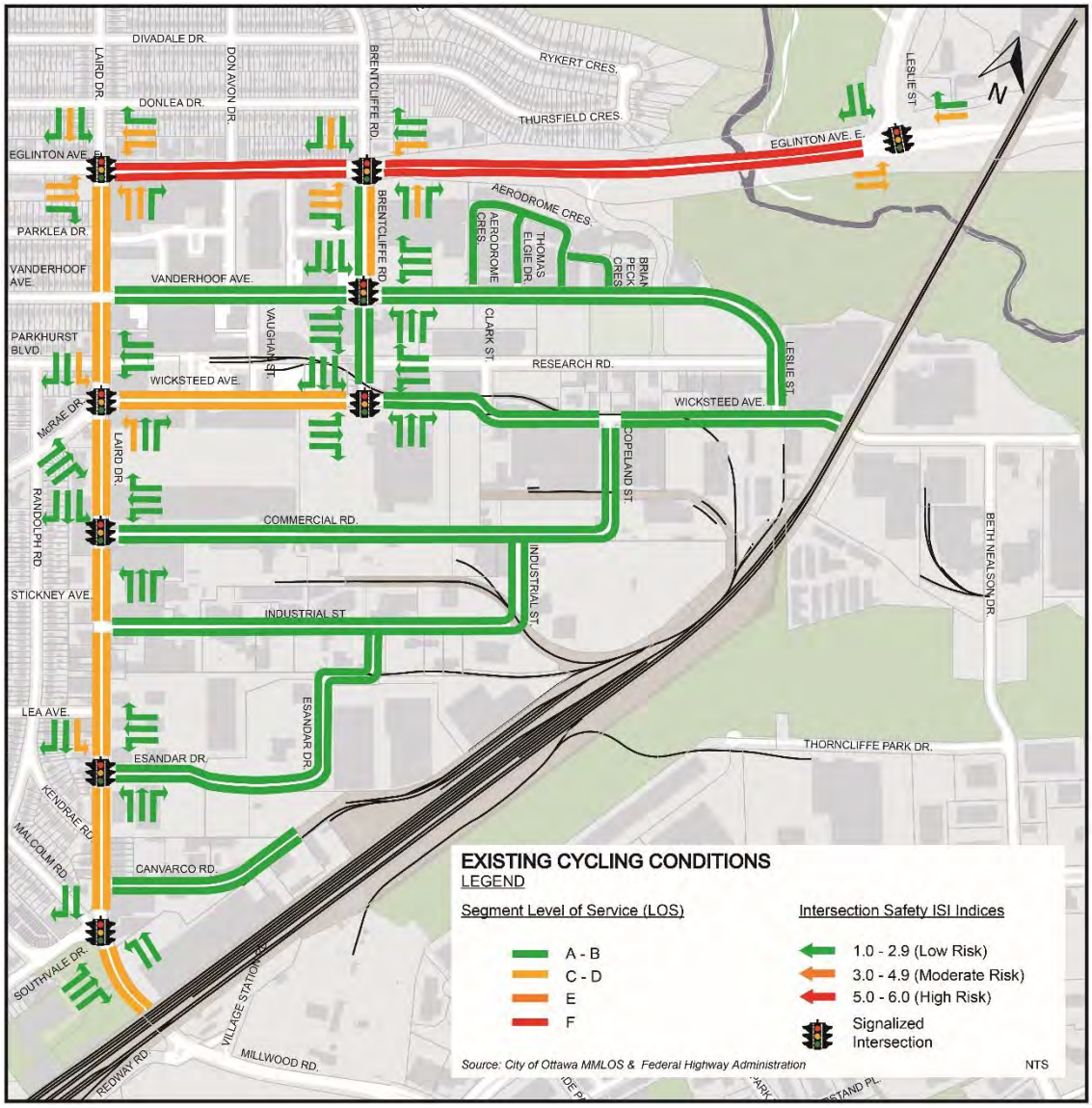


Figure 4-21: Cycling LOS and Intersection Crossing Safety Indices



4.6 Pedestrian Environment

There are existing sidewalks within the study area, and pedestrian movement is highly related to accessing retail and bus stop facilities, based on the limited data available and through community consultation. Pedestrian amenities, such as benches, street furniture, streetscaping, and shade are very limited in the study area based on site visits.

Pedestrian access and mobility within the study area will be an integral part to the success of the future LRT Laird Station. This section documents the existing pedestrian facilities and user experience.

4.6.1 Pedestrian Network

Sidewalks are present on both sides of the major roadways, Eglinton Avenue and Laird Drive, and along streets that connect to the big box retail stores. However, other local roads, primarily in the employment lands, have either a sidewalk on only one side, or no sidewalks at

all. Combined with the previously mentioned street network issues, such as the lack connectivity and granularity, a poor pedestrian network results, detracting from both transit and active transportation as a mobility option.

The existing pedestrian facilities along the road network is illustrated in Figure 4-22.

4.6.2 Pedestrian Comfort

Pedestrian comfort was evaluated using the same two criteria as used for the cycling assessment - the City of Ottawa's Multi-Modal LOS for midblock segments, and the NHA Crosswalk Safety Indices for signalized intersections.

The resultant LOS and safety indices are shown in Figure 4-23. The results generally indicate the provision of adequate service, but key findings include that there is a high degree of segmentation for all roads which leads to lack of connectivity within the study area.

4.6.3 Other Pedestrian Considerations

Other considerations that emerged from site visits and community consultation include:

- Narrow sidewalk widths with limited boulevards along Laird Drive (i.e. numerous driveways, utility poles);
- Most of the employment lands are not adequately served with public sidewalks;
- Limited street furniture (i.e. benches) and streetscaping (i.e. shade);
- Limited east-west crossing opportunities of Laird Drive;
- Pedestrian network is discontinuous and indirect;
- Existing residential development near Aerodrome Crescent is poorly connected to existing and planned transit; and,
- Minimal direct walking connections to the proposed ECLRT Laird Station entrances and planned community facilities.

Figure 4-22: Existing Pedestrian Facilities, Volumes, and Future Station Catchments

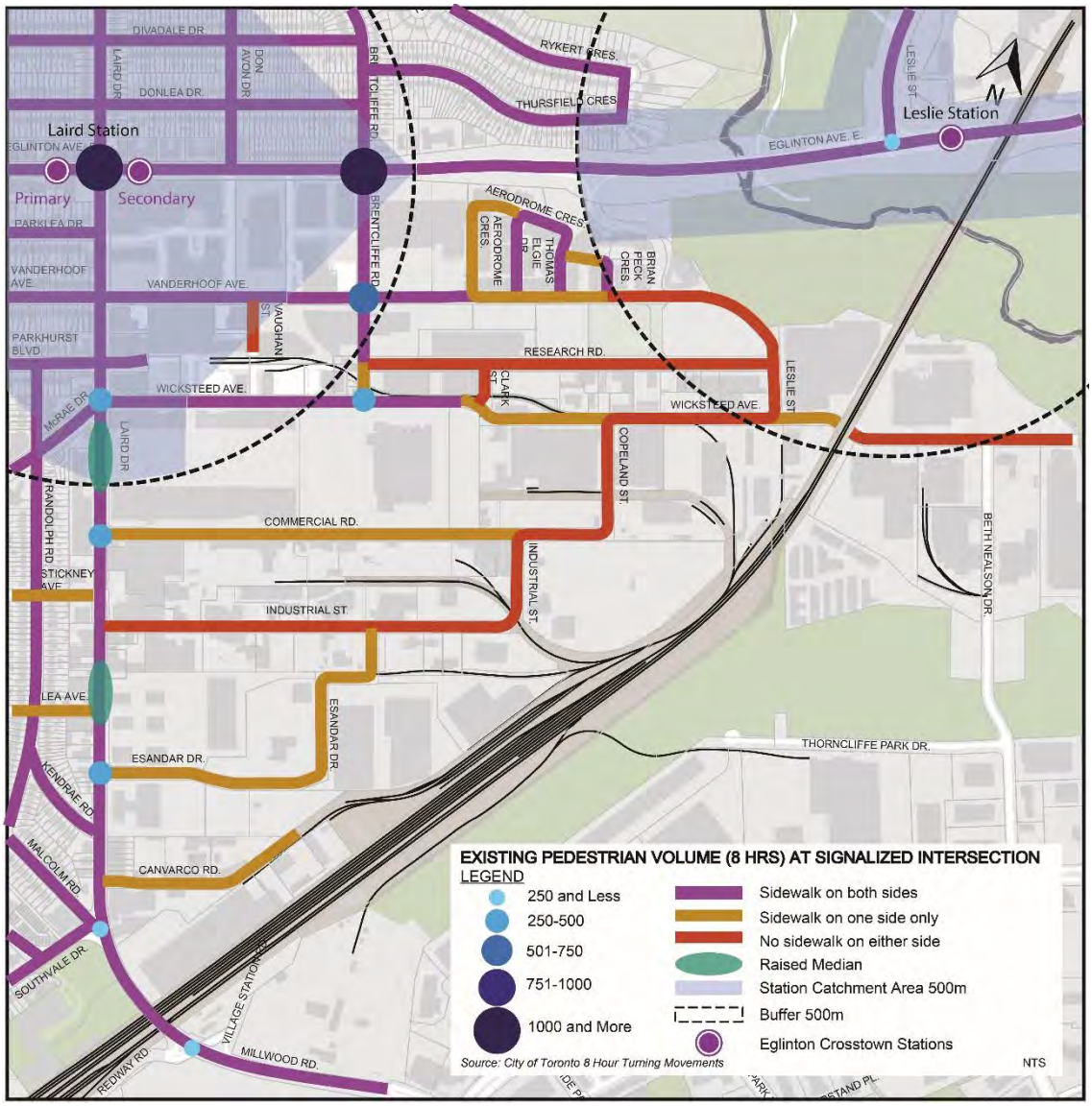


Figure 4-23: Pedestrian LOS and Crosswalk Safety Indices

4.7 Vehicular Travel and Traffic Operations

Eglinton Avenue East is a major arterial within the City of Toronto. Additionally, due to many of the barrier effects in the area, there are several capacity constrained intersections. This section discusses the existing traffic operations at signalized intersections, and noted neighbourhood infiltration concerns.

4.7.1 Traffic Operations

Traffic operations analysis was conducted using Synchro version 10, with a nominal growth rate of 0.5% applied to older counts to scale them to 2017. It should be noted that new counts could not be collected given the current construction state of the study area, particularly along Eglinton Avenue. At locations where volumes may have already been at capacity, growth may not have been possible, furthermore current traffic signal operations may not reflect conditions present during the count.

All intersection levels of service (LOS) and critical movements as per City of Toronto guidelines are shown in Figure 4-24. The full evaluation summary is provided in Table 4-3 and Table 4-4 for the AM and PM peak hours respectively.

All intersections along Eglinton Avenue operate with significant delays, with several critical movements in both the AM and PM peak hours. Long turning lanes currently exist, and some priority is given to through traffic, resulting in queues for turning movements.

Furthermore, the intersections of Laird Drive at McRae Drive and at Southvale Drive both operate with significant delays in the PM peak hour. Operations at Laird Drive and Commercial Road and at Esandar Drive both operate well. Limitations in the Laird corridor capacity is constrained by both the higher volume side-street connections at McRae Drive and Southvale Drive, but also by the number of offsetting crossing roadway intersections.

Also, to be noted, via both site observations and community consultation, significant queuing was being experienced along Brentcliffe Road, north and south of Eglinton Avenue; along McRae Drive / Wicksteed Avenue, from west of Laird Drive to Brentcliffe Road; and along Southvale Drive, west of Laird Drive.

Table 4-2: Level-of-Service Definitions

LOS	Signalized Intersection	Unsignalized Intersection
A	≤10 sec	≤10 sec
B	10–20 sec	10–15 sec
C	20–35 sec	15–25 sec
D	35–55 sec	25–35 sec
E	55–80 sec	35–50 sec
F	>80 sec	>50 sec

Figure 4-24: Signalized Intersection Operations and Critical Movements

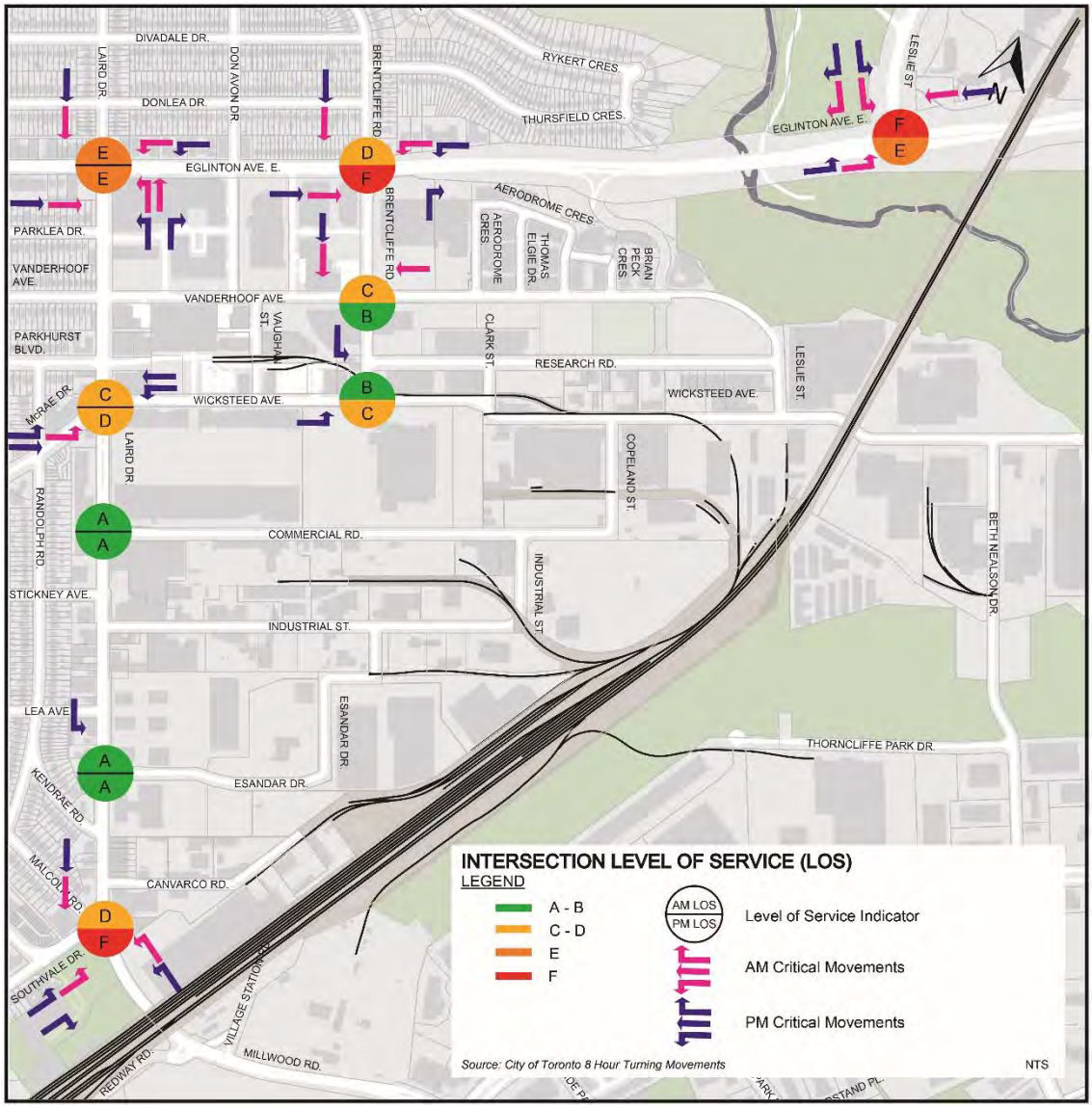


Table 4-3: AM Peak Hour Intersection Capacity and Critical Movements

Intersection	Intersection LOS	Intersection V/C Ratio	Critical Movement			
			Movement	LOS	V/C Ratio	95th Percentile Queue (m)
Brentcliffe Rd & Eglinton Ave	D	0.94	EBT	D	0.88	148
			WBL	F	1.08	189
			SBT	D	0.59	87
Laird Dr & Eglinton Ave	E	1.28	EBT	D	0.94	145
			WBL	F	1.25	235
			NBL	F	1.14	109
			NBT	D	0.41	70
			SBT	E	0.72	99
Eglinton Ave & Leslie St	F	1.42[1]	EBL	E	1.00	181
			WBT	D	0.78	131
			SBL	F	1.04	145
			SBR	F	3.16[1]	529
Laird Dr & McRae Dr	C	0.72	EBL	B	0.37	23
Laird Dr & Southvale Dr	D	1.04	EBL	E	0.96	104
			NBL	E	1.02	182
			SBT	E	0.92	84
Southvale Dr & Millwood Rd	B	0.61	None			
Brentcliffe Rd & Vanderhoof Ave	C	0.86	WBT	D	0.89	85
			SBT	B	0.85	164
Wicksteed Ave & Brentcliffe Rd	B	0.78	SBL	B	0.68	80
Laird Dr & Commercial Rd	A	0.49	None			
Laird Dr & Esandar Dr	A	0.4	None			

Note 1: Significant Peak AM turning volumes and v/c ratios are because of limited alternative routes, older counts with a conservative growth factor applied to scale to current year, and priority given to through traffic.

Table 4-4: PM Peak Hour Intersection Capacity and Critical Movements

Intersection	Intersection LOS	Intersection V/C Ratio	Critical Movement			
			Movement	LOS	V/C Ratio	95th Percentile Queue (m)
Brentcliffe Rd & Eglinton Ave	F	2.21[1]	EBT	C	0.90	198
			WBL	F	2.83[1]	250
			NBR	D	0.88	210
			SBT	D	0.74	115
Laird Dr & Eglinton Ave	E	1.57	EBT	D	0.87	130
			WBL	F	1.52	226
			NBL	F	1.41	175
			NBR	D	0.81	151
			SBT	E	0.81	122
Eglinton Ave & Leslie St	E	1.01	EBL	E	1.02	209
			WBT	D	0.81	135
			SBL	E	0.85	99
			SBR	F	1.35	210
Laird Dr & McRae Dr	D	0.99	EBL	E	0.89	91
			EBT	E	0.81	83
			WBL	D	0.48	50
			WBT	F	1.09	146
			SBL	F	0.99	100
Laird Dr & Southvale Dr	F	1.2	EBL	F	1.13	157
			EBR	F	1.03	148
			NBL	F	1.18	186
			SBT	F	1.06	167
Southvale Dr & Millwood Rd	B	0.82	SBT	D	0.92	87
Brentcliffe Rd & Vanderhoof Ave	B	0.79	None			
Wicksteed Ave & Brentcliffe Rd	C	0.9	EBL	D	0.90	85
			SBL	C	0.68	64
Laird Dr & Commercial Rd	A	0.63	None			
Laird Dr & Esandar Dr	A	0.67	SBL	B	0.69	65

Note 1: Significant peak PM turning volumes and v/c ratios are because of limited alternative routes, older counts with a conservative growth factor applied to scale to current year, and priority given to through traffic.

4.7.2 Neighbourhood Infiltration

Concerns regarding potential neighbourhood infiltration was raised during the EGLINTONconnects Laird Focus Area assessment, as well as during this study's consultation activities. To identify the true nature of traffic patterns within the study area, inclusive of the nearby residential neighbourhoods of Leaside North and Leaside, location-based traffic data was used.

Figure 4-25 and Figure 4-26 show the AM and PM peak period travel patterns for personal traffic, while Figure 4-28 and Figure 4-29 show the travel patterns for commercial traffic. The pie charts in each figure are to scale relative to the total vehicular travel volumes through that location, with the percentage of traffic to / from each zone also illustrated. Refer to Section 4.1.5 and the Appendix for additional background detail.

Key findings from this data analysis include:

- AM and PM Peak Period findings are similar;
- Generally, all designated local roadways (i.e. Lea, Parklea, Parkhurst, Don Avon) exhibit over 75% - 90% vehicular traffic to / from the local community and the immediate surrounding areas (i.e. Zones 1, 2 and 3, which is bounded by Lawrence/Yonge/Bloor-Danforth/DVP – an area within 3 km of the study area);
- Eglinton Avenue is a designated major arterial roadway that provides a regional network role, and local traffic (i.e. Zones 1 and 2) comprises less than 50% of the traffic, but when considering Zone 3 approaches 75% of the total two-way traffic – therefore functioning as intended for a regional major arterial, with traffic volumes nearing upper capacity limit;
- Laird Drive is a designated major arterial roadway that provides both a local and regional role, and traffic comprises of 50% local (Zones 1 and 2), 25% from adjacent areas (Zone 3), and 25% from the rest of Toronto – functioning as intended for a major arterial roadway, with two-way traffic volumes at expected capacities;
- McRae Drive is a designated collector roadway, and traffic comprises of 50% local (Zones 1 and 2), 25% from adjacent areas (Zone 3), and 25% from the rest of Toronto – functioning as intended for a collector roadway, with two-way traffic volumes at expected capacities; and,
- Southvale Drive is a designated collector roadway, and traffic comprises of 50% local (Zones 1 and 2), 35% from adjacent areas (Zone 3), and 15% from the rest of Toronto – although functioning as intended for a collector roadway, the two-way traffic volumes are at or over expected capacity limits.

Other findings to consider include:

- Average AM Peak trip length from within the Leaside community (Zones 1 and 2) is 1.6 km;
- Number of cars per household has increased 25% since 2001, and now nearing 1.5 vehicles per household (Census Data); and,
- Employment trips in the area (from TTS Data) is over 4200 in 2011 rebounding from below 2000 trips in 2001, but still below 4800 trips as recorded in 1991.

The above findings indicate that traffic within the community is primarily from the local surrounding areas within 3 km, which is how these road types should function. Longer distance trips (greater than 3 km) are generally limited to arterial and collector roadways, with only the major arterials experiencing vehicular trips to / from the broader Toronto area.

The increased traffic in the local community experienced by residents is also a reflection of the increase in vehicle ownership, and auto/passenger mode shares within the study.

Given the high percentage of trips from the local community and the adjacent surrounding areas (< 3 km), significant opportunity is presented to enhance mobility choice, such as active transportation and improved connections to existing / planned transit, to reduce vehicular travel in the study area. Furthermore, increased employment and mixed land uses within the study area will assist in both decreasing any longer distance trips, and / or encouraging active mode shares.

Traffic calming solutions may be applicable on select local streets to encourage greater use collectors and arterials, outside the study area. However, given the short distances of most trips, there would likely be diminishing returns on impacts to travel patterns. These options are already being investigated by Paradigm Transportation Solutions Limited.

Within this study area, complete street initiatives will be promoted, such as narrowing the roadway approaches, reducing the curb radii, and introducing a modest vertical grade change. These design techniques assist to discourage thru traffic and promote active transportation modes.

Figure 4-25: Average Weekday AM Peak Period Personal Vehicle Travel Patterns

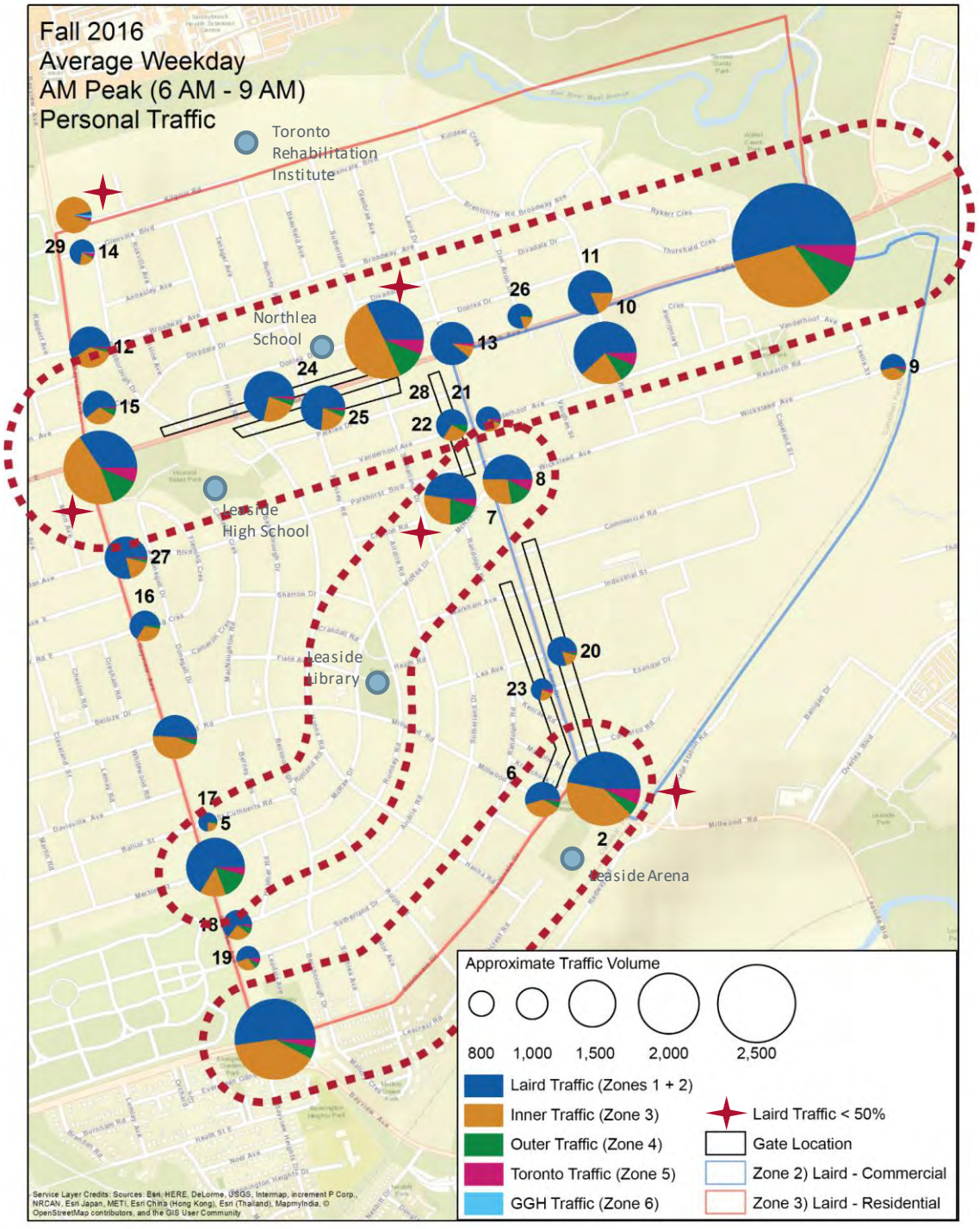
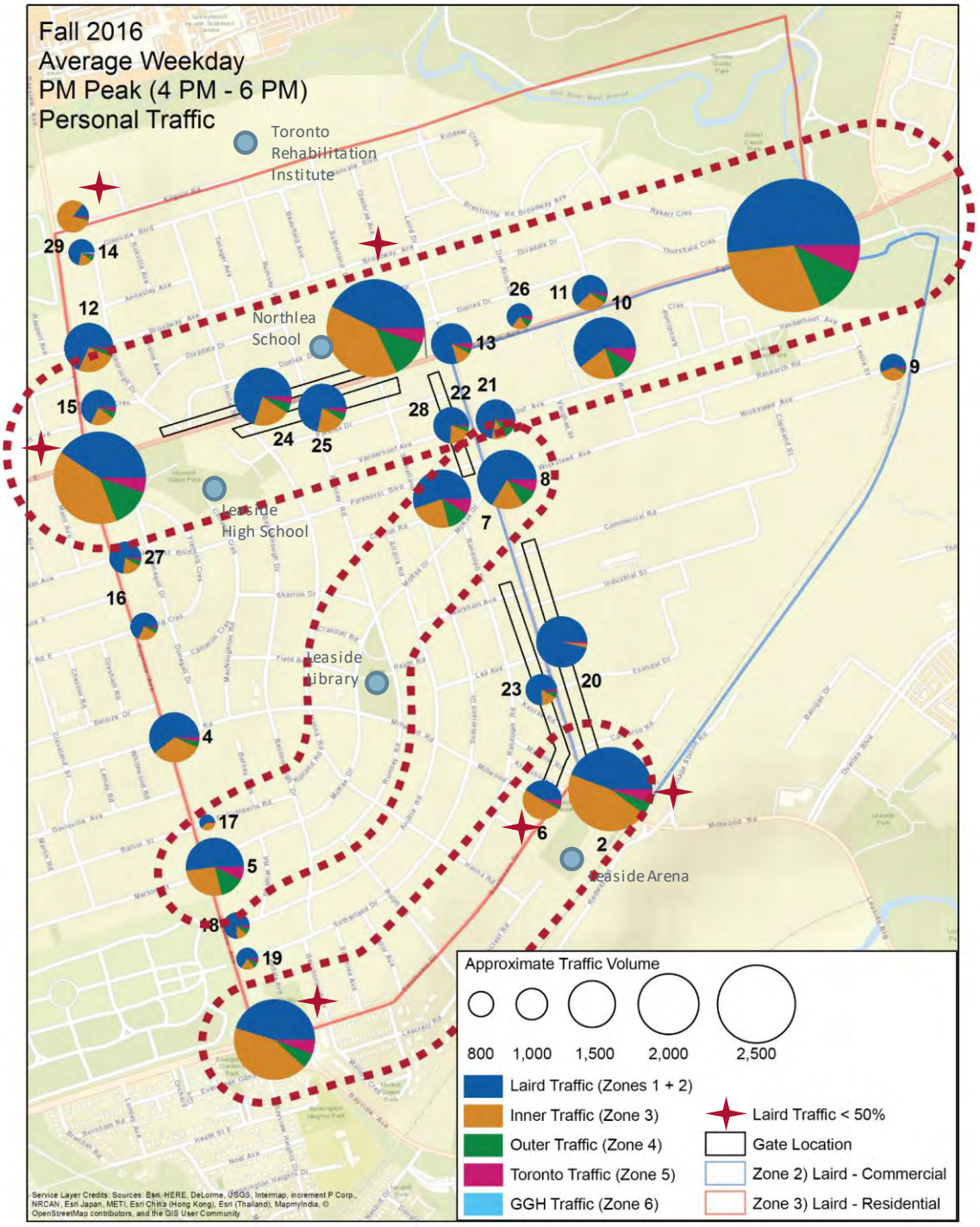


Figure 4-26: Average Weekday PM Peak Period Personal Vehicle Travel Patterns



4.8 Goods Movement

Historically, the Leaside area had many industrial facilities that directly and primarily utilized the rail line that bounds the study area. Today, commercial transportation and goods movement is primarily done by trucks. Major trucking routes are Eglinton Avenue, Laird Drive, Millwood Road, Brentcliffe Road, and Wicksteed Avenue as evident by the percentage of trucks exhibited by the turning movement counts.

The observed major truck generators within the study area, based on site visits and observations, as well as the truck volumes from the City-provided turning movement counts are shown in Figure 4-27.

To supplement this analysis, recent and more comprehensive location-based travel data was used. Figure 4-28 and Figure 4-29 show the travel patterns for commercial traffic between the identified destination zones. The pie charts in each figure are to scale relative to the total commercial vehicle travel volumes through that location, with the percentage of traffic to / from each zone also illustrated. Refer to Section 5.1.5 for additional background detail.

This commercial vehicle travel data indicates the following:

- AM and PM findings are similar with respect to travel patterns; however, AM volumes are larger than the PM volumes;
- Majority of commercial traffic into the study area is to / from within the City of Toronto; and,
- Access points into the study area include Brentcliffe Road from Eglinton Avenue, Wicksteed Avenue / Commercial Road / Industrial Street / Esandar Drive from Laird Drive, and Wicksteed Avenue from east of the rail tracks.

Figure 4-27: Businesses with High Heavy Vehicle Traffic

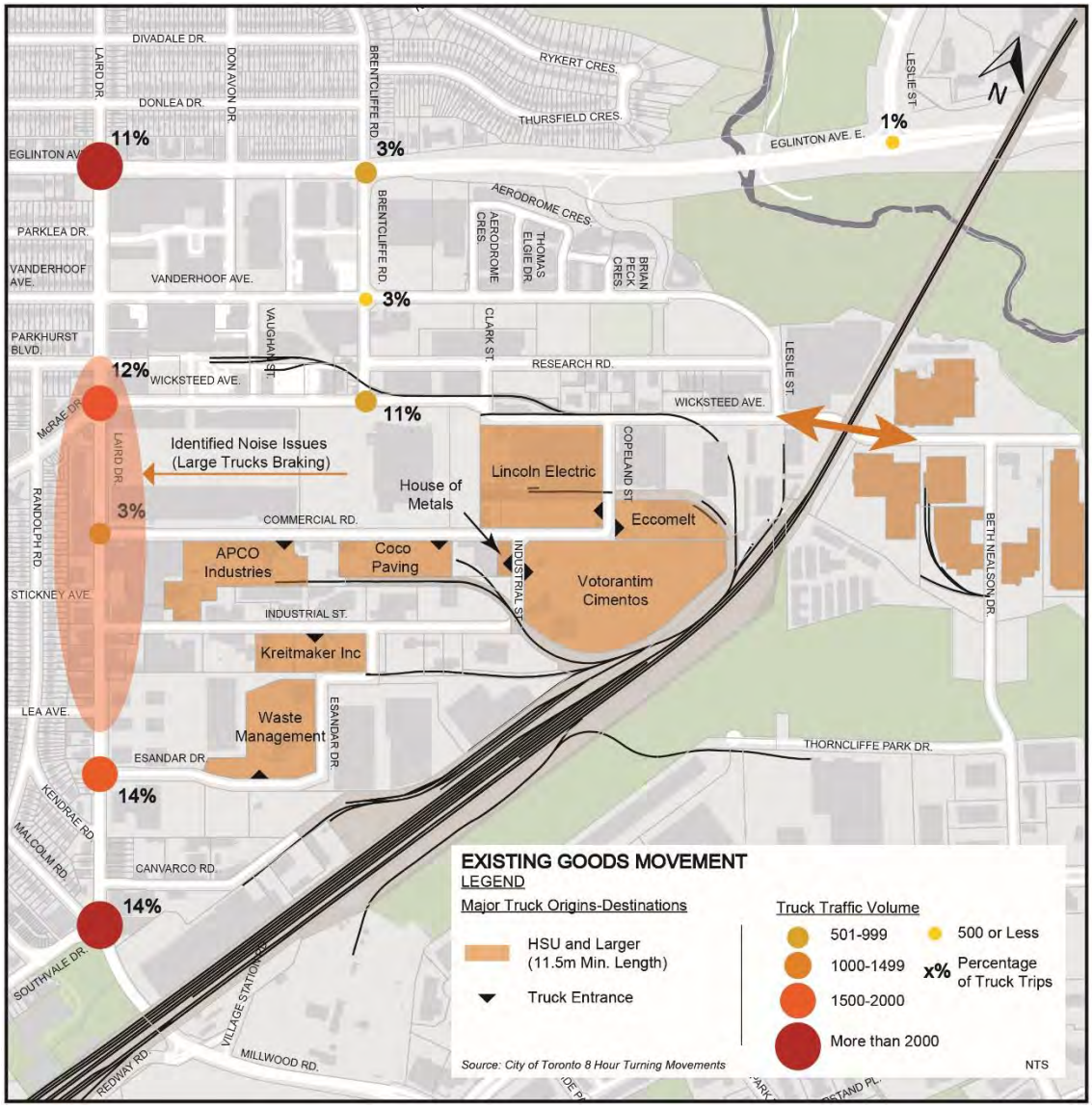


Figure 4-28: Average Weekday AM Peak Period Commercial Vehicle Travel Patterns

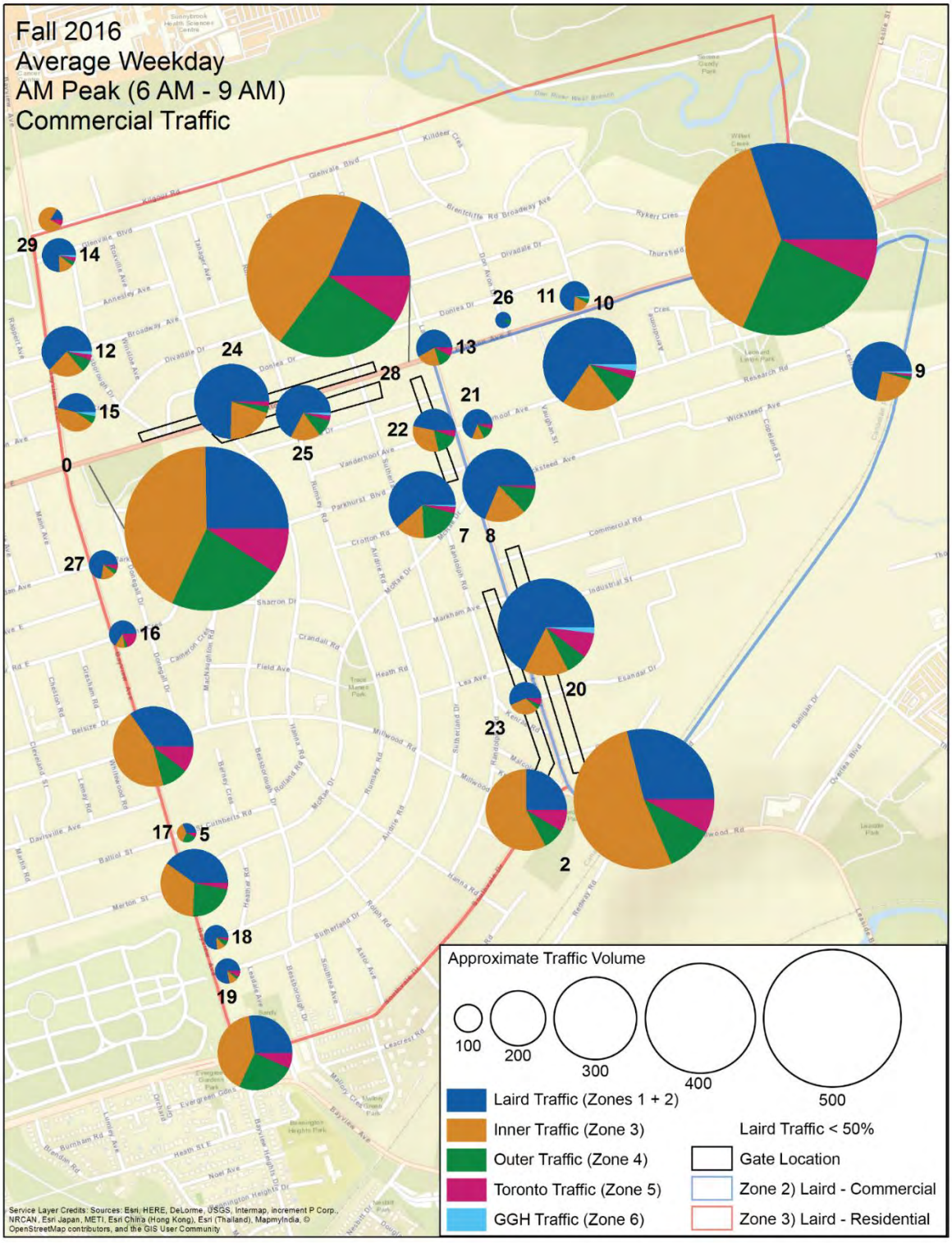
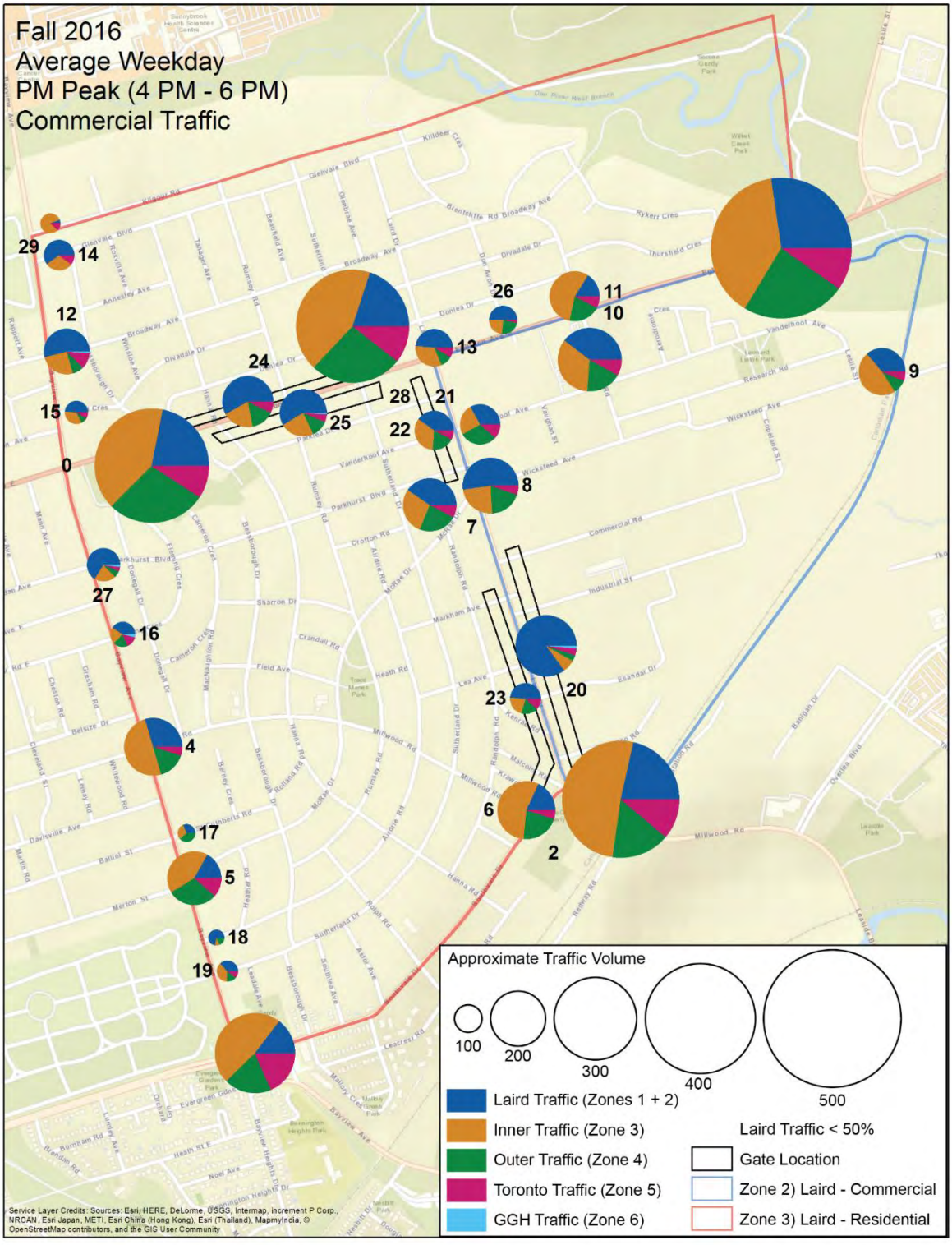


Figure 4-29: Average Weekday PM Peak Period Commercial Vehicle Travel Patterns



4.9 Parking

Given the area's current makeup of low density industrial and big box store land uses, there is a significant amount of privately-owned surface parking. The surface parking within the study area is shown in Figure 4-30.

On-street parking is generally restricted in most of the study area given the abundance of off-street parking capacity available. However, near the small residential block east of Brentcliffe Road along Vanderhoof Avenue, residential parking is allowed. A map showing the available residential and off-street retail parking is provided in Figure 4-30.

No off-street publicly-owned parking facilities or shared parking arrangements were identified in the study area.

During one consultation event, some on-street parking spillover from the retail uses on the east of Laird Drive into the local community was noted (i.e. along Parklea Drive).

4.10 TDM Policies and Smart Commute

No existing TDM strategies have been identified in the study area. Review of the supporting transportation studies for the proposed development applications, have indicated that TDM measures will be implemented.

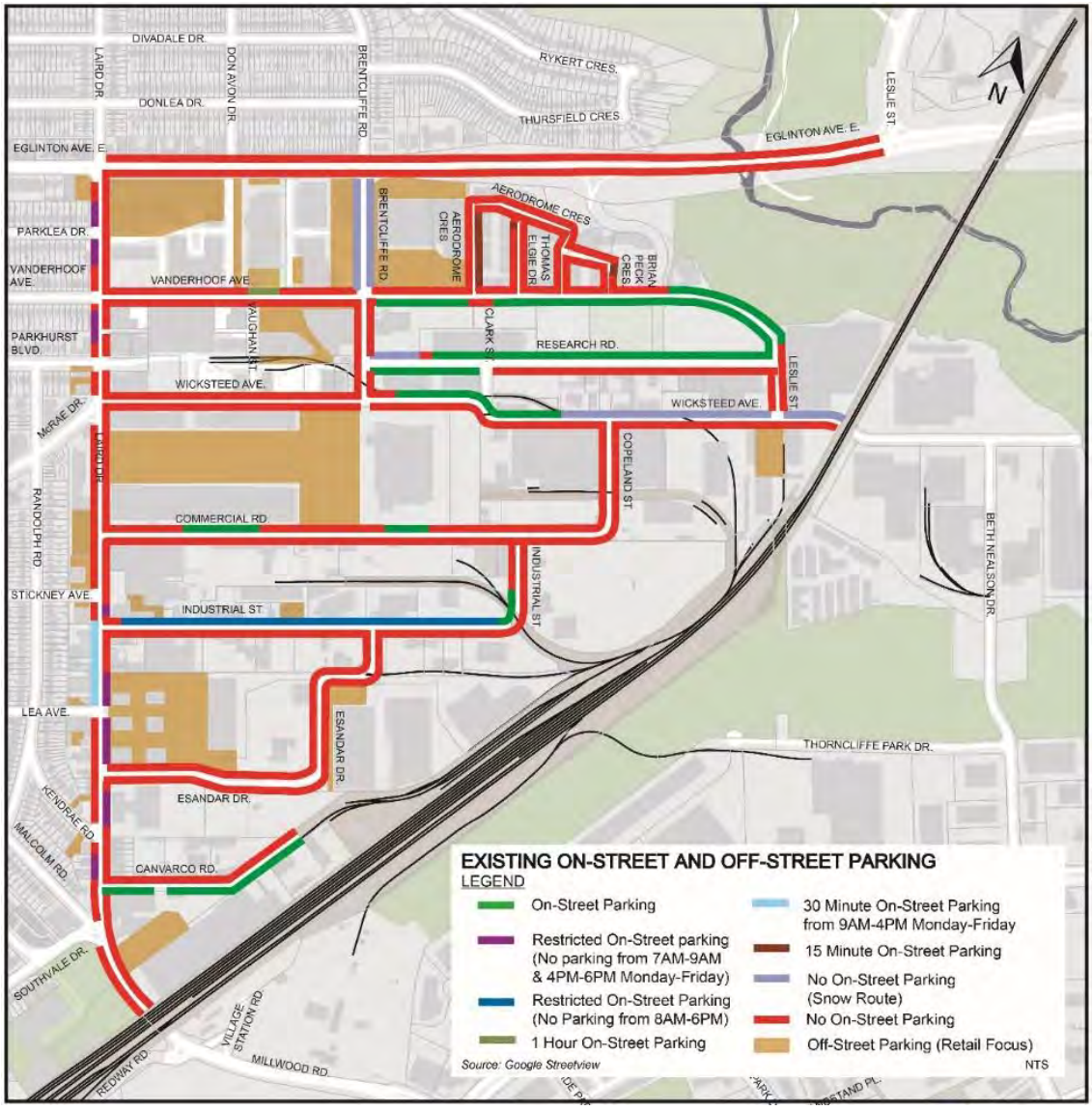
Several transportation demand management (TDM) strategies are implemented at regional and local scales that affect the study area. A potential program, in conjunction with the emerging redevelopment, is Metrolinx's Smart Commute program to help facilitate travel options other than auto driver. The program works with the community and employers to promote these alternative travel modes. This will provide opportunity for future residents / employers, community facilities, and others to implement travel demand management strategies.

4.11 Leaside High School Travel Planning (STP)

The Leaside High School is approximately 750m west of Laird Drive along Eglinton Avenue East. To improve active and transit mode shares to and from the school, they have implemented a school travel plan (STP). Within this plan, five main action areas are identified, education, encouragement, enforcement, engineering, and evaluation. One of the key recommendations from the plan was to work with this study, to plan safer bike routes that connect to the school.

In addition to potential coordination with the emerging development in the study area, it is also a template for adoption by other schools in the study area and the immediate surrounding neighbourhoods. Safe and secure access to all schools could discourage potential vehicular trips to each school for drop-offs / pick-ups, as evidenced both by observed queuing and by the number of short trips undertaken indicated by the location-based data.

Figure 4-30: Surface Parking within Study Area



5 Opportunities

The **Laird in Focus** study area is defined as the lands bounded by the CP rail corridor that runs along its eastern and southern edges, Laird Drive to the west, and Eglinton Avenue East to the north. These lands were assessed as the study area for the transportation component of the study. Phase 1 of the study determined the background conditions and potential opportunities in the area for all travel modes as summarized below. Further details can be found in the Existing Conditions Report in Appendix D.

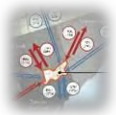
- Despite a poor environment, physical barriers, and low connectivity to existing and future destinations, there is generally sufficient ROW spaces, growth potential, and land availability to create an attractive and safe pedestrian network.

- Despite a poor environment, physical barriers, and lack of a cycling network, opportunities to build on the latent demand and support new growth is demonstrated.

- ECLRT implementation will transform mobility access and options in the study area. it requires a balanced and coordinated plan to provide first and last mile solutions by maximizing active transportation and transit connectivity, while maintaining vehicle access and goods movement in a balanced manner.
- Arterial and collector roadways experience capacity issues during peak hours and a significant portion of vehicle trips being made are a short distance within the study area. Travel demand management strategies, to reduce single occupancy vehicles and allow other mobility options have the opportunity to flourish in this environment in the future. Significant potential is available given the planned size and intensity of mixed use development scenarios for carpooling, car-share, bike-share, variable parking strategies, and trip planning.

- A coordinated goods movement strategy is required to support the on-going vitality of the Leaside employment lands, while co-existing with the increasing mobility demand for transit and active transportation for employees and residents.

- Physical barriers and lack of fine grained street network contribute significantly to arterial and collector roadways operating at / near capacity, but perhaps most importantly to the significant queuing at key boundary locations of the study area.



- As future mobility continues to shift away from vehicular uses, opportunity for comprehensive parking strategies to create a balance environment to accommodate future vehicle demand with appropriate policies to control parking supplies in partnership with Toronto Parking Authority.

6 Consultation

Multiple consultation opportunities were held during each Phase of the study. The following provides a summary of major consultation events that were held during each phase.

6.1 Phase 1

6.1.1 Project Kick Off

(November 30, 2016)

The project was introduced by City of Toronto staff with the objective of gathering feedback that would inform the study process, its key themes, and its content.

6.1.2 Transportation Summit

(March 25, 2017)

The consultation session provided a forum for the project team to better understand the transportation issues enabling them to better focus efforts in the initial stages of the project. Fifteen people (in addition to City staff and the project team) participated representing residents, business owners, and active transportation advocates.

6.1.3 Local Advisory Committee Meeting No. 1

(April 25, 2017)

The study's purpose, process, schedule, background research, and key consultation activities to date were presented. The meeting included a round-table discussion focused on obtaining input for the team to develop the Vision Statement and Design Principles.

6.1.4 Public Consultation Meeting No. 1: Visioning & Emerging Principles

(May 1, 2017)

The team's understanding of the Study Area was presented at the late afternoon and evening sessions with the purpose of gaining feedback from the public. A total of 100 participants attended the 2 sessions and contributed to the basis of a vision statement and a set of guiding principles.

6.1.5 Public Consultation Meeting No. 2: Design Charrette

(June 3, 2017)

Registrants participated in a morning or afternoon workshop with the expressed purpose of developing design alternatives for Study Area A and B, evolving scenarios for the Transportation Study Area, and streetscape options for key streets. The two sessions garnered interest from a total of 38 individuals who contributed to the formation of the options.

6.1.6 Design Review Panel

(June 8, 2017)

The Laird in Focus Study was presented to the Design Review Panel which provided comments on the project's scope, its urban design approach, and potential public realm opportunities.

6.1.7 Leaside Business Park Association

(June 14, 2017)

City Planning staff attended a meeting of the Leaside Business Park Association to introduce the project and receive feedback and comments.

6.1.8 Landowners' and Business Owners' Drop-in No. 1

(June 29, 2017)

The results of the design charrette were presented at a breakfast drop-in attended by 30 local landowners and business proprietors. Feedback from the session helped to inform subsequent work on the study.

6.1.9 Toronto Planning Review Panel

(June 10, 2017)

The panelists provided comments to City staff on the project's deliverables to date. They spoke to issues regarding employment areas in general before providing feedback on the Study Area concerning the emerging vision and principles, urban design and built form, transportation, and servicing.

6.2 Phase 2

6.2.1 Local Advisory Committee Meeting No. 2

(October 10, 2017)

The meeting offered an opportunity prior to the upcoming public session to review and provide feedback on the presentation material. The subjects discussed included the progress to date of the Heritage Study, the emerging vision and the results of the design charrette, draft alternative development options for both Study Areas A and B, an emerging streetscape concept, and the results of the transportation analysis.

6.2.2 Public Consultation Meeting No. 3: Development Alternatives

(October 17, 2017)

The purpose of this meeting was to present the planning and urban design scenarios for each of the study areas and to gather feedback that would inform subsequent steps of the study. At the public session transportation analyses was provided as well as a draft framework for evaluating the options. 150 people attended the presentation and provided comments on this and the accompanying display panels.

6.2.3 Landowners' and Business Owners' Drop-in No. 2

(October 19, 2017)

The breakfast drop-in provided an opportunity for land- and business owners to review the alternative development options as well as streetscape options and potential future road network scenarios for the Leaside Business Park. Seven people attended the event.

6.2.4 Local Advisory Committee Meeting No. 3

(November 21, 2017)

An evaluation of the alternative development options was presented leading to a draft preferred alternative for Eglinton Avenue (Study Area A) as well as a draft urban design approach for Laird Drive (Study Area B). The committee provided comments that informed refinements to the subsequent public presentation.

6.2.5 Public Consultation Meeting No. 4: Draft Emerging Preferred Alternative

(December 5, 2017)

The draft emerging preferred alternative for Study Area A as well as for test sites along Laird Drive (Study Area B) were presented as well as an update on the transportation component of the project. Comments were provided in breakout sessions that focused on issues concerning height and density, transportation, community facilities, the public realm, land use, heritage, and infrastructure.

6.3 Phase 3

6.3.1 Local Advisory Committee Meeting No. 4

(April 10, 2017)

Committee members were presented with the draft public presentation which included “The 10 Big Moves”, refined demonstration plans for Study Areas A and B, properties to be considered for the City’s heritage registry, recommendations for the Transportation Study Area, the Streetscape Master Plan, transportation phasing, and the results of the servicing analysis. Projected population and employment yields were provided along with a breakdown of the potential number of residential unit types.

6.3.2 Public Consultation Meeting No. 5: Preferred Alternative Plan

(April 23, 2018)

The evening was comprised of a presentation by the project team followed by a “question and answer” session bookended by an open house. Participants viewed panels illustrating “The 10 Big Moves”, prospective sites for consideration on the City’s heritage registry, and the demonstration plans for each of the study areas. Augmenting this material were precedent images and development yield statistics. Rounding out the exhibit were panels describing transportation and servicing improvements required to support the projected development capacity. Approximately 85 people attended the presentation and open house.

7 Alternative Land Use Options

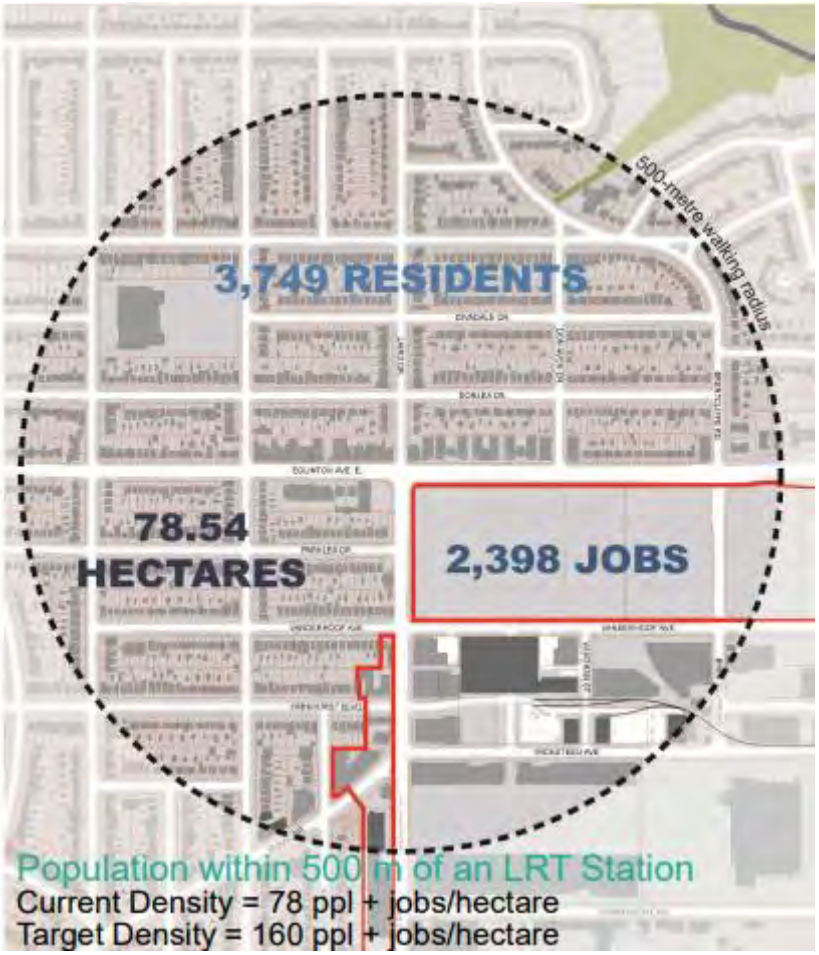
Within Study Area A and B, there are numerous opportunities to implement different land use options. Due to the constrained transportation environment, an iterative process to evaluate land use options and the resulting travel demands was conducted.

7.1 Land Use Context

7.1.1 Places to Grow

The Provincial planning document, Places to Grow - Growth Plan for the Greater Golden Horseshoe (2017) indicate a target of 160 residents/jobs per hectare for those served by light rail transit or bus rapid transit. Within the current development context, the area around the proposed ECLRT stop would have a density of 78 people + jobs per hectare as shown in Figure 7-1.

Figure 7-1: Resident and Job Density



7.1.2 939 Eglinton Avenue East

The City has also already approved a proposed residential development located at 939 Eglinton Avenue East. This development is expected to accommodate 1,841 residents, over a land area of approximately 2 hectares. As a result of this decision, this development sets a precedent for the density of adjacent buildings, in particular those that are closer to the Laird ECLRT stop. Thus, proposed developments closer to Laird Station would at least be permitted to develop to a similar density as 939 Eglinton Avenue East.

7.1.3 Study Area B

Study Area B primarily consists of mid-rise small development blocks. As a result, there are minimal alternative options from a transportation perspective due to the constrained block sizes. As a result, an estimate of feasible development sizes was used to evaluate Study Area B transportation impacts within the context of the overall study area.

7.2 Concept Development Process

An iterative and integrated process between land-use/built form, and transportation was conducted. Given the opportunities and constraints identified within the existing conditions, for the area, it is clear there are numerous trade-offs from both land-use and transportation perspectives for potential built form options. Due to the numerous constraints, iterations help shape a solution that incrementally determines impacts of land use changes on transportation, and vice versa. This allows fine-tuning, and careful consideration of each incremental change, allowing a solution that is balanced between an ideal built form, while ensuring mobility in the area is suitable for all modes and available infrastructure. The process is shown in Figure 7-2.

Figure 7-2: Iterative Integrated Planning Process

7.3 Model Process and Multi-Modal Approach

To adequately assess changing mobility conditions for the study area, a localized multi-modal demand model for the area was developed. This purpose of this model is to be able to reflect changes in development and travel behaviors, and its impact on the travel patterns of vehicles, transit users, pedestrians and cyclists. Creating a simplified demand model allows for quick testing of development scenarios, but also robust enough to offer flexibility in accommodating real-world data and assumptions.

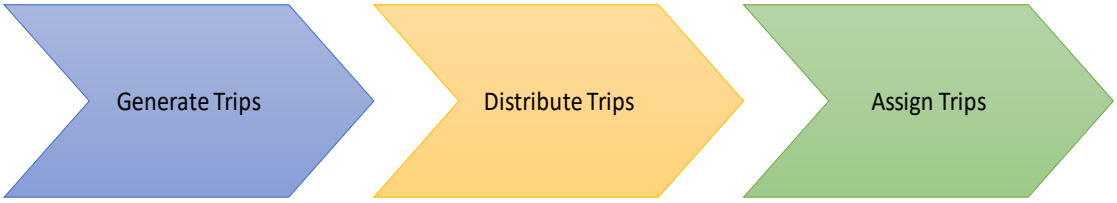
The transportation demand model follows 4 basic steps, trip generation, trip distribution, modal split and trip assignment. In a typical 4-step model, the modal split typical would factor in an aggregated travel cost based on travel speeds, monetary costs and other factors, and then user behavior may be altered based on actual capacities.

Given the localized sub-area context, mode splits are derived based on the development characteristics, including population demographics, facilities available, and directness of travel

paths. As a result, modal split behavior could be reasonably approximated based on existing data and similar areas of the City. This model was not calibrated, as the intent was not to create a demand model, but create a platform for comparative purposes between land use scenarios.

Thus, the proposed sub-area models follow 3 simple steps as shown in Figure 7-3.

Figure 7-3: Model Process

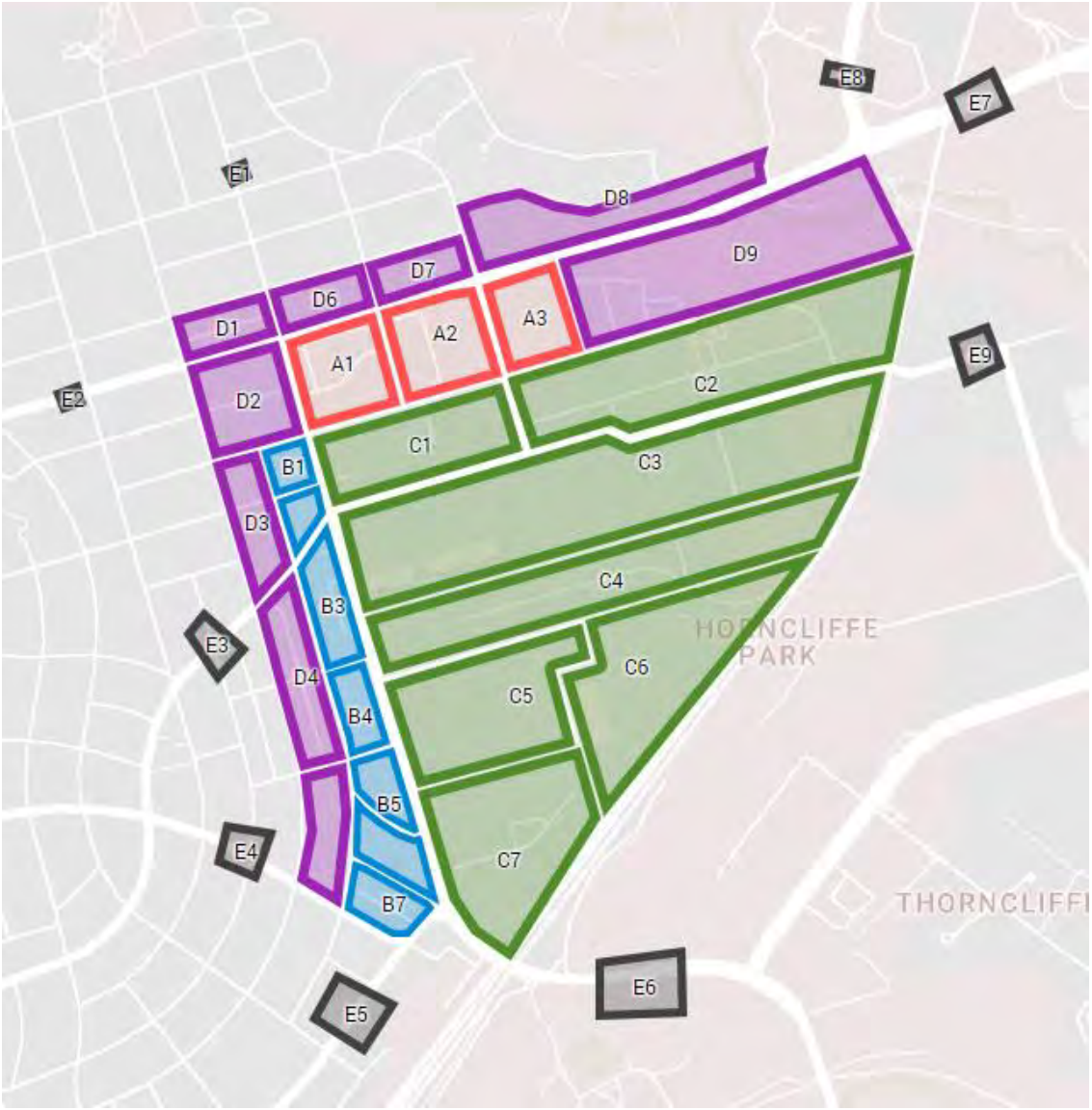


7.4 Transportation Demand Analysis

Like any traffic demand modelling exercise, the study area needs to be disaggregated into development blocks. For Laird in Focus, the proposed study area was broken into development blocks as shown in Figure 7-4. The zones within Study Area's A and B, and the employment lands (Area C for the purposes of this analysis) were disaggregated to ensure that travel demands would be adequately distributed into proposed development blocks and internal roads.

Additional zones of existing neighbourhoods were added to allow for interaction between new developments and existing areas. The extents of these existing development areas characterized as Area D, were limited as their only purpose was to evaluate travel between a new development block and an immediately adjacent area. Further travel was captured by external zones shown as Area E, which represents travel demands into and out of the study area along different routes.

Figure 7-4: Demand Analysis Zones



7.4.1 Trip Generation and Modal Split

To assess total travel demands, total trips would need to be generated, and then assigned to different mode shares. Assumptions for each of the following development type, residential, commercial, office, and community/institutional is provided below.

Modal splits for existing land uses were based on TTS estimates of the area including zones 217, 219, and 220 as shown in Figure 7-5. The existing mode splits for the AM and PM peak hours is shown in Figure 7-6. To remain conservative, it was assumed that the existing blocks within Area's C and D would continue to follow the existing mode splits.

Figure 7-5: TTS Zones Assessed

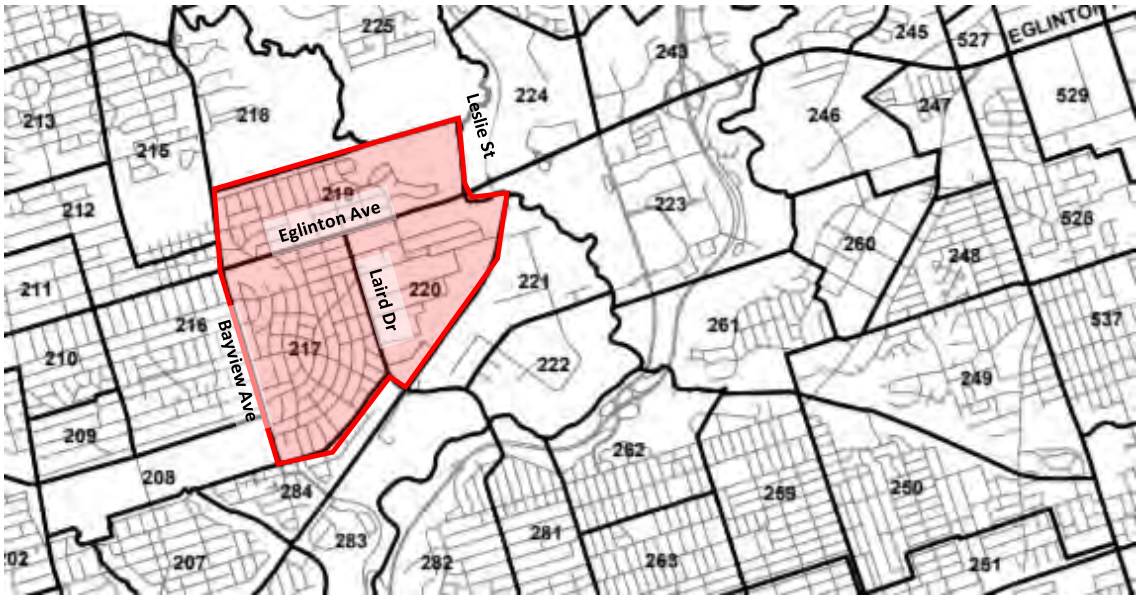
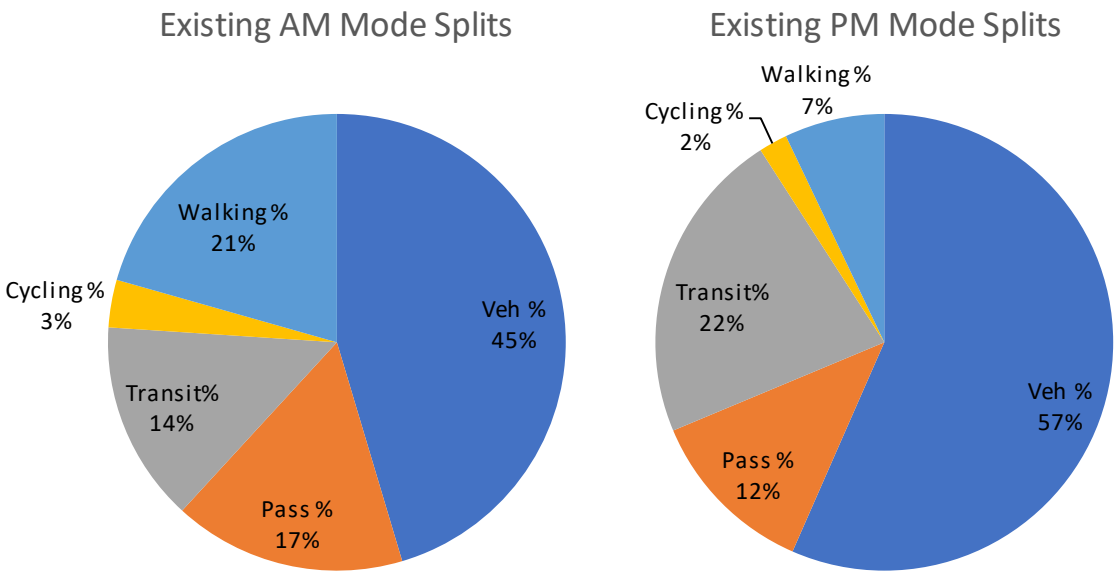


Figure 7-6: Existing Mode Splits (Based on TTS Data)



Residential

Residential trip generation was calculated based on the total number of residents in the 3 TTS zones, and the total number of trips to and from the zones. Results and the rate used to develop total trips per resident in the peak hour is shown below. This was used for both existing and future residential developments. The number of residents per existing zone was determined by disaggregating the TTS zone by land area.

Table 7-1: Residential Trip Generation Rates

Period	Inbound Per Resident	Outbound Per Resident
AM Rate	0.02	0.31
PM Rate	0.19	0.04

Office/Employee

New office developments within the mixed scope context compared with existing employment uses are significantly different. As a result, existing employment uses were calculated based on the number of employment based trips TTS Zone 220 produced, and the number of employees within the zone. Employment within each development block in Area C was simply the existing employment numbers for the area based on TTS split evenly among each zone.

Future employment was quite low, only approximately 500 employees in the Area A development blocks, as a result, the ITE Trip Generation Manual rates were used as a reasonable approximation as shown below.

Table 7-2: Employment Trip Generation Rates

Period	Inbound Per Employee	Outbound Per Employee
AM Rate	0.40	0.06
PM Rate	0.07	0.34

Commercial

The majority of existing commercial development is within Area C. As a result, Zones C3 and C5, which contain two of the largest commercial blocks were assumed to generate the majority of commercial traffic within Area C. All shopping purposed trips from TTS in this zone were assigned to these two blocks to remain conservative. Future retail/commercial trips were calculated based on ITE Trip Generation Manual Rates as a reasonable approximation as shown below.

Table 7-3: Commercial Trip Generation Rates

Period	Inbound Per 100 Sq M	Outbound Per Sq M
AM Rate	0.021	0.015
PM Rate	0.037	0.037

Community/Institutional

Community and institutional land uses can be extremely varied depending on the actual land use type. The community facility trip rate was based trip rates proposed for a community facility nearby (Leaside Arena), where proxy sites were used to estimate trip rates as shown below. The institutional land use within Area B was approximated using commercial rates given the lack of data available.

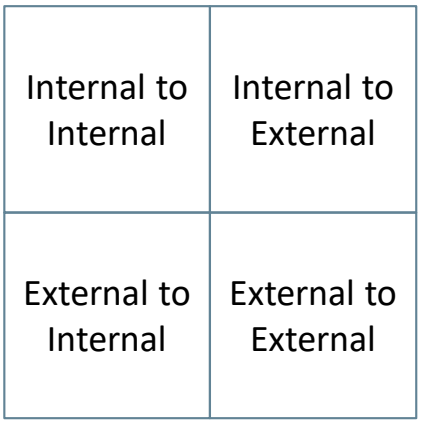
Table 7-4: Community Trip Generation Rates

Period	Inbound Per 100 Sq M	Outbound Per 100 Sq M
AM Rate	0.0	0.0
PM Rate	1.07	0.49

7.4.2 Trip Distribution

In a typical demand model, there are four trip origins and destination sets that need to be assessed as shown in Figure 7-7.

Figure 7-7: Typical Trip Distribution Matrix



To determine the trips to and from the study area blocks (A, B, C, and D) that remain within these blocks, versus destined to or from external zones, the "*National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*" methodology was used. Generated trips were inputted into this tool, which resulted in a matrix of travel demands between internal trip uses, and the external travel demands per mode.

Internal – Internal Trips

Internal trips from the internal trip capture methodology were distributed based on the proportion of trips each development block produces for each trip purpose. TTS data for the area shows that short distance trips had a mode split of 60% auto, 39% walking and 1% cycling with transit trips removed. It was assumed that in the context of the study area boundaries, there would be limited availability and opportunity for transit trips in between the development blocks.

Internal – External / External - Internal Trips

The total number of trips from and to each development block is outputted from the internal trip capture methodology. These were then distributed to each development block by the proportion of trips per mode each block generated. The external zone distribution was derived using Streetlight GPS data, this is shown in the table below.

Table 7-5: External Trip Distribution

External Zone	AM		PM	
	From (Ext to Int)	To (Int to Ext)	From (Ext to Int)	To (Int to Ext)
E1	0%	0%	0%	1%
E2	19%	4%	19%	21%
E3	8%	8%	7%	9%
E4	3%	1%	1%	1%
E5	15%	6%	17%	17%
E6	14%	14%	16%	7%
E7	5%	39%	22%	17%
E8	32%	26%	17%	24%
E9	3%	2%	1%	3%

Transit trips are not subject to this distribution as they start from each development block, assumed to travel using an active mode share to the transit stop/station before continuing on the transit route. Existing route passenger volumes were used to determine the percentage of trips to each transit route. Transit trips can then be assigned to the pedestrian and cycling networks and layered with the pedestrian and cycling trips, but also be used to assess capacities required on the feeder bus network and at the ECLRT station.

Table 7-6: Transit Distribution

Transit Line/Stop	From Transit Stop to Study Area	From Study Area to Transit Stop	Basis/Justification
Line/Route 1	72%	72%	(Eglinton LRT based on #34+54)
Line/Route 2	5%	5%	(Other interlined routes along Eglinton Based on #51)
Line/Route 3	19%	19%	(Leaside based on #56)
Line/Route 4	5%	5%	(south Leaside based on #88)

External – External Trips

External trips unrelated to the study area represent the background traffic levels through the area. Future travel patterns will change depending on a variety of development and roadway capacity factors, thus to estimate these background trips, Streetlight data was used to find the proportion of trips from each external node to each other. Streetlight allows calibration of these trips to traffic counts, and projected counts based on the EGLINTONconnects study were used. It should be noted that the adopted methodology for EGLINTONconnects was to simply grow existing counts based on an established growth rate for the area.

The resultant external-external matrix required some manual calibration based on existing counts due to some order of magnitude differences at the calibration locations. This is presumed to be as a result of differences in travel patterns over time, and the fact that counts are subject to daily fluctuations. An assignment was completed with only these external-external trips to ensure that generated network volumes were reasonable. Streetlight data is shown in Appendix F, and the analysis worksheets including matrices for each scenario is provided in Appendix C.

Distributed Trips

The different matrices for internal and external trips were then combined for each travel mode, vehicle, cycling and pedestrian. Transit trips generate a separate pedestrian and cycling distribution matrix based on the stop locations.

7.4.3 Trip Assignment

Trips were assigned based on an All or Nothing algorithm. This means that trips from each zone/block would take the same route to reach a different zone/block based on the shortest travel time and/or distance. As a result of this methodology, it should be noted that proposed vehicle flows are desired vehicle flows that do not take into account available capacity and delays.

7.4.4 Base Case Analysis

To begin the iterative assessment process, the first step was to develop an assessment of the base built form alternatives. Three alternatives were initially reviewed, however due to the limited differences in total population and employment for the three alternatives, Scenario A was considered the base case as all three scenarios would each produce a similar number of

potential trips. It should be noted that changes in land-use and built form would primarily affect Study Area A, whereas Area B has limited development block sizes, thus there are limited options possible. The mode share was derived from existing conditions for zones which are not changing, and new development areas used assumptions from other areas along Eglinton Avenue as per the EGLINTONconnects Study. The following table shows the populations in Area A, with a breakdown by land use type.

Table 7-7: Initial Development Scenarios

Scenario	Total Population	Residential	Office	Commercial	Community Facility
Scenario A	8834	7886	363	573	12
Scenario B	9171	7178	1627	366	0
Scenario C	8868	8352	80	400	36

The base case test shows that vehicles would face some constrained conditions along Eglinton Avenue east of Brentcliffe, and along Laird Drive south of Eglinton. This could result in the following impacts:

- Peak spreading due to limitations in capacity during peak hour;
- Further changes in mode splits due to slow travel times of personal vehicle trips;
- Shortcutting or use of alternative routes;
- Longer queues and delays at intersections; and,
- Increased need for TDM and/or other strategies to limit vehicle trips.

Table 7-8: Base Case Demand

Scenario	Link	Capacity Available Per Direction	Traffic Volumes	
			SB/WB	NB/EB
Initial Base ~40%/60%	Laird South of Vanderhoof	1000-1500	1260 (1090)	1400 (1670)
	Eglinton East of Laird	2000-2500	1530 (2120)	2370 (1970)
	Eglinton East of Brentcliffe	2000-2500	1610 (2210)	2760 (2090)

7.5 Land Use Refinement

An iterative process between the land use and proposed built form, with the resulting roadway capacity and transportation impacts being used to work towards a preferred development scheme.

After the initial base case assessment, a more refined option was considered, with reduced population and employees in Study Area A. The results are shown in the table below.

Table 7-9: Refined Development Scenario Statistics Per Zone

Zone/Block	Residential Population	Employees	Commercial GFA (M^2)	Community/Institutional GFA (M^2)
A1	2,754	180	8,195	2,400
A2	2,601	335	8,440	0
A3	1,923	0	1,420	0
Area A Total	**7,278**	**515**	**18,055**	**2,400**
B1	98	0	1,244	0
B2	174	0	616	0
B3	580	0	1,558	11,451
B4	274	0	3,100	0
B5	125	0	2,444	0
B6	131	0	808	0
B7	148	0	0	0
Area B Total	**1,530**	**-**	**9,770**	**11,451**

Along with the proposed land use, further permutations of mode splits and development sizes for Area A were considered to provide guidance towards a preferred planning alternative. Results are shown in Table 7-10. To allow for traffic operations along Laird Drive and Eglinton Avenue to function acceptably during peak hours, further reductions in development size, improvements to alternative modes of travel, reductions in travel demand or additional road capacity is required. One of the key constraints is eastbound along Eglinton Avenue in the AM peak hour east of Laird Drive past Brentcliffe Road.

Table 7-10: Development Size and Mode Split Testing

Scenario Vehicle / Transit + Active	Link/Segment Volumes - AM (PM)	Residential Percentage of Part A Developments							
		25%		50%		75%		100%	
		1820 Residents		3640 Residents		5460 Residents		7280 Residents	
		SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB
~50%/50%	Laird South of Vanderhoof	1300 (1100)	1410 (1660)	1330 (1120)	1420 (1690)	1360 (1140)	1420 (1720)	1390 (1160)	1430 (1750)
	Laird South of Industrial	930 (840)	1230 (1270)	980 (850)	1230 (1320)	1590 (850)	2400 (1360)	1080 (860)	1240 (1410)
	Eglinton East of Laird	1580 (2110)	2270 (2000)	1580 (2130)	2330 (2010)	1730 (2160)	2710 (2020)	1590 (2180)	2460 (2030)
	Eglinton East of Brentcliffe	1720 (2150)	2400 (2180)	1720 (2200)	2550 (2180)	1730 (2250)	2710 (2190)	1730 (2310)	2870 (2200)
~40%/60%	Laird South of Vanderhoof	1270 (1050)	1370 (1620)	1300 (1070)	1370 (1650)	1320 (1090)	1380 (1680)	1340 (1100)	1380 (1700)
	Laird South of Industrial	910 (820)	1200 (1230)	950 (820)	1200 (1270)	990 (820)	1200 (1310)	1030 (830)	1210 (1350)
	Eglinton East of Laird	1560 (2070)	2220 (1970)	1560 (2090)	2270 (1980)	1570 (2110)	2330 (1990)	1570 (2140)	2380 (2000)
	Eglinton East of Brentcliffe	1690 (2100)	2320 (2140)	1690 (2150)	2460 (2140)	1690 (2190)	2590 (2150)	1700 (2240)	2720 (2160)
~30%/70%	Laird South of Vanderhoof	1230 (990)	1310 (1570)	1250 (1010)	1310 (1590)	1270 (1030)	1320 (1620)	1290 (1040)	1320 (1640)
	Laird South of Industrial	880 (790)	1160 (1190)	910 (790)	1160 (1220)	940 (790)	1160 (1250)	970 (790)	1160 (1280)
	Eglinton East of Laird	1540 (2030)	2160 (1940)	1540 (2050)	2200 (1940)	1540 (2070)	2240 (1950)	1540 (2080)	2280 (1960)
	Eglinton East of Brentcliffe	1650 (2050)	2230 (2090)	1650 (2090)	2330 (2100)	1660 (2120)	2430 (2100)	1660 (2160)	2530 (2110)

Based on these results, the further analysis of transportation strategies as documented in Section 8 were investigated to determine the potential of reducing travel demands and improve alternative modes of travel. Additionally, refinements to the land use demonstration plan were completed, with monitoring and phasing strategies to ensure that future developments do not exceed available capacity along key routes.

8 Transportation Strategies

The multi-modal analysis and iterative approach indicated that the vehicular capacity was the limiting constraint. As such, the overall multi-modal demand and associated policies/strategies will be important to a successful mobility plan solution.

To address the established overall objectives and guiding principles, this section tests potential impacts of different strategies on the draft emerging built form alternative as shown in Figure 8-1. The potential opportunities and solutions for the road network need to consider physical constraints such as the railway, heritage buildings, ROW availability, and the Don Valley ravine system. Furthermore, consideration of existing uses and demands were considered, included commercial vehicle movements, neighbourhood infiltration, and safety.

Figure 8-1: Draft Emerging Preferred Option for Study Area A for Testing

8.1 TDM Strategies and Policies

Policies to encourage non-auto travel demands and/or reduce travel during peak hours can also significantly reduce the number of vehicle trips during peak hours. However, these measures tend to have greater impacts on newer, mixed use developments, and would typically have low impacts on existing low density residential developments.

Furthermore, the potential impacts of TDM strategies and policies can significantly vary, dependent on regional destinations, changes in region-wide infrastructure, and other factors outside not directly related to changes within the study area. As a result, different mode-shares and trip reductions were tested. This allowed for a detailed assessment of the sensitivity of the road network to the success of TDM measures, thereby allowing for its implementation and monitoring plan that helps better understand development and its impact on mobility.

8.1.1 Mode Share

There are opportunities to increase active transportation and transit mode shares to a level that would sustain the proposed development. A more refined testing of mode shift scenarios was conducted on the preferred option as shown in Table 8-1.

The success of individual policies and strategies may be different to the overall outcome of the full set of recommended policies and strategies. As a result, the intent of this sensitivity testing was to ensure that key breakpoints in terms of vehicle capacity are understood. It is shown that reducing vehicular mode shares to 30% or lower will be integral to allowing the full development and corresponding preferred built form to proceed.

Table 8-1: Mode Share Sensitivity Testing

Scenario Vehicle/ Transit+Active	Link/Segment Volumes - AM (PM)	Capacity Available Per Direction	Preferred Built Form (Area A - 7135 Residents)	
			SB/WB	NB/EB
~45%/55%	Laird South of Vanderhoof	1000-1500	1360 (1150)	1420 (1740)
	Laird South of Industrial	1000-1500	1050 (850)	1230 (1380)
	Eglinton East of Laird	2000-2500	1600 (2160)	2410 (2030)
	Eglinton East of Brentcliffe	2000-2500	1730 (2270)	2780 (2200)
~40%/60%	Laird South of Vanderhoof	1000-1500	1340 (1120)	1400 (1710)
	Laird South of Industrial	1000-1500	1030 (840)	1220 (1350)
	Eglinton East of Laird	2000-2500	1590 (1160)	2380 (1600)
	Eglinton East of Brentcliffe	2000-2500	1710 (2240)	2710 (2170)
~35%/65%	Laird South of Vanderhoof	1000-1500	1320 (1100)	1370 (1700)
	Laird South of Industrial	1000-1500	1000 (830)	1190 (1350)
	Eglinton East of Laird	2000-2500	1570 (2140)	2320 (2000)
	Eglinton East of Brentcliffe	2000-2500	1690 (2240)	2610 (2160)
~30%/70%	Laird South of Vanderhoof	1000-1500	1290 (1060)	1340 (1650)
	Laird South of Industrial	1000-1500	970 (800)	1170 (1280)
	Eglinton East of Laird	2000-2500	1560 (2090)	2270 (1970)
	Eglinton East of Brentcliffe	2000-2500	1670 (2160)	2530 (2120)

8.1.2 Travel Demand Reduction

It is also possible to further reduce the overall number of trips made during the peak hour. Given that the main vehicle capacity constraint is during the AM peak hour, options to encourage off-peak travel, telecommuting or other strategies may be effective in lowering overall demands. Alternative development profiles, which attract different types of tenants

(students, seniors, lower income, etc.) would also reduce peak hour demands. The existing trip rate used reflects the current trend in the existing study area. More developed urban environments, such as that along Yonge Street, near Finch Station, show much lower travel demands as shown in Table 8-2.

Table 8-2: Potential Future Residential Trip Rate

Period	Study Area TTS Zones (217, 219, 220)	Comparable Future – Finch Station TTS Zone (450)
AM Rate	0.33	0.19
PM Rate	0.23	0.16

It is likely given the potential emerging urban character that vehicular demand reduction could be in the range of 30-40% in the long-term (i.e. similar to Finch Station, and other downtown Toronto neighbourhoods. Recognizing that this vehicular trip reduction transition would occur over a long period of time, a conservative projection for future trip generation of a 5% reduction was initially assumed. As the overall development moves towards completion, a 10% reduction in demand could be realistic if policies to encourage lower travel demands are implemented. Monitoring on the effectiveness of the adopted TDM measures is a critical requirement.

8.2 Transit Network

The existing feeder bus network is expected to be re-evaluated by the TTC and changed to accommodate the ECLRT when completed. However, the existing capacity constraints, and potential increases to these routes based on the existing ridership with minor adjustments was assessed to provide a high-level understanding of the feeder bus network. Projected transit demands and capacity based on this study's proposed development are shown in Table 8-3 and Table 8-4 for the AM and PM peak hours.

In general, some existing bus routes with low capacity, such as the 56 Leaside, may need an increase in bus service to accommodate future development and demand from the Laird Station. In general, however, the proposed demands during the peak hour can be accommodated with a feeder bus network similar to the existing service levels.

The quality of service, and connectivity to stops will have an impact on proposed transit routes. As a result, bus bays should be placed strategically to connect key destinations, facilitate bus operations, and to allow for the implementation of transit signal priority at key locations, including queue jumping opportunities.

Table 8-3: Projected AM Peak Hour Transit Demands and Capacity

AM Peak Hour		Existing		Future Total (40%/60%)		Existing Capacity	
Route	Location	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
ECLRT (projected ridership upstream and downstream from Laird Station)	West Side (Near Bayview)	2400	5550	2578	6328	7200	7200
	East Side (Near Leslie)	2050	4900	2337	5264	7200	7200
Feeder Bus along Eglinton Avenue (Leslie and/or other routes)	West Side (Near Bayview)	50	50	67	84	200	200
	East Side (Near Leslie)	50	50	84	67	200	200
56 Leaside	South Side (Near Millwood)	204	38	344	313	300	300
88 Leaside	West Side (Near Millwood)	30	73	49	130	200	200
	East Side (past CPR)	14	26	25	42	200	200

Table 8-4: Projected PM Peak Hour Transit Demand and Capacity

PM Peak Hour		Existing		Future Total (40%/60%)		Existing Capacity	
Route	Location	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
ECLRT (projected ridership upstream and downstream from Laird Station)	West Side (Near Bayview)	5550	2400	6169	2667	7200	7200
	East Side (Near Leslie)	4090	2050	4544	2278	7200	7200
Feeder along Eglinton (Leslie and/or Other)	West Side (Near Bayview)	50	50	78	74	200	200
	East Side (Near Leslie)	50	50	74	78	200	200
56 Leaside	South Side (Near Millwood)	57	103	170	199	300	300
88 Leaside	West Side (Near Millwood)	59	22	103	39	200	200
	East Side (past CPR)	40	17	71	30	200	200

8.3 Road Network

Projected vehicular demands are shown in Figures 8-2 and 8-3. Capacity constraints is identified along Laird Drive south of Eglinton Avenue and these issues can be addressed by providing additional north-south linkages south of Eglinton Avenue through the proposed development. With improved north-south connections between Wicksteed Avenue and Eglinton Avenue, users would have alternative routing choices and capacity constraints along Laird Drive would be reduced.

Eglinton Avenue near Brentcliffe Road is another constraint area, particularly for eastbound movements during the AM peak hour. Additional roadway capacity options are difficult to provide here due to the existing Don Valley ravine system, and rail corridor. Improvements along existing roadways, such as Wicksteed Avenue, could improve east-west roadway capacity.

Figure 8-2: Projected AM Peak Hour Vehicle Flow

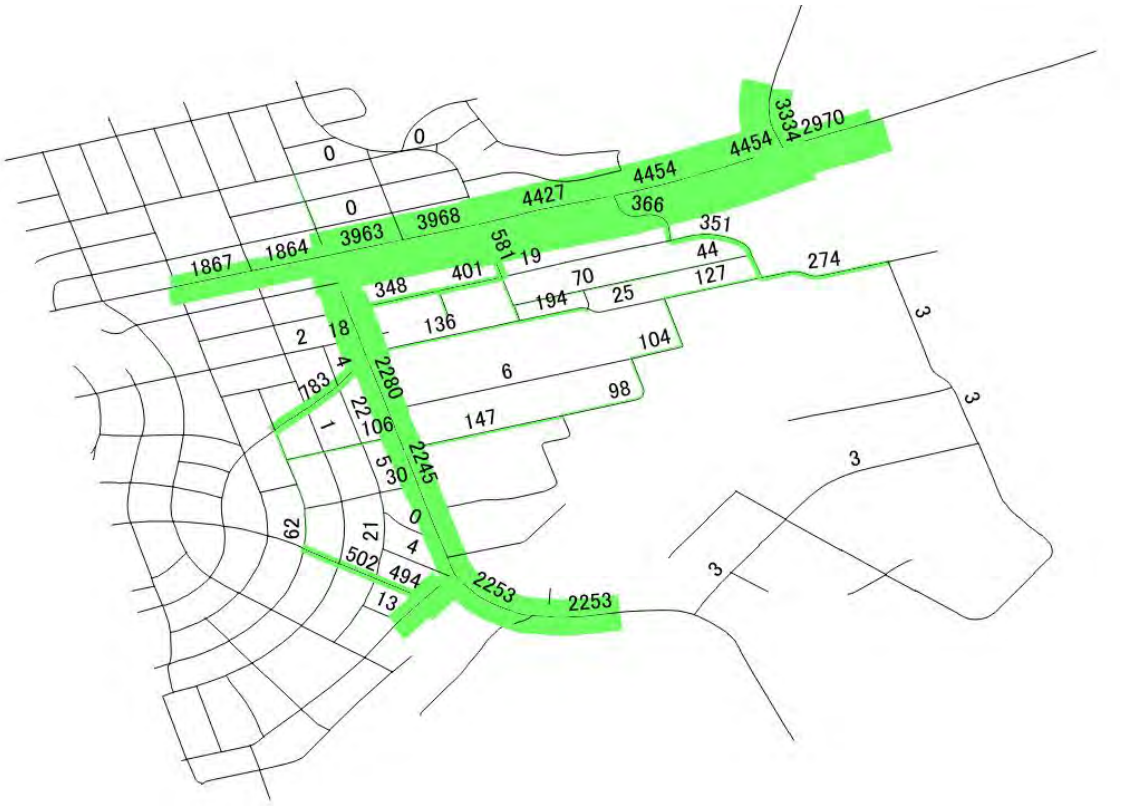
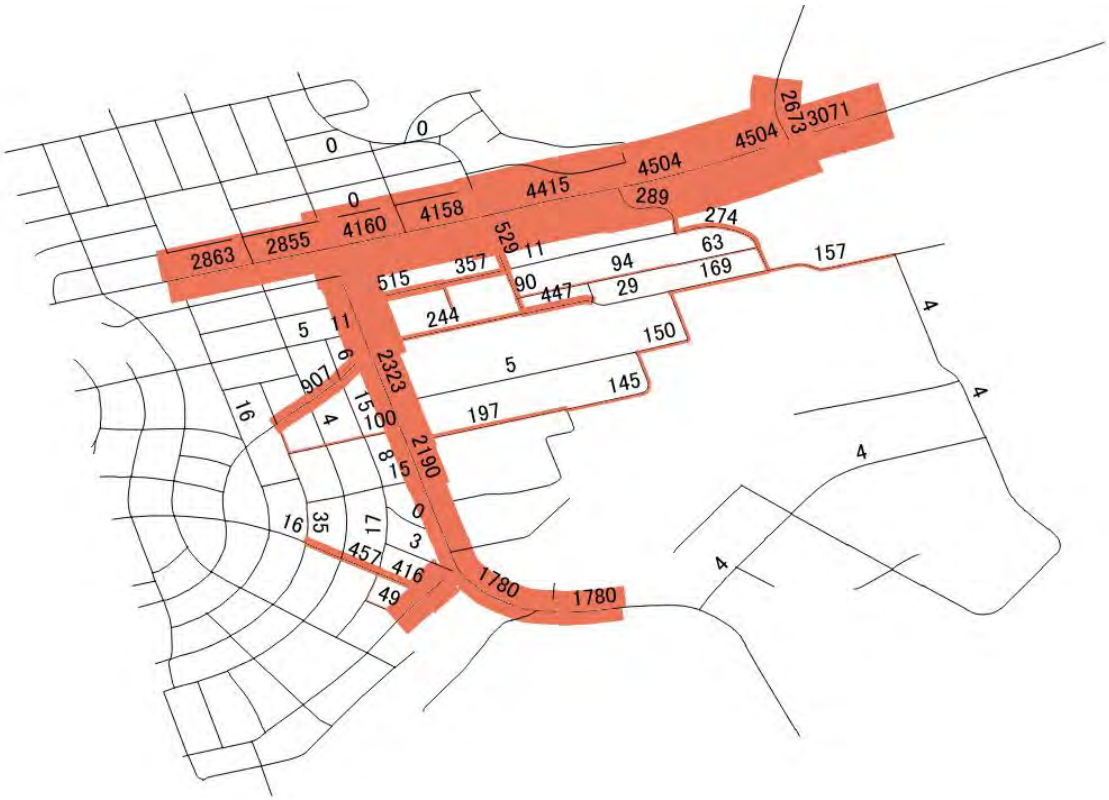


Figure 8-3: Projected PM Peak Hour Vehicle Flow



8.3.1 Traffic Operations

Future traffic operations analysis was conducted to review key signalized intersections in the study area. This was completed to assist in the development of the functional plan, including confirmation of lane configurations and turn lane storage lengths.

For the fully implemented development build-out, an initial test of traffic operations with the base assumptions for mode shares (i.e. 40% vehicular mode split and 5% travel demand reduction) indicated some capacity constraints at these intersections.

Additional analysis indicated that the implementation of 80% of Study Area A's residential development build-out, development traffic could be accommodated by the planned road network. Table 8-5 and Table 8-6 present projected AM and PM peak hour traffic operations with 80% of Study Area A's development traffic.

To be noted, these analyses are high level based on several land use and transportation planning assumptions. As development occurs with specific proposals being made, these assumptions need to be reviewed for consistency and for impact on other developments. As mentioned for TDM strategies, monitoring of the transportation network based on subsequent development implementation will be critical.

Table 8-5: Projected AM Peak Hour Traffic Operations

Intersection	Intersection LOS	Critical Movements			
		Movement	LOS	V/C Ratio	95th Percentile Queue (m)
Laird Dr & Eglinton Ave	F	EBT	F	1.71	492.0
		WBL	F	1.89	396.0
		NBT	F	1.37	244.0
		SBT	D	0.17	30.0
Eglinton Ave & Don Avon Dr	C	EBT	C	0.94	277.0
		NBT	E	0.88	107.0
Brentcliffe Rd & Eglinton Ave	F	EBT	F	1.25	436.0
		WBL	F	1.05	78.0
		NBL	D	0.03	6.0
Laird Dr & Vanderhoof Ave	B	WBL	E	0.92	87.0
Laird Dr & McRae Dr	D	EBL	E	0.79	96.0
		WBL	F	1.17	116.0
		NBL	F	1.19	45.0
		SBT	F	0.95	308.0

Table 8-6: Projected PM Peak Hour Traffic Operations

Intersection	Intersection LOS	Critical Movements			
		Movement	LOS	V/C Ratio	95th Percentile Queue (m)
Laird Dr & Eglinton Ave	F	EBT	F	1.26	381.0
		WBL	F	1.27	231.0
		NBT	F	1.09	171.0
		NBR	D	0.79	182.0
		SBT	D	0.04	11.0
Eglinton Ave & Don Avon Dr	C	EBT	B	0.88	172.0
		WBL	F	0.86	24.0
		WBT	C	0.93	210.0
		NBT	D	0.56	48.0
Brentcliffe Rd & Eglinton Ave	D	EBT	E	1.09	354.0
		WBL	E	0.80	41.0
		WBT	C	0.97	340.0
		NBT	D	0.02	5.0
		NBR	D	0.71	96.0
Laird Dr & Vanderhoof Ave	C	WBT	D	0.85	114.0
		SBT	B	0.95	70.0
Laird Dr & McRae Dr	C	EBL	E	0.99	102.0
		WBL	D	0.80	68.0

8.3.2 Neighbourhood Infiltration

Concerns with neighbourhood infiltration was highlighted by many residents during various consultation activities. In order to continue to support the existing neighbourhoods to the north of Eglinton Avenue and west of Laird Drive, the new signalized intersections would be designed to restrict through movements into these neighbourhoods. This includes the intersection of Vanderhoof Avenue and Laird Drive, as well as Eglinton Avenue and Don Avon Drive. In addition, horizontal and vertical deflections at designated local streets will be implemented.

8.3.3 Goods Movement

The existing conditions assessment and stakeholder input highlighted a need to maintain truck access to the employment lands area. To safely accommodate truck movements, a number of strategies will be adopted: identify designated truck routes where appropriate designs can be incorporated; provide dedicated turn lanes; and, provide larger receiving lanes and turning radii at key intersections for the preferred truck routes.

8.4 Pedestrian Network

Pedestrian flows for the AM and PM peak hours are shown in Figures 8-4 and 8-5. These figures show that there is significant demand to and from the ECLRT Laird Station and nearby transit stops. This leads to a high pedestrian volume along Laird Drive, between Eglinton Avenue and Vanderhoof Avenue in the AM and PM peak hours.

Improved connectivity, specifically north-south connections within Study Area A will allow pedestrians to utilize the new local streets. However, even with this consideration, most of the transit demand in the AM peak hour will be headed westbound. A large volume of pedestrian would cross or access the intersection of Eglinton Avenue and Laird Drive and it should be designed to enhance pedestrian comfort and safety. Furthermore, where possible, crossing distances should be minimized, and crosswalk widths increased.

Figure 8-4: Projected AM Peak Hour Pedestrian Flow

Figure 8-5: Projected PM Peak Hour Pedestrian Flow

8.5 Cycling Network

Projected cycling volumes along each roadway is shown in Figure 8-6 and Figure 8-7. The volume does not take into consideration recreation cycling traffic during non-peak hours, particularly those accessing the ravine system trails to the east of the study area. The desire for a connection to the Don Valley ravine system was highly supportive during the consultation activities.

There is a need for improved cycling infrastructure and linkages to other parts of the City's network. A cycling option along Laird Drive and Vanderhoof Avenue would provide a connection to the existing network and planned destinations. The City's 10 Year Cycling Plan should be amended to reflect Laird Drive and Vanderhoof Avenue as the preferred streets for cycling infrastructure.

Cycle tracks would provide a high level of comfort and safety for both commuter and recreational cyclists, and is recommended for Laird Drive. An off-street multi-use path along Vanderhoof Avenue and a small segment of Brentcliffe Road, would provide access to proposed parklands within the planned development blocks and to the Don Valley ravine system areas east of the study area.

Cycling parking amenities at transit stations and key destinations should be provided.

Figure 8-6: Projected AM Peak Hour Cycling Flow

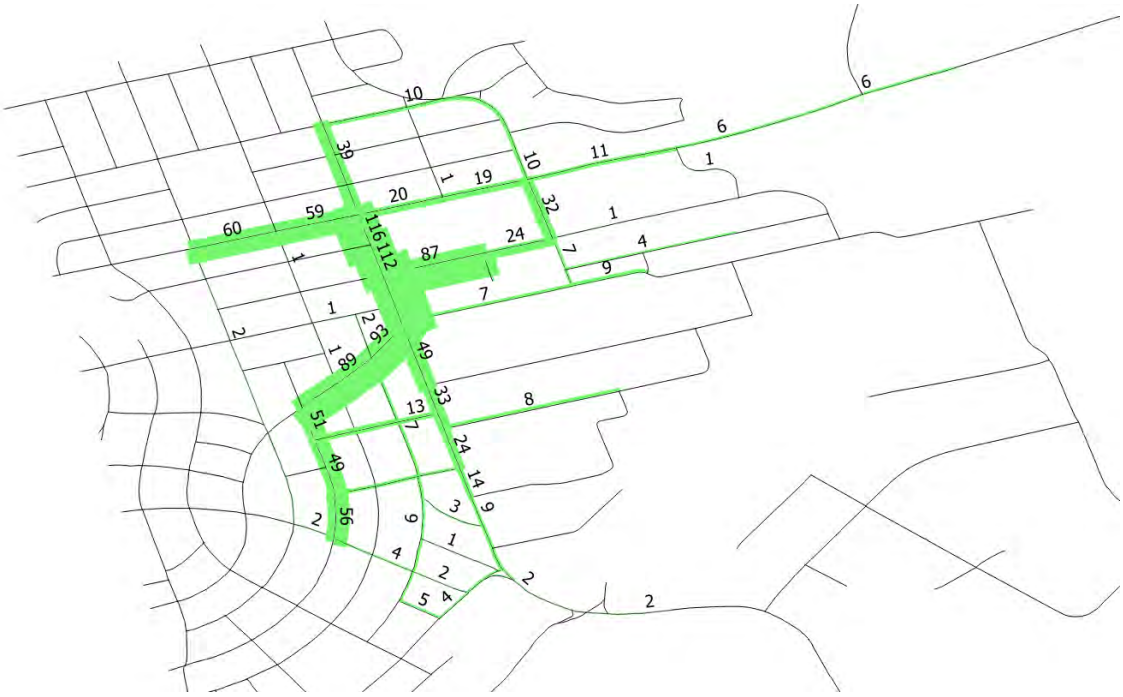


Figure 8-7: Projected PM Peak Hour Cycling Flow

8.6 Parking Strategies

Progressive parking strategies will ensure that new developments attract non-auto oriented residents and employees.

However, a minimum number of parking spaces is still required to support current uses, and ensure that overspill parking does not negatively impact existing neighbourhoods.

8.6.1 Minimum Parking Rates – Residential

Situated along a major transit corridor, it would be expected that both Study Areas A and B would follow Policy Area 2/3 as per City guidelines for parking supply requirements. This is consistent with the approved development at 939 Eglinton Avenue. Table 8-7 shows the required parking spaces per unit type for residential developments based on this requirement.

Table 8-7: City Residential Parking Policy

	1 Bedroom	2 Bedroom	3 Bedroom	Visitor (per Unit)
Policy Area 2/3 - Spaces per Unit	0.7	0.9	1.0	0.1

Residential parking spaces, which are typically owned by individual unit owners are still recommended to be provided on site within individual buildings. Although a shared lot is possible if centrally located, there is minimal benefits to doing so as it does not reduce overall parking provision requirements. However, given the small study area and the proposed location of a public community centre, it would be recommended that a centralized parking facility be located here. This would not only provide adequate access for the entire study area, but also is close to the transit station, thereby providing parking for transit as well.

8.6.2 Minimum Parking Rates – Non-Residential

Table 8-8 indicates the required parking supply for each of the non-residential land uses proposed within both study areas.

Table 8-8: City Non-Residential Parking Policy

Land Use	Space Per 100 Square Meters
Office	1.0
Retail	1.0
Community	0.5

To reduce the overall parking demand and to permit better sharing of parking uses, it is recommended that non-residential parking be shared among all developments within Study Area A. The benefits are:

- Ability to fully utilize parking spaces throughout the day by unlocking synergies between multiple uses (office, retail, and community facility);
- Flexibility to adjust pricing strategies to improve mode-share changes within the area;
- Flexibility to incorporate and adjust to future technologies, car-share spaces; and,
- Improved ability to change parking supply as mixed developments come online.

The City has established percentages for office, retail, and community facility parking. The AM/PM/Evening utilization of parking spaces for each use are as follows:

- Office – 100% /60% / 0%
- Retail – 20% / 100% / 100%
- Community – 25% / 100% / 100%

Therefore, for non-residential uses, the parking supply should be the maximum required parking demand in either the AM, PM, or Evening periods. The preferred plan would require the following parking spaces:

- Office: 23,960 sq m – 240 spaces
- Retail: 17,420 sq m – 174 spaces
- Community: 2,950 sq m – 15 spaces
- Total = 429 spaces

With shared parking, the PM period would require the highest parking supply, but only result in a total of 334 parking spaces.

8.7 Shared Mobility

Shared vehicles and cycling promotes additional reductions in vehicle ownership rates, and provides improved mobility choice. Study Area A has a high potential for implementing shared mobility hubs that include shared vehicles and/or shared cycling facilities.

8.7.1 Bike Share

Three locations are currently identified as potential bike share locations. One is to be located at the southeast corner of Eglinton Avenue and Laird Drive, providing access to and from the proposed ECLRT station. The second location is in the vicinity of Brentcliffe Road and

Vanderhoof Avenue, which provides access / choice for the planned, using the proposed multi-use paths, to access destinations to the west (community centre, retail, transit, etc.) and the Don Valley ravine system to the east for recreational cycling.

A third location is proposed at the existing Leaside Memorial Gardens community centre, located at the intersection of Laird Drive and Millwood Road, with a potential gateway treatment. A potential fourth location, subject to available property after appropriate gateway landscape treatments, is the southwest corner of McRae Drive and Laird Drive.

8.7.2 Car Share

Car-share spaces should be provided at a centralized location for both residential and non-residential users in Study Area A. Typically, car share usage occurs within 500m of a car share facility. As development occurs south of Vanderhoof Avenue in the future, additional car-share stations could be considered to facilitate use by existing neighbourhoods and new developments.

8.7.3 Rideshare

Ride sharing could reduce the number of vehicle trips by increasing the number of passengers per vehicle, thus accommodating the same overall trips with fewer vehicles. The effectiveness of ridesharing can vary depending on many mobility and economic factors, but it is an important mode choice to be considered. Public and private infrastructure should be designed to create convenient pick-up/drop off locations for employers, schools and residential developments.

9 Recommended Mobility Plan

The study and surrounding areas was planned primarily for cars and trucks. Combined with a lack of a fine-grained network and the presence of many physical barriers (i.e. railway corridor, large property parcels, and ravine system), the street network is disconnected. Thus, a challenging pedestrian and cycling environment exists. This further encourages people to drive, creating further traffic delays, congestions and safety issues.

The transportation review and multi-modal analysis confirms that the major investment into the Eglinton Crosstown LRT (ECLRT) line will significantly improve regional and local mobility, directly with enhanced higher-order and connected feeder bus transit options, and indirectly with supportive multi-modal access and shared mobility strategies.

Short-term opportunities for the area include the introduction of cycling facilities, which currently do not exist. A network of dedicated cycle tracks and multi-use pathways can provide efficient connections between key local destinations such as the future LRT station, community facility, and new and existing parks. The network should also connect to the larger cycling system that is comprised of the future Eglinton Avenue cycle track, the existing Millwood Road bicycle lanes, and the Don Valley ravine system.

Support for employment uses includes the identification of specific truck routes to facilitate movement within and beyond the Leaside Business Park. These routes tie into the larger arterial and highway road system and should be designed to minimize pedestrian and cyclist conflicts with heavy vehicles while also ensuring truck movement is efficiently realized.

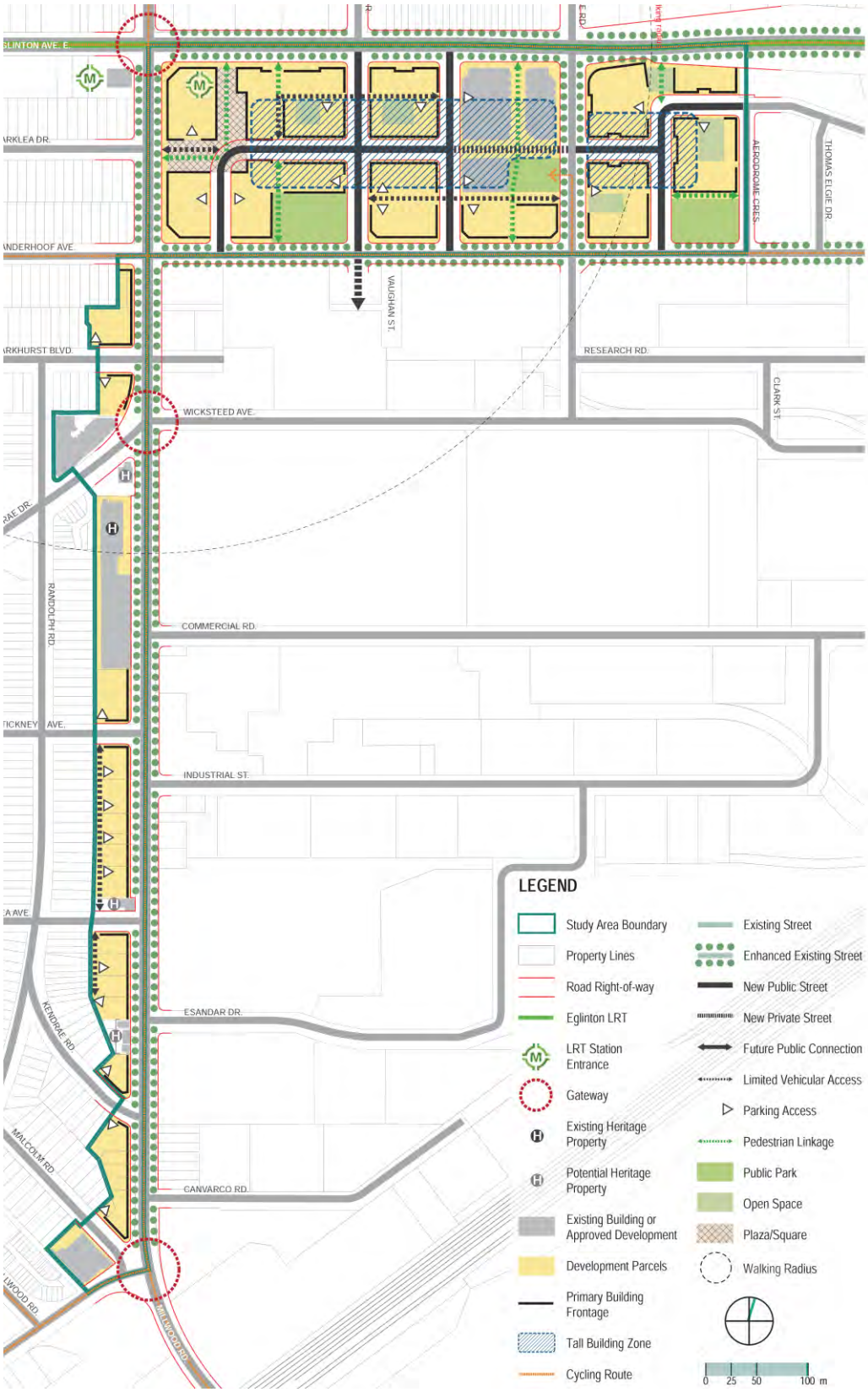
Correspondingly, emerging City-building initiatives will present opportunities to integrate new residential and employment intensification, including an enhanced public realm and community facilities. As such, this integrated planning process considered safe mobility access and choice in the development of the overall planning framework. This is evidenced by the several transportation-related references in the Laird in Focus Vision Statement and the associated principles, and in five of the ten identified “Big Moves” for the study.

Figure 9-1: Study Area and Context

9.1 Shifting Away from Vehicles – A Balanced Approach

Once ECLRT is operational, a transformation in travel modes will occur, locally and regionally. The degree which future travel moves away from vehicles however, will be measured by how well we achieve a balanced and integrated multi-modal transportation network. Critical for success will be enhanced access and connections to ECLRT, that includes reliable and convenient local transit, and safe and comfortable walking and cycling facilities.

Figure 9-2: Recommended Integrated Built Form and Transportation Structure Plan



Based on multi-modal analysis and extensive consultation, a long list of mobility recommendations has been identified to transform the study area from car-dependent travel to transit and other modes. Central to most of the recommendations were re-imagining Laird Drive and guiding new development to be non-auto based.

Laird Drive will become a central spine in the area, unifying existing residential neighbourhoods, retail uses and employment areas with an attractive multi-modal transportation corridor. It connects existing and planned community centres, has major bus routes and provides access to the vital employment lands. Existing cycling routes lack safe connectivity to the Leaside neighbourhoods and beyond the study area to the network. Further, existing sidewalks and boulevards are generally unattractive, due to narrow widths, utility pole locations, numerous driveway depressions, and limited greenery and amenities.

The re-imagined Laird Drive is highlighted by implementing continuously on both sides a grade-separated cycle track facility and wide sidewalks. Boulevard widths are optimized for streetscape greening and street furniture, with additional width generally provided along the west side to integrate with emerging mixed-use development. Another key design component is integrating the bus stops into the boulevards, ensuring that shelters, street furniture / seating, shade, lighting, and bike parking, are incorporated to enhance the comfort of transit patrons. This is being achieved while maintaining reasonable traffic operations, including goods movement via trucks, within the established right-of-way.

Guiding the emerging neighbourhood along Eglinton Avenue is largely founded on implementing a finer grain street network to provide choice for how people will move around and access to where people want to go. Additional safe and comfortable mid-block connections will be encouraged through the development blocks to improve permeability. With a green and attractive setting and a resulting lower speed environment the following attributes will be achieved:

- increased pedestrian and cycling activity with safe, comfortable and attractive conditions;
- enhanced and convenient access and connectivity to transit; and,
- alternative routing choices that connect to the surrounding street network, that will distribute vehicular trips within the study area.

The extent of a mode shift to active transportation and transit will be magnified by the success of a travel demand management (TDM) program and associated innovative mobility strategies. The recommended mobility plan promotes TDM to promote travel demand measures and technological advances that will ensure additional travel choice to single occupant vehicular travel, including adding capacity to the network without expansion. Smart Commute programs, school trip planning, parking maximums and development-related benefits should be the minimal expectations to provide modest reduction on vehicle trips. Enhanced and progressive TDM measures are continuously being advanced with technology, presenting significant opportunities. Monitoring of the transportation network as development occurs is critical, to ensure that trips are being diverted to transit and the effectiveness of the adopted TDM program, but also when / if further transportation infrastructure is required.

In embracing a multi-modal transportation approach that is sustainable and balanced, redefining the transportation mode hierarchy is required. The following transportation mode hierarchy has been adopted, consistent with the City's policies:

- **Active transportation** – walking and cycling modes provide both health and infrastructure capital and operating cost benefits.
- **Transit network** – higher-order transit lines, such as the Eglinton Crosstown, provide significant opportunities to not only impact regional trip choices away from vehicles, but also to facilitate development that is active transportation supportive. Further, feeder bus networks can be effectively planned to connect higher-order transit lines with residential communities and employment districts.
- **Transportation demand management (TDM) and innovative mobility strategies** – adopting TDM and technological advances, accepting emerging governance structures, supporting shared arrangements, and encouraging / incentivizing societal behaviour changes directly present infrastructure cost benefits, but also fulfils a need for non-peak travel periods.
- **Goods movement** – supporting the vitality of employment lands is critical to an economically sustainable City.
- **Vehicular movement and associated parking** – it is recognized that vehicles and parking will remain essential elements of a transportation network, however to accommodate future transportation demands, major infrastructure costs and quality of life impacts will be presented. Shifting away from vehicular trips is necessary for a sustainable and balanced transportation system within a vibrant City.

Recognizing the benefits of an integrated multi-modal transportation system, the recommended mobility plan also reinforces low-carbon options, while addressing environmental and health benefits, and societal equity in mobility planning for all users.

Based on analysis and extensive consultation, the following mobility recommendations are presented, that will transform the study area from car-dependent travel to other modes, and most predominantly to transit.

9.1.1 Pedestrian Network

Providing a high quality and safe pedestrian network will help to promote shorter trips by enhancing travel choice, provide access and connectivity to where people want to go, and improve the quality of the pedestrian experience.

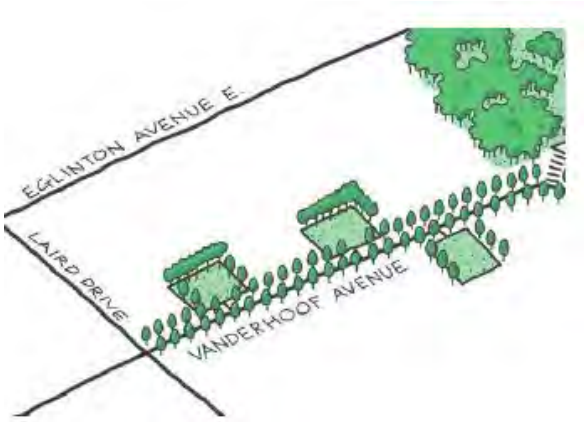
Recommendation 1. Implement recommendations along Eglinton Avenue as per EGLINTONconnects.

Recommendation 2. Implement a finer grain street network that includes generous sidewalks on both sides of new and existing streets. This will provide choice for how people will move around and will emphasize safe and comfortable walking. Streets will provide a green and comfortable setting for all users and activities. These local streets will have lower travel speeds and primarily provide only local access supporting an increase level of pedestrian activity. Additional safe and comfortable mid-block connections are encouraged through the development blocks to improve permeability. The implementation of a finer grain street network will occur in phases as redevelopment happens to improve linkages and connectivity to facilitate a mode shift to active transportation, and support access to all transit.

Recommendation 3. Establish a new east-west mid-block green street that will act as a connector from residential areas to destinations. Destinations include the transit station, the existing and planned community centres, and emerging retail and office uses. With an attractive public realm treatment, the new street will be pedestrian-friendly with a focus on intimate passive activities in comparison with Eglinton Avenue.

Recommendation 4. Transform Vanderhoof Avenue into a greenway spine. This will connect the existing Leaside neighbourhood and the planned developments with new and existing parks, as well as the Don Valley trail system to the east. This greenway spine will have a widened north boulevard comprising of a generous 2.1 m sidewalk, and a 3.0 m multi-use path buffered with additional greenery. The widened boulevard and associated buildings setback present a walking and cycling environment that is appropriate for all users and age, while establishing a clear transition to the remaining employment lands to the south.

Figure 9-3: Green Street Concept



Recommendation 5. Provide generous and continuous wide sidewalks along both sides of Laird Drive (2.1 m), including optimizing boulevard widths for streetscape greening and street furniture.

Recommendation 6. Incrementally enhance the pedestrian environment and safely connect to the enhanced pedestrian network within the employment lands as redevelopment occurs with the provision of sidewalks on both sides.

Recommendation 7. Implement City of Toronto's Vision Zero road safety plan to improve safety for pedestrians. Specific measures include:

- narrowing all roadway lane widths to minimize crossing walking distances;
- introduce a new signalized intersection at Laird Drive and Vanderhoof Avenue to facilitate safe Leaside neighbourhood access to the transit station, community centre, emerging retail and office uses, and existing and planned parks;
- for local roads into the Leaside residential neighbourhoods, introduce curb extensions consisting of a narrowed roadway and a

tighter radius, and a raised textured intersection profile – for pedestrians there will be an increased storage area at the intersection corners and a shorter crossing walking distance, while vehicular traffic will require lower speeds;

- remove existing Laird Drive medians which encourage unsafe mid-block pedestrian crossing, but investigate new controlled pedestrian crossings at key intersection or mid-block locations;
- modify signalized intersection configuration at Laird Drive and McRae Drive to remove traffic island and to reduce radii, including potential turning restrictions, to shorten the walking distances and reduce vehicular speeds at this highly pedestrian-active intersection;

Figure 9-4: Laird and McRae Treatment Option

- through roadway design and placement of utilities, encourage truck movement along preferred corridors, thereby reducing potential conflict with pedestrians;
- provide wider crosswalks (6 m) at crossing with anticipated high pedestrian volumes (i.e. Eglinton Avenue and Laird Drive, Laird Drive and Vanderhoof Avenue), and correspondingly ensure larger pedestrian storage areas with wider boulevards and building setbacks;
- promote active transportation along Brentcliffe Road on the west side to avoid significant northbound turning truck movements at Eglinton Avenue; and,
- provide continuous uninterrupted sidewalks across driveways and minor unsignalized intersections.

9.1.2 Cycling Network

Cycling trips will be promoted and better supported, particularly for short to moderate length trips, by enhancing travel choices that support safe and comfortable connections to the existing and planned cycle network.

Recommendation 8. Implement grade-separated cycle track recommendations along Eglinton Avenue as per EGLINTONconnects.

Recommendation 9. The finer grain street network consisting of new east-west and north-south streets, and associated mid-block connections through development blocks, present a lower speed environment that is cycling-friendly. The implementation of a finer grain street network will improve linkages and connectivity to facilitate a mode shift to active transportation, and support access to all transit.

Recommendation 10. Undertake a refinement to the City's 10 Year Cycling Network Plan, that includes a continuous grade-separated cycle tracks along Laird Drive between Eglinton Avenue and Millwood Road, and a continuous off-street multi-use path along Vanderhoof Avenue between Laird Drive and the Don Valley trail system.

Figure 9-5: Cycling Connections

Recommendation 11. Transform Vanderhoof Avenue into a greenway spine connecting the existing Leaside neighbourhood and the planned development with new and existing parks, as well as the Don Valley trail system to the east. This greenway spine will have a widened north boulevard comprising of a generous 2.1 m sidewalk, and a 3.0 m multi-use path buffered with additional greenery. The widened boulevard and associated buildings setback present a walking and cycling environment that is appropriate for all users and age, while establishing a clear transition to the remaining employment lands to the south.

Recommendation 12. Implement continuous grade-separated cycle tracks along Laird Drive, completing a critical section of the cycling network between Eglinton Avenue and Millwood Road, which will provide safe and comfortable

connections to transit and community facilities. In addition, this key connection will improve connectivity beyond the study area, including the adjacent Leaside neighbourhoods.

Recommendation 13. Incrementally enhance and safely connect to the refined and broader cycling network within the employment lands as redevelopment or capital works occurs with the provision of buffered cycling facilities.

Recommendation 14. Provide public bicycle parking spaces along the key cycling routes and at key destinations, such as transit station entrances and community facilities, to provide increased opportunities to secure bicycles in the area.

Recommendation 15. Coordinate with the Toronto Parking Authority, and developers and landowners to create a bike share network in the area. This will promote movement between key destinations, such as transit facilities, community and park facilities, and area businesses.

Recommendation 16. Encourage cycling usage through the development process by: a) securing above minimum long-term on-site bike parking; b) providing development-related cycling benefits; c) promoting the implementation of cycling repair stations in the area; d) including educational training programs for all users and ages.

Recommendation 17. Implement the City of Toronto's Vision Zero road safety plan. In addition to implementing the City of Toronto's Vision Zero road safety plan and related pedestrian safety measures, adopted cycling safety measures include implementing bike boxes for safer turning movements for on-street to on-street cycling facility movements, and consistent integrated cycle track treatment at bus stop locations.

Figure 9-6: Streetscape Concept

9.1.3 Transit Infrastructure

Improving the experience and amenities of the local feeder bus network along with the opening of the ECLRT will shift travel from private vehicles to more transit usage. In addition, enhanced active transportation access and connectivity to transit will support this mode shift to transit.

Recommendation 18. Coordinate with the Toronto Transit Commission regarding bus stop locations and associated design requirements. Bus bays and associated amenities need to consider potential routing, timed layover locations, and potential vehicle type / length. Shelters will be provided at all bus stop locations.

Recommendation 19. Implement the recommended two-bus bay along Eglinton Avenue as per EGLINTONconnects.

Recommendation 20. Implement bus bay locations for timed layover and / or at anticipated high volume of passengers getting on and off locations. In addition to the two-bus bay along Eglinton Avenue, other identified locations include: a two-bus bay along Brentcliffe Road in the southbound direction south of Eglinton Avenue; a two-bus bay along Vanderhoof Avenue in the westbound direction east of Laird Drive; and a two-bus bay along Laird Drove in the southbound direction south of Eglinton Avenue.

Recommendation 21. Adopt integrated bus stop treatments with the planned cycle tracks. Maintaining the cycle track facility separate and in front of the bus stop waiting area / shelter is preferred.

Recommendation 22. Provide proper integration of transit facilities with development where appropriate.

Recommendation 23. To improve passenger comfort, in addition to shelters at all bus stop locations, other amenities such as additional shelters, street furniture / seating, shade, lighting, and bike parking, should be included, particularly at anticipated high volume of passengers getting on and off locations.

Recommendation 24. Explore the introduction of transit priority measures for the local feeder bus network, particularly near the transit station or at congested intersections, to provide a more reliable choice for commuters.

Recommendation 25. Improve active transportation connections to and from transit stations / stops by establishing a finer grain street network and mid-block linkages through the development process. Include associated wider crosswalks at anticipated high passenger volume locations.

Recommendation 26. Design the street network to minimize delay to bus movement, including appropriate intersection turning radius and avoiding

intersecting local streets on heavy travelled transit routes near the ECLRT station.

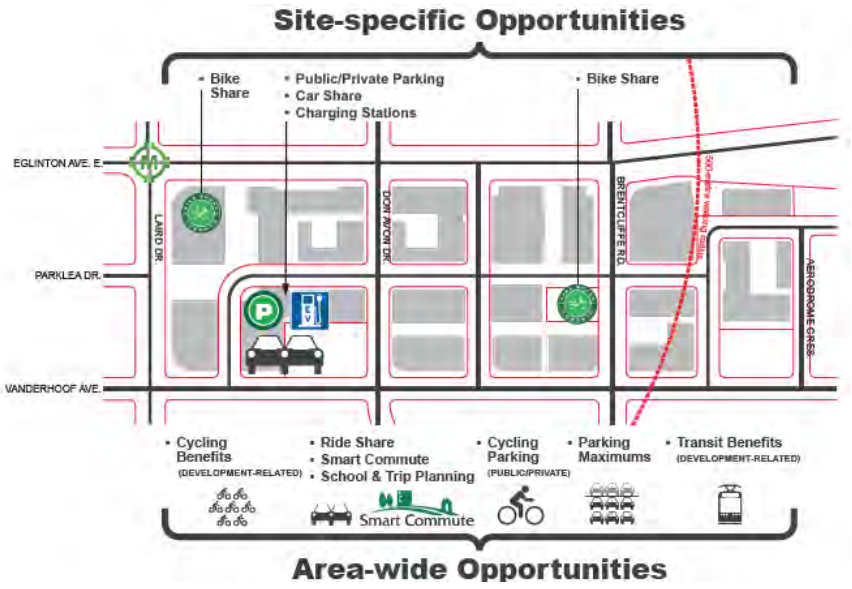
Recommendation 27. Encourage transit usage through the development process by providing development-related transit benefits, such as transit passes, real-time arrival display boards, and direct connections to the station.

9.1.4 Travel Demand Management (TDM) and Innovative Mobility Strategies

Transportation Demand Management (TDM) and innovative mobility strategies are to be encouraged. These strategies promote travel demand measures and technological advances that support alternatives to single occupant vehicular travel, adding capacity to the network without requiring its expansion.

Recommendation 28. Coordinate with Metrolinx Smart Commute program, developers, and businesses and related associations to incorporate a TDM plan to increase convenience and usage. Developers will be required to submit a comprehensive TDM plan and contribute to a TDM monitoring program. Encourage developers to incorporate trip planning techniques with the onset of their development marketing, working with Smart Commute to promote, educate and implement.

Figure 9-7: Shared Mobility and TDM Strategies



Recommendation 29. Coordinate with local school boards and school trip planning programs to incorporate new development requirements. Encourage developers to incorporate school trip planning techniques with the onset of their development marketing. Ensure that developers contribute to a TDM monitoring program.

Recommendation 30. Integrate publicly accessible parking infrastructure (i.e. Toronto Parking Authority) near the transit station and the proposed community centre, control parking supply, and implement other innovative mobility plan elements such as car-share and shared-bike facilities.

Recommendation 31. Secure TDM measures, electric vehicle charging infrastructure, and other Toronto Green Standards requirements in new developments through the development review process to reduce the number of vehicle trips.

9.1.5 Parking Strategies

The provision of parking will be planned to manage traffic volume growth and limit unnecessary car travel, thereby encouraging transit and alternative travel modes.

Recommendation 32. On-street parking along Laird Drive will not be permitted.

Recommendation 33. Parking for development along Laird Drive will be located underground or at the rear of the property, and accessed from the local streets, not from Laird Drive.

Recommendation 34. On-street short-term parking will be provided along the new east-west mid-block street that will support planned ground-level retail uses, and drop-off / pick-off functions near the transit station entrance and the proposed community facility.

Recommendation 35. Consideration for lower parking rates for new developments in concert with TDM strategies. Given the proximity to transit availability, population density and enhanced mobility options being introduced, lower parking rates will limit the supply of parking spaces and encourage non-auto trips.

Recommendation 36. Integrate publicly accessible paid parking spaces for all new developments, including along laird Drive.

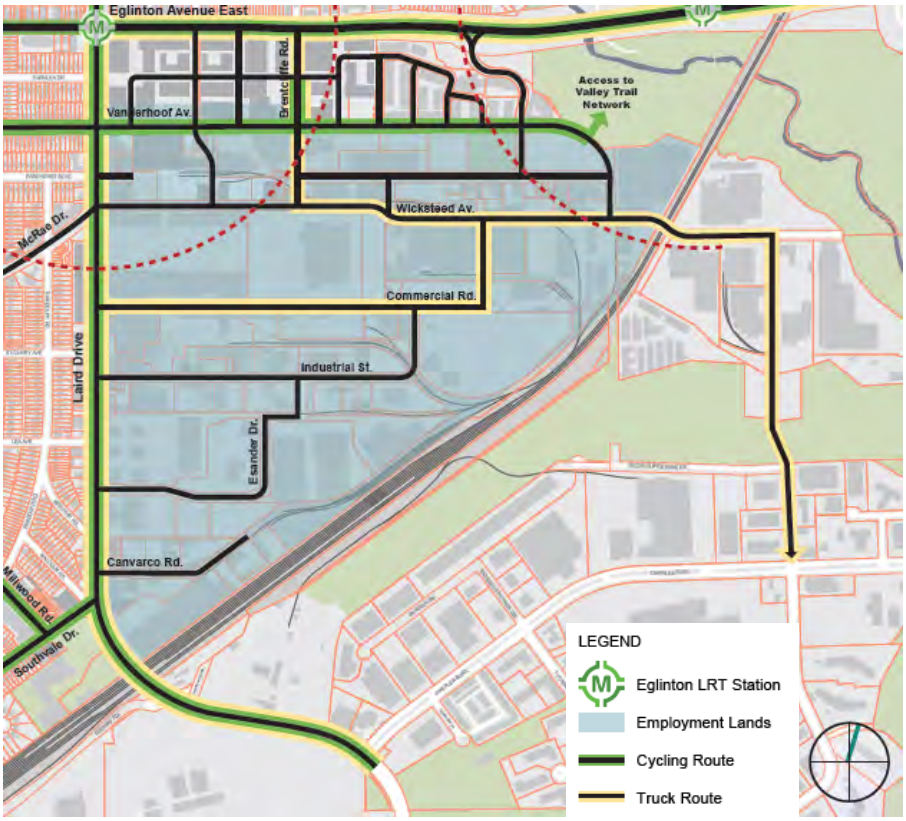
9.1.6 Goods Movement

Supporting the vitality of Employment Lands is critical to an economically sustainable city. The City recognizes the importance of the Leaside Business Park and is committed that the Leaside employment lands are to remain as “employment lands”, maintaining access to and from their operations. The mobility plan recommends a safe and balanced approach to maintaining the employment lands vital, while providing the opportunity for people to work, live and play locally.

The vitality of employment lands is critical to integrate growth with a supportive transportation system. The mobility plan recommends a safe and balanced approach to maintaining the employment lands vital, while providing the opportunity for people to work, live and play locally.

Recommendation 37. Support key truck / goods movement routes, consisting of arterial roadways to the Leaside Business Park (i.e. Eglinton Avenue, Laird Drive, Brentcliffe Road and Millwood Road), and internal roadway access via Commercial Road and Wicksteed Avenue, including the provision of truck turning radii and lanes where appropriate.

Figure 9-8: Proposed Truck Routes



Recommendation 38. Implement appropriate roadway / streetscape designs and utilities placement to reduce potential conflict with pedestrians and cyclists.

Recommendation 39. Goods servicing for the emerging new development along Eglinton Avenue will be accessed from the internal local roadways, preferably to underground facilities and / or to screened locations off the local roadways.

Recommendation 40. Goods servicing for development along Laird Drive will be at the rear of the property, accessed from the local streets, and not from Laird Drive.

Recommendation 41. Implement a southbound left turn lane along Laird Drive approaching Commercial Road to separate the primary truck entrance into the employment lands from other traffic to improve safety and ensure operational efficiency.

Recommendation 42. Incrementally enhance the pedestrian and cycling environment, by safely connecting to the enhanced transit and active transportation network within the employment lands as redevelopment occurs, to provide increased travel choice for employees and patrons.

Recommendation 43. Consider improvements to Wicksteed Avenue by providing additional roadway capacity and to facilitate goods movement.

9.1.7 Street Network

The development of this emerging neighbourhood will implement a finer grain street network, improving access and connectivity while facilitating a modal shift to active transportation and transit. This network will further provide alternative routing choices that connect to the surrounding street network, thereby distributing vehicular trips within the study area.

Recommendation 44. Implement recommendations along Eglinton Avenue as per EGLINTONconnects.

Recommendation 45. The emerging neighbourhood along Eglinton Avenue is to implement a finer grain street network that will provide alternative routing choices that connect to the surrounding street network, thereby distributing vehicular trips within the study area.

Recommendation 46. Development proponents must demonstrate to the City's satisfaction that the street network will function appropriately, and ensure capacity and access is available for the proposed development. Ensure that developers contribute to monitoring provisions that will assess TDM effectiveness and the actual diversion to the transit mode.

Recommendation 47. Laird Drive will be reconfigured between Eglinton Avenue and Millwood Road as a "Complete Street". The intent is to re-balance the existing vehicle-focussed functions with appropriate multi-modal uses while prioritizing key traffic movements. Specifically, this includes combining lanes to provide wider sidewalks, a continuous cycle track, and optimizing boulevard widths for streetscape greening and street furniture.

Recommendation 48. Vanderhoof Avenue roadway will introduce narrowed lanes to include a continuous left turn lane to ensure safe and efficient traffic operations given the existing offset roadways and driveways on both sides and projected large turning volumes.

Recommendation 49. Additional road capacity such as Wicksteed Avenue improvements are potentially required as development occurs, subject to actual TDM effectiveness and diversion to transit. Additional study would be required, but a preliminary concept envisions, as a minimum, a roadway widening from Brentcliffe Road to Millwood Road via Beth Nealson Drive, including a CPR grade separation.

Recommendation 50. Implement City of Toronto's Vision Zero road safety plan. Specific measures include:

- narrowing all roadway lane widths to minimize crossing walking distances;
- introduce a new signalized intersection at Laird Drive and Vanderhoof Avenue to facilitate safe Leaside neighbourhood access to the transit station, community centre, emerging retail and office uses, and existing and planned parks;

- for local roads into the Leaside residential neighbourhoods, introduce curb extensions consisting of a narrowed roadway and a tighter radius, and a raised textured intersection profile – for pedestrians there will be an increased storage area at the intersection corners and a shorter crossing walking distance, while vehicular traffic will require lower speeds;
- remove existing Laird Drive medians which encourage unsafe mid-block pedestrian crossing, but investigate new controlled pedestrian crossings at key intersection or mid-block locations;
- modify signalized intersection configuration at Laird Drive and McRae Drive to remove traffic island and to reduce radii, including potential turning restrictions, to shorten the walking distances and reduce vehicular speeds at this highly pedestrian-active intersection;

Figure 9-9: Improved Intersection Configurations

- provide widen crosswalks (6 m) an anticipated high pedestrian volume crossing (i.e. Eglinton Avenue and Laird Drive, Laird Drive and Vanderhoof Avenue), and correspondingly ensure larger pedestrian storage areas with wider boulevards and building setbacks;
- promote active transportation along Brentcliffe Road on the west side to avoid significant northbound turning truck movements at Eglinton Avenue; and,
- provide continuous uninterrupted sidewalks across driveways and minor unsignalized intersections.

9.2 Functional Concept Plan

A functional concept plan for the recommended mobility plan has been developed. The functional design of all roadways and rights-of-way has considered the proposed changes in use, intensity and character as the development occurs, and adheres to the Toronto Complete Street Guidelines (2016), the Toronto Green Technical Standards (2018), and numerous other City design standards. In addition, all new local streets will conform to Toronto's Development Infrastructure Policy and Standards (DIPS).

The functional concept plan drawings illustrating key components and associated typical sections are provided separately. The functional concept plan has been developed to an approximate 10% design level, at a scale of 1:1000 and typical sections at 1:100.

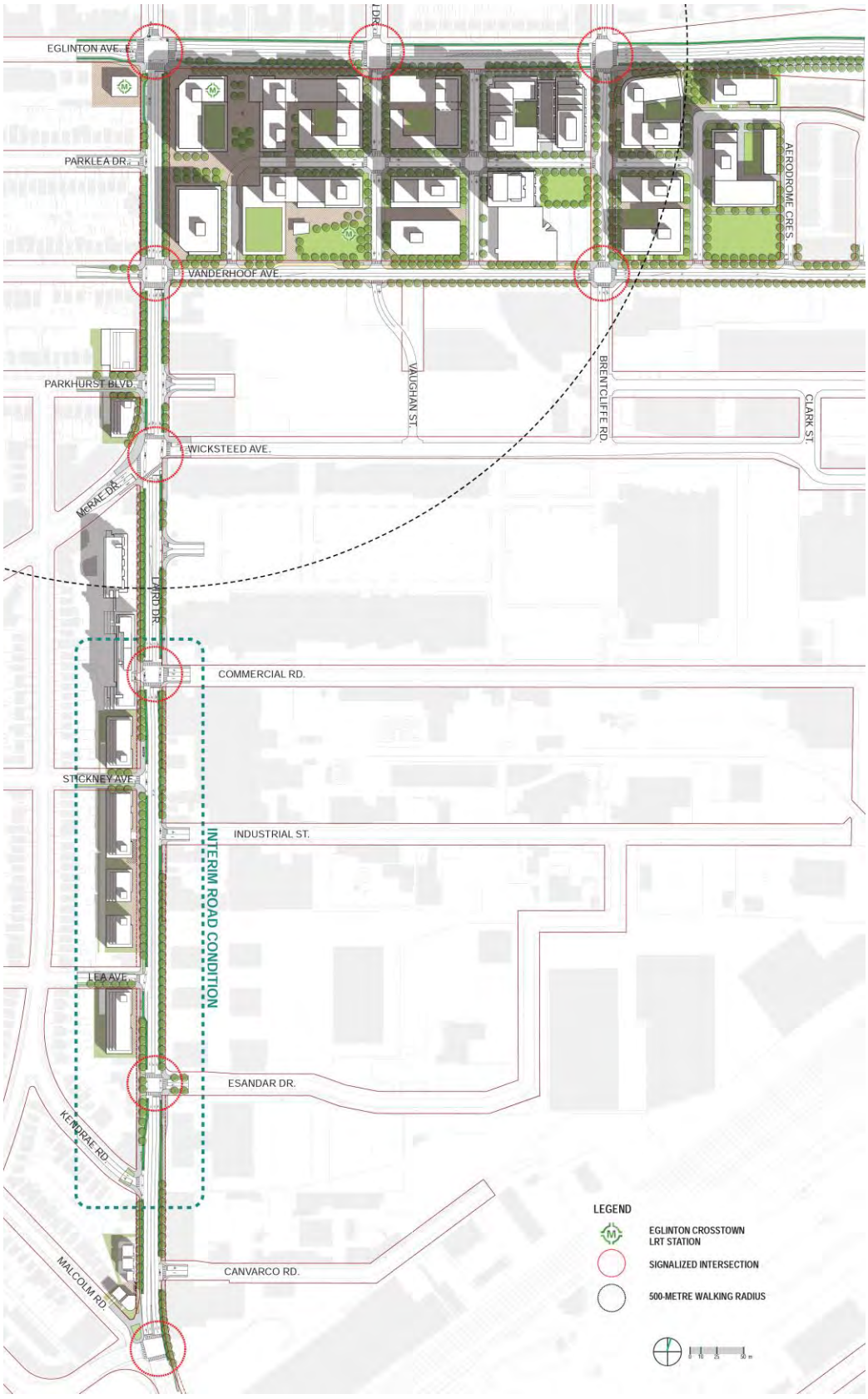
9.2.1 Roadway Descriptions

The following sub-sections provide an overview of the recommended typical sections for key roadways in the study area. To be read in conjunction with the functional concept plan and typical sections, these elements are addressed:

- roadway classification;
- right-of-way requirements;
- pedestrian and cycling facilities;
- bus transit interface provisions;
- boulevard and streetscape features;
- goods movement considerations; and,
- number and width of vehicular lanes, including identification of any intersection treatments, on-street parking provisions, and any non-standard treatments.

The typical sections have been used to confirm maximum right-of-way widths, and to inform of any necessary amendments to the Official Plan. The overall plan is provided in Figure 9-10.

Figure 9-10: Overall Roadway Plan



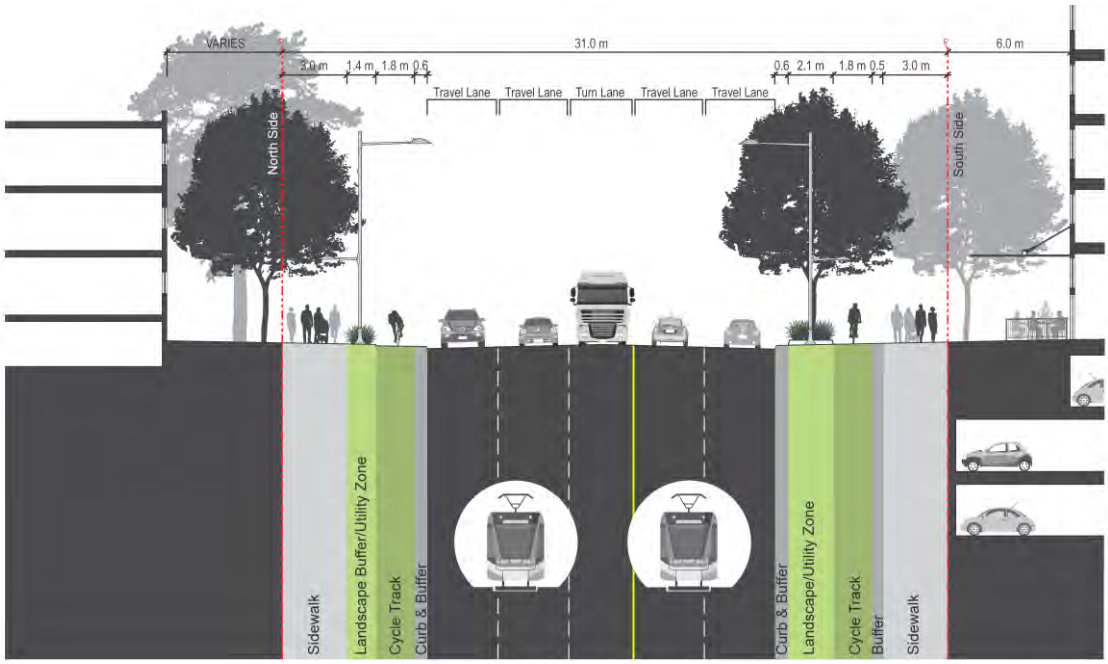
Eglinton Avenue

The recommendations from the EGLINTONconnects study are supported and endorsed for implementation. Recommended generous sidewalks in conjunction with building setbacks, cycle tracks buffered by landscaped zones and strategically placed bus lay-bys and on-street car parking, will provide an enhanced walking and cycling environment. This will support safe and comfortable access to the ECLRT to encourage non-vehicular trips, and to the planned mixed uses along Eglinton Avenue, with the anticipated greater range of and intensity of users than the other streets in the study area.

Although Eglinton Avenue will remain a major arterial with a high volume of vehicles and trucks, that will continue to provide regional connections as part of the larger transportation network, once the ECLRT is operational, a transformation in travel modes will occur, locally and regionally. A balanced and integrated multi-modal transportation network is critical for success to reduce the number of vehicular trips.

Figure 9-11 illustrates the proposed Eglinton Avenue cross-section in the vicinity of the study area.

Figure 9-11: Eglinton Avenue Typical Section



Laird Drive

Laird Drive is the primary north-south street in the study area that separates 2 distinct land uses in the Leaside community – the residential neighbourhood to the west and employment areas to the east. On the east side is a combination of recent low density mixed use / retail uses and older commercial properties. The west side presents a combination of older low density mixed use / retail uses and emerging new mid-rise residential developments. Heritage sites, including a few recently designated ones, are present along the west side of Laird Drive.

Although designated as a major arterial, Laird Drive presently provides a broad transportation role with respect to vehicular movement, which negatively impacts the pedestrian and cycling environments. Laird Drive provides direct driveway access and on-street parking, while also

being an important link in the local and regional road and goods movement network, a network that is challenged by a high degree of circuity. The ECLRT and supportive development presents an opportunity to evolve the transportation network and provide improved mobility.

It is envisioned that Laird Drive could provide an increasingly multi-modal function role as a central spine for the Leaside community that unifies the distinct land uses – residential to the west and the employment areas to the east – providing a safe and comfortable street for all ages and abilities.

Laird Drive can evolve into a destination for both communities, for workers and area residents both during and after typical business hours. Laird Drive can unify the existing distinct land uses with an enhanced landscaped streetscape. Combined with generous landscaped building setbacks this will promote the green streetscape character that can accommodate opportunities for grade-related plazas, patios and other public amenities. Laird Drive will become increasingly a local destination.

Laird Drive will also be the key connector for all modes to the ECLRT, to existing and planned community facilities, and to the regional transportation network and recreational resources.

To achieve this destination, unifying, and connector function, Laird Drive's transportation role needs to evolve into a balanced multi-modal transportation role to better serve the local community needs and to promote local non-auto trips within the area. Improved walking and cycling facilities, streetscape and amenities integrated with the local surface bus network, while maintaining an appropriate level of service for vehicular and goods movement requires a re-balancing of the planned 27.0m right-of-way (ROW) width.

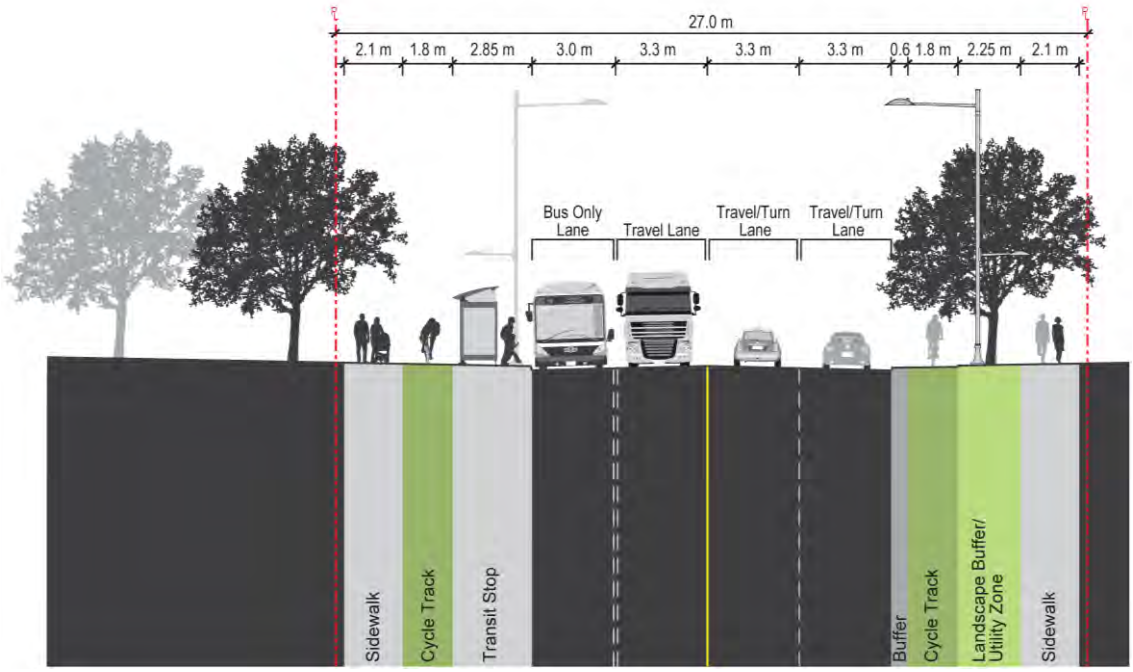
Figure 9-12: Laird Cycling Use

The following discussion describe for Laird Drive segments the recommended re-balancing of the proposed 27.0m ROW, including supporting rationale.

Segment 1 – Eglinton Avenue to McRae Drive: This segment is in the vicinity of the ECLRT's Laird Station entrances, the planned community facility, emerging retail uses, and a major east-west cycling facility. Significant pedestrian and cycling volumes, and numerous on-street surface bus connections are not only anticipated, but also desirable. To accommodate a

balanced multi-modal approach within a 27.0m ROW, but also recognizing that a 6m building setback will be provided on the east side, a recommended typical section has been developed, as illustrated in Figure 9-13.

Figure 9-13: Laird Drive Typical Section - South of Eglinton Avenue



South of Parklea Drive to McRae Drive the roadway curb-to-curb width increase to 13.2m (4 – 3.3m lanes). The intersection at Vanderhoof Avenue will be signalized to: provide a safe pedestrian and cycling crossing to access transit, the planned community centre, emerging retail uses, and the proposed east-west multi-use trail facility; and, to facilitate the anticipated increased turning movements. To be noted, the intersection south of Vanderhoof Avenue and Larid Drive will not permit East-West thru movement. At both Vanderhoof Avenue and McRae Drive intersections, lane functions (i.e. thru and / or turning) transition to prioritize anticipated key vehicular movements. Further, at proposed bus stop locations, the cycle track will ramp up to the platform elevation, and traverse the bus stop area on the roadside of the bus shelter.

Access into the proposed new development on the east side, across from Parkhurst Boulevard, will be designed to restrict movements to only right-ins and right-outs.

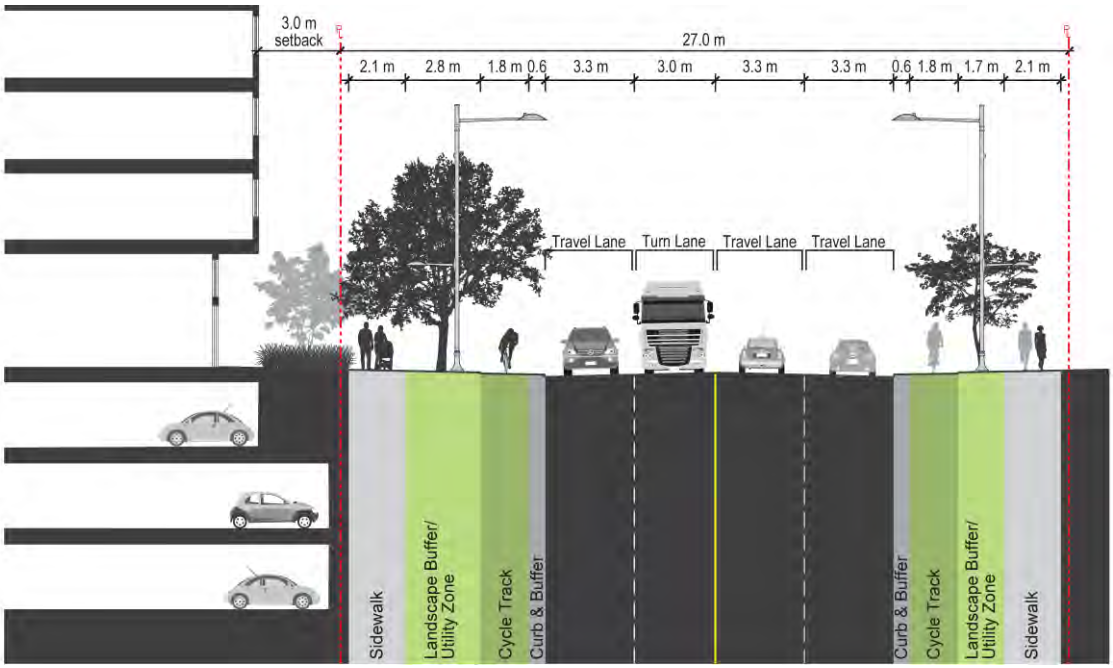
Segment 2 – McRae Drive to Commercial Road: In addition to improving the pedestrian / cycling / transit environments, this segment will need to address major driveways to planned developments on both sides of Laird Drive, and significant truck volumes as Commercial Road is the proposed designated truck route and access point into the Leaside Business Park.

Figure 9-14 illustrates the recommended typical section along Laird Drive between McRae Drive and Commercial Road.

It is recommended that the McRae Drive eastbound movement include a right turn restriction. Existing turning movements are very low and there are several alternative routes presented. Removal of the channelization island and replacing it with a minimum radius and turning restriction, will reclaim significant right-of-way to implement a gateway feature that could highlight Leaside's heritage and support cycling and walking amenities. But more importantly,

the reduced crossing lengths and increased storage areas enhances the safety for pedestrians and cyclists for all intersection crossing movements.

Figure 9-14: Laird Drive Typical Section - South of McRae Drive



Segment 3 – Commercial Road to Esandar Drive: During the progress of the study, heritage properties were identified including 96 Laird Avenue (northwest corner of Laird Drive / Lea Avenue), which encroaches into the proposed 27.0m right-of-way. To date, only the east side 3.5m has been conveyed, so presently there is a 23.5m ROW available.

Prior to the heritage property designations, a symmetrical cross-section was recommended as shown in Figure 9-15.

Ultimately, 4 – 3.3m vehicular lanes will be required beyond the designated heritage property, as illustrated in Figure 9-16. This will require a 27.0m right-of-way, which means that an additional 3.5m property conveyance is required when redevelopment occurs on the east side.

Figure 9-15: Typical Section at 96 Laird Drive (Pre-Heritage Designation)

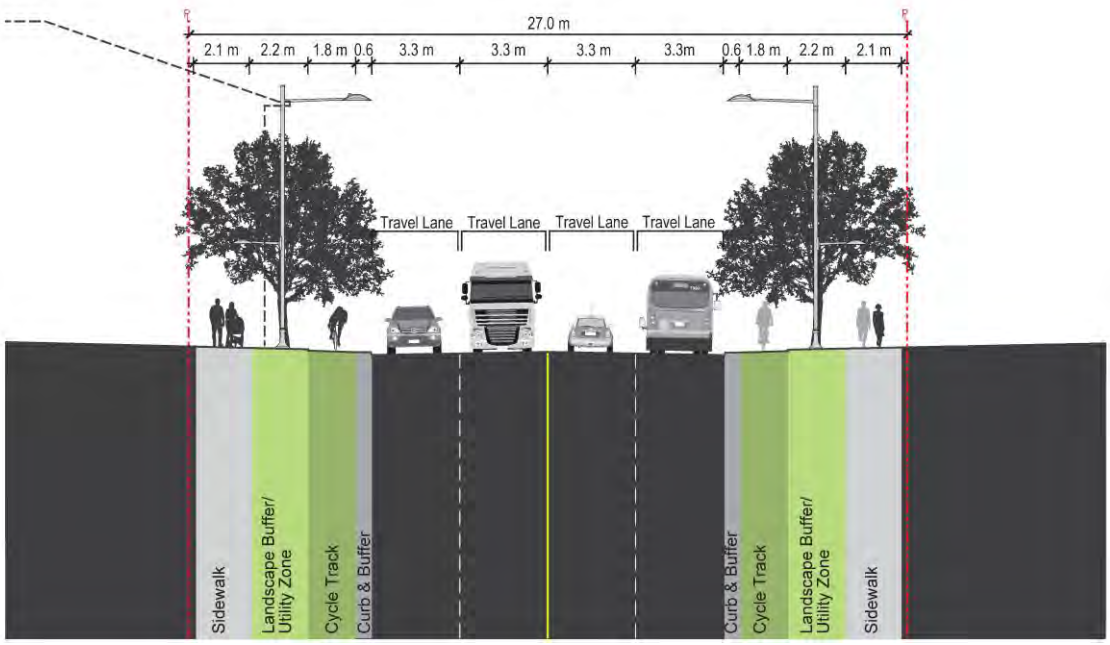
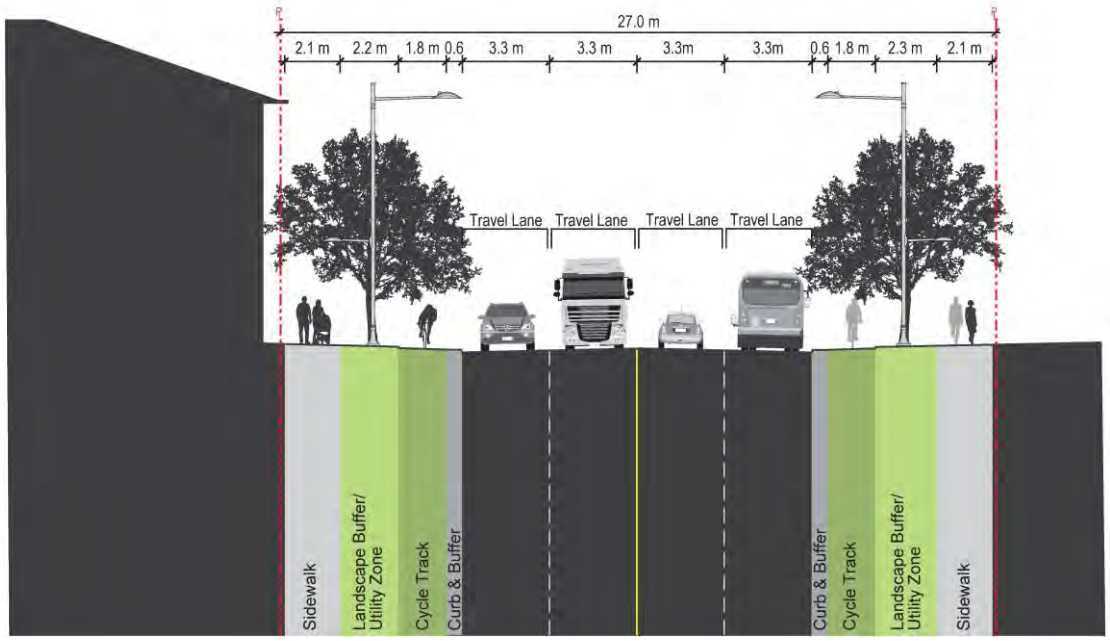


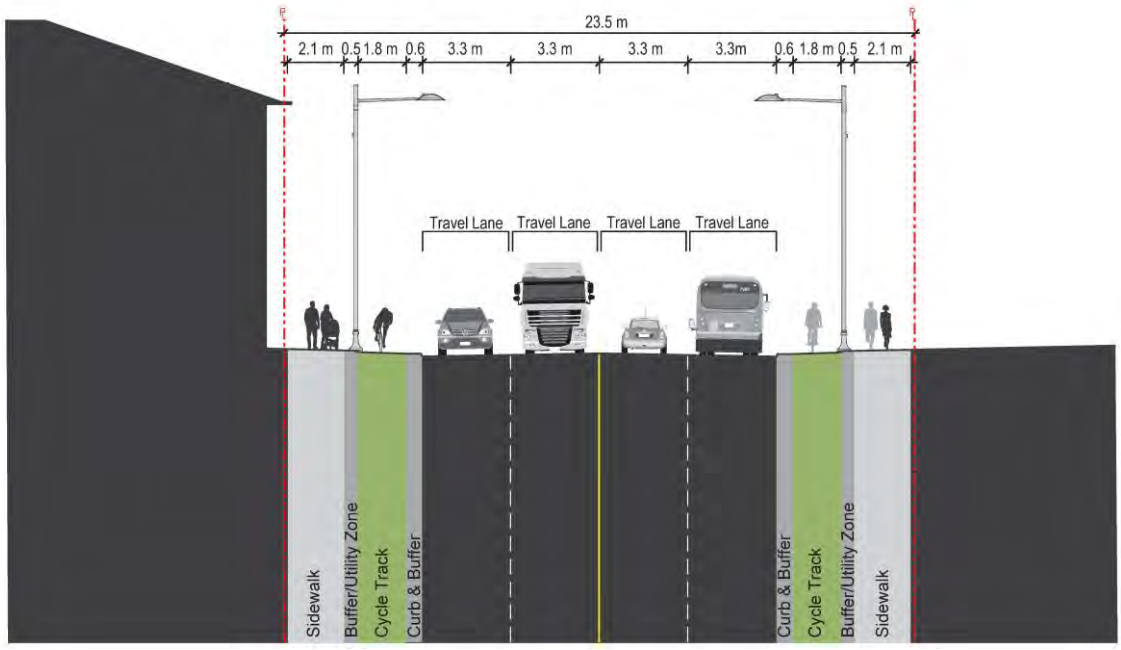
Figure 9-16: Typical Section at 96 Laird Drive (Ultimate Cross-Section)



To promote near-term cycle track construction along Laird Drive, 2 potential interim options were developed using the existing 23.5 right-of-way.

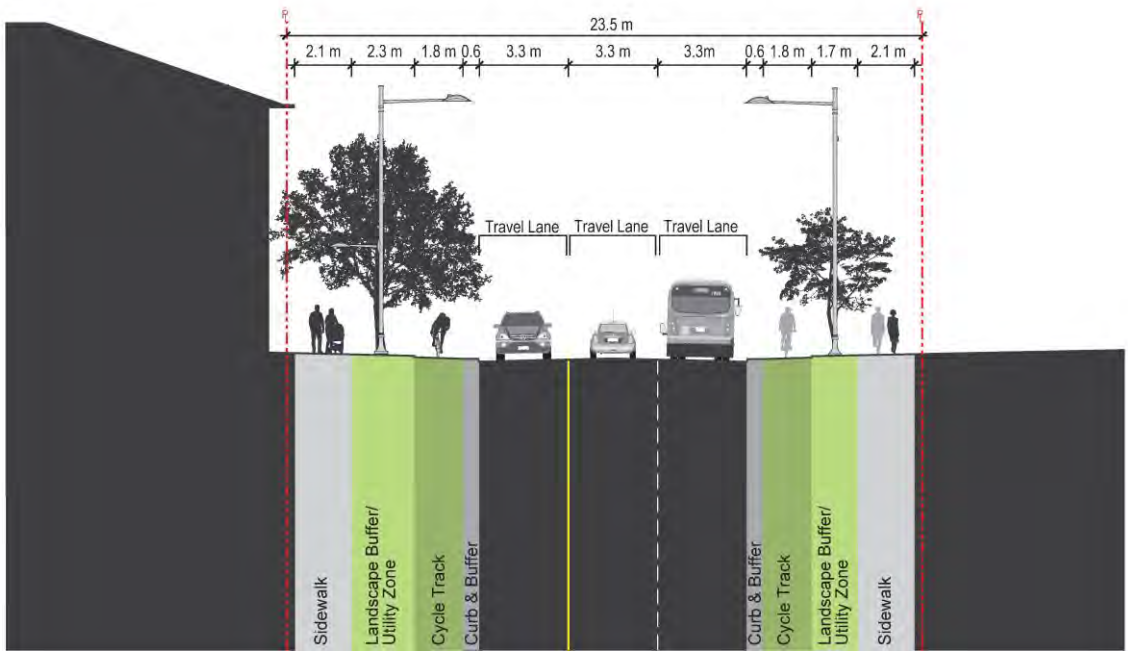
Interim Option 1 utilizes the existing 23.5m ROW and provides the ultimate 4-lane with cycle tracks cross-section. As a result, as shown in Figure 9-17, no green / landscaping zone is provided on either side. Further, a roadway shift of over 2m is required presenting a significant roadway transition on both the north and south approaches, which impacts all roadway elements.

Figure 9-17: Option 1 - Interim Typical Section at 96 Laird Drive



Interim Option 2 also initially utilizes the existing 23.5m ROW, but with only 3 traffic lanes – a 3.3m lane in the northbound and southbound direction, and a 3.3m continuous two-way left turn lane as shown in Figure 9-18. This configuration allows for landscaped boulevards on both sides. The resulting roadway shift is reduced. Both the roadway shift and the west side boulevard is constructed to the ultimate 4-lane cross-section configuration.

Figure 9-18: Option 2 - Interim Typical Section at 96 Laird Drive



When redevelopment occurs on the east side, including with an additional 3.5m property conveyance, the ultimate 4-lane cross-section can be constructed, with only the roadway's east side requiring widening and reconstruction. Interim Option 2 is subject to future public consultation.

Segment 4 – Esandar Drive to Millwood Road

This segment will ultimately be a 4-lane cross-section, two lanes in each direction. Although the designated ROW is 27.0m, additional property may be required: to facilitate an ultimate 4-lane transition at the Esandar Drive intersection; to provide a typical bus stop configuration; and, to ultimately extend the cycle track network across the CPR corridor.

The recommended Laird Drive 4-lane typical section from south of Esandar Drive to the reconstructed Millwood Road follows the typical cross section identified in Figure 9-16:

Vanderhoof Avenue

Transforming Vanderhoof Avenue to become a beautiful greenway linking existing Leaside neighbourhoods and planned developments to shared public uses and the Don Valley ravine system was one of the identified "10 Big Moves" of the Laird in Focus study.

The intent is to provide an asymmetrical cross-section within the existing 20.0m right-of-way, providing a wider boulevard width on the north side. As a result, an increased buffer distance with the remaining employment lands to the south will be provided. This wider boulevard also provides for a lay-by facility to be used for TTC buses, and as a pick-up / drop-off (PUDO) zone for the planned community facility and associated parklands.

Figure 9-19 and Figure 9-20 illustrate the recommended typical section proposed for Vanderhoof Avenue.

The intersection of Vanderhoof Avenue and Laird Drive will be signalized. The design will be focussed on providing safe pedestrian and cycling access for the local communities. Vehicular through movements along Vanderhoof Avenue will be restricted to minimize vehicular traffic on local streets.

Figure 9-19: Vanderhoof Avenue Typical Section

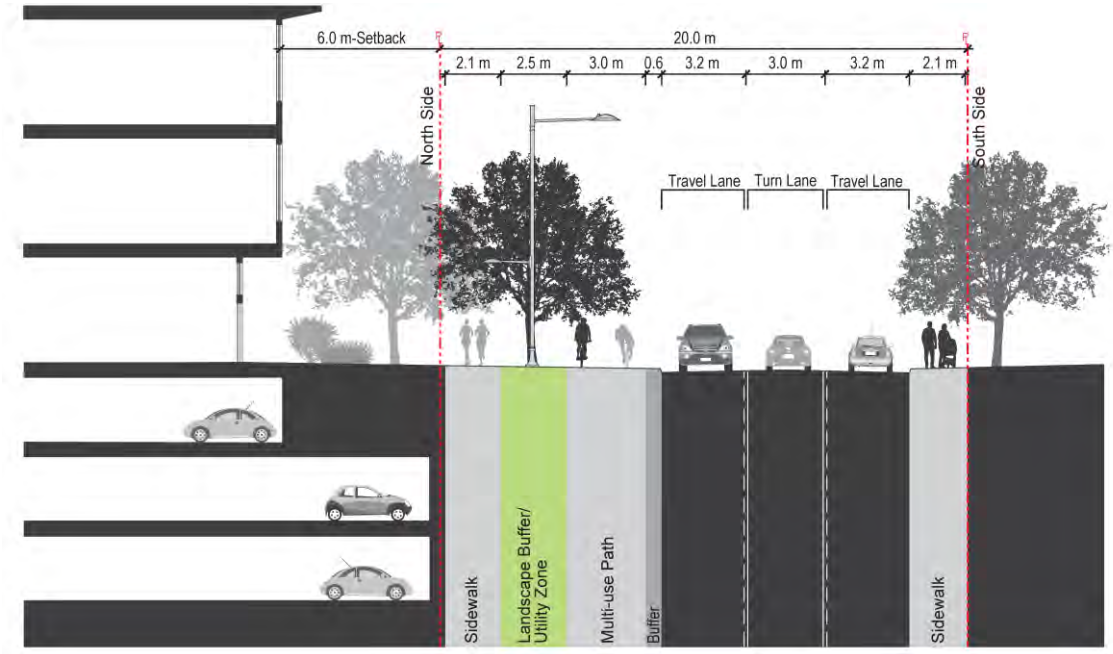
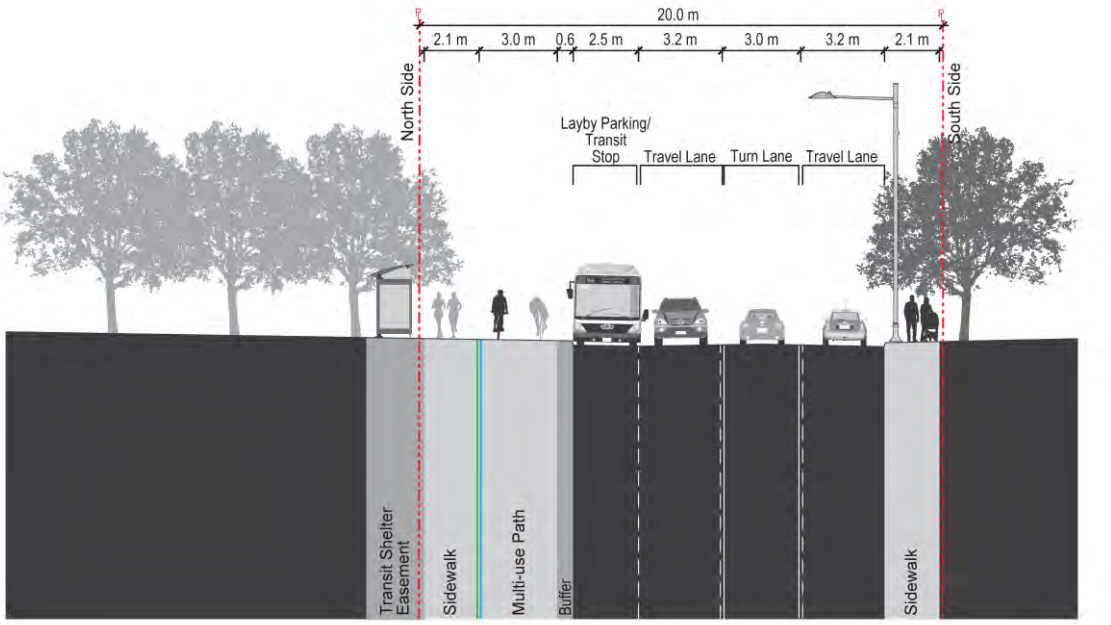


Figure 9-20: Vanderhoof Avenue Typical Section with Layby Adjacent to Public Park



To be noted, in order to maintain a consistent cross-section with the multi-use trail on the north side, the travelled roadway of Vanderhoof Avenue will have to be shifted to the south east of Aerodrome Crescent and in the vicinity of Leonard Linton Park.

New Local Streets

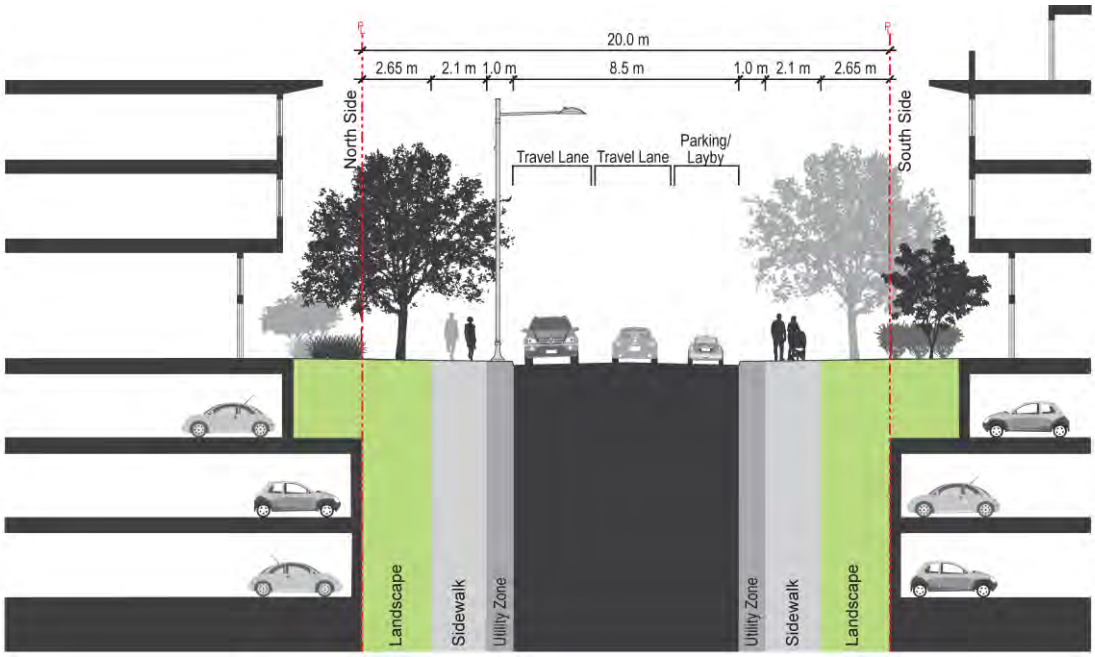
A new east-west local street is proposed between Eglinton Avenue and Vanderhoof Avenue linking key destinations include the transit station, the existing and planned community facilities, parks, and emerging retail and office uses. The new local street was not extended to Laird Drive to minimize impact to bus and vehicle movements south of Eglinton Avenue close to the LRT station.

New north-south local streets are proposed between Laird Drive and Brentcliffe Road, the extension of Don Avon Drive and Street 'B'. These streets between Eglinton Avenue and Vanderhoof Avenue are critical to implementing a finer grain street network that will provide alternative routing choices.

As part of the redesign of the Don Avon Drive and Eglinton Avenue intersection, which will be signalized, vehicular through movements will be restricted to minimize vehicular traffic on local streets. The intersection design will focus on providing safe pedestrian and cycling access for the local community.

These streets will be classified as local streets with a 20m right-of-way. With an attractive public realm treatment, the new street will be pedestrian-friendly with a focus on intimate passive activities in comparison with a busier and active Eglinton Avenue. Figure 9-21 illustrates the typical cross section of a local street.

Figure 9-21: Street 'A' (Mid-Block) Typical Section



Brentcliffe Road

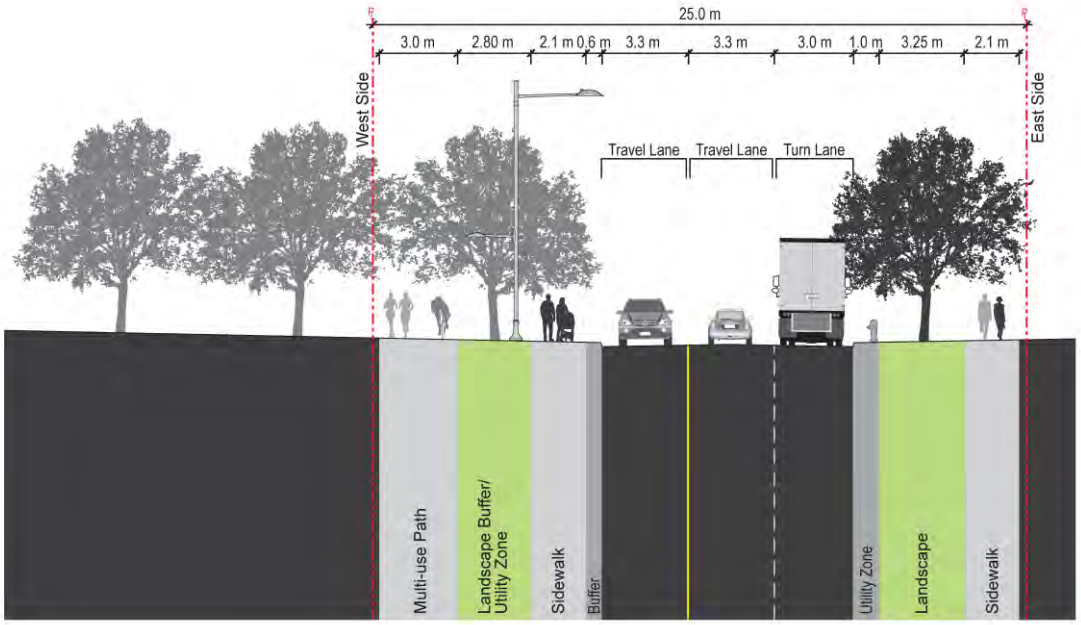
Brentcliffe Road between Eglinton Avenue and Wicksteed Avenue is a minor arterial that will continue to, provide a significant transportation role with respect to vehicular, transit, and goods movement. This is a major consideration in the re-balancing of transportation elements within the planned 25.0m right-of-way. Figure 9-22 illustrates the proposed re-balancing within the ROW.

It is envisioned that Brentcliffe Road will remain as a key goods movement route, in and out of the Leaside Business Park. Providing a long northbound right turn lane at Eglinton Avenue, uninterrupted with a mid-block stop, including a larger turning radius, will continue to support goods movement activities.

Generous 2.1m sidewalks are provided on both sides buffered by a wide landscaping zone on the roadway side with a minimum 3.0m width that will significantly enhance the pedestrian environment for all ages and abilities. A 3.0m multi-use trail on the west side will connect to the proposed multi-use trail along Vanderhoof Avenue and terminate at Street 'A' in the vicinity of a proposed park facility.

A two-bus bay along Brentcliffe Road in the southbound direction, south of Eglinton Avenue, is also proposed for timed layovers for potential multiple routes.

Figure 9-22: Brentcliffe Road Typical Section



9.2.2 Intersection Treatments

Different techniques are recommended to promote a safe pedestrian and cycling environment, and to discourage non-local traffic entering the adjacent residential neighbourhoods. The major proposed initiative is to locally narrow the roadway width, reduce the intersection turning radii, and to introduce an elevation raise, preferably with visual cues (i.e. texture and colour treatments).

Figure 9-23: Intersection Treatment Options

These treatments will reduce speeds and thereby lengthen travel times, and will significantly discourage larger vehicles / trucks from entering. As a result of these initiatives, safety is promoted, including pedestrian and cycling crossing times are shorten. These treatments are recommended along local roads only along Laird Drive intersections (Parklea Drive, Vanderhoof Avenue, Parkhurst Boulevard, Stickley Avenue, Lea Avenue, Kenrae Avenue) and at the Eglinton Avenue and Don Avon Drive intersection.

9.2.3 Right-of-Way Requirements

As previously described, the recommended mobility plan is generally within the roadway's designated right-of-way, with the following potential exceptions;

- additional property near the proposed heritage designated property at 96 Laird Drive in order to provide a consistent and continuous streetscape along Laird Drive, and / or to protect for an ultimate 4-lane cross-section along Laird Drive;
- localized property beyond the designated right-of-way widths at key intersections to site bus stops with desirable shelters / amenities and cycling facility interface.

9.2.4 Overall Pavement Markings and Signage for Traffic Control Devices

The following non-standard and site-specific pavement markings / traffic control devices are recommended:

- wider crosswalks (i.e. 6m) along key pedestrian movement routes and where high volumes are anticipated;
- no thru traffic signage to be provided at the intersections of Don Avon Drive and Eglinton Avenue and Vanderhoof Aveneue and Laird Drive;
- no right turn signage in the eastbound directions at the McRae Drive and Laird Drive intersection.

An intermediate signalized crossing location along Laird Drive between Commercial Road and Esandar Drive should also be explored, considering where the TTC plans to place a bus stop along this section.

9.3 Implementation Plan

An implementation plan for the recommended mobility plan has been developed defining infrastructure, policy, and service improvement requirements. The following section outlines the requirements for:

- Development Phasing;
- Policy Directions;
- Environmental Assessment (EA) Requirements;
- Development Charges; and,
- Monitoring and Assessment Plan.

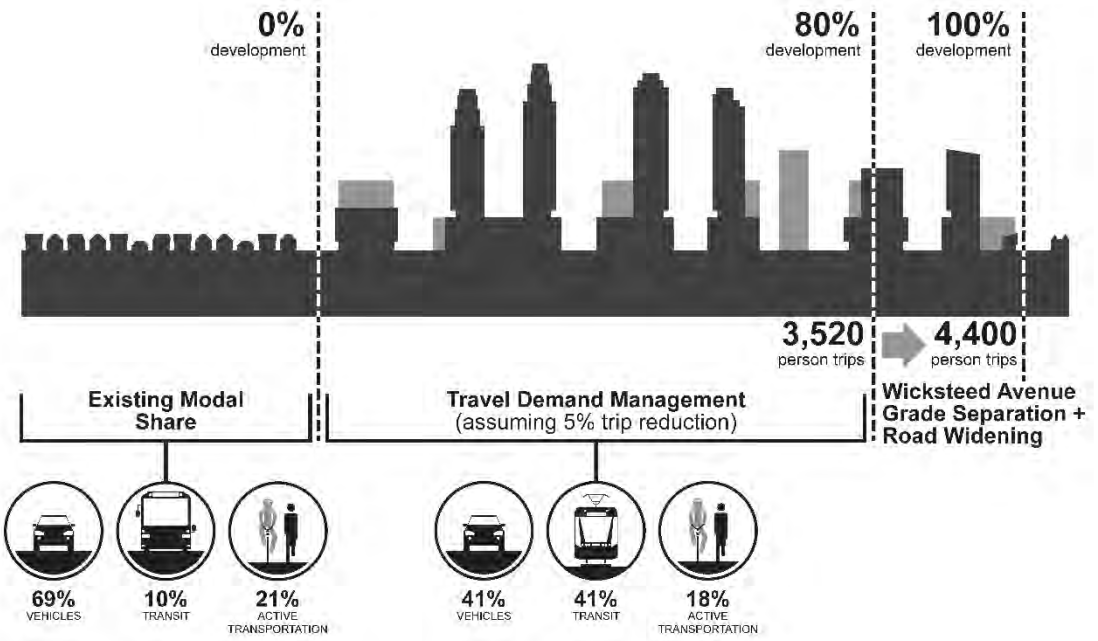
9.3.1 Development Phasing

The recommended mobility plan findings present an implementation plan based upon development levels and the need for additional infrastructure (to be noted assumes ECLRT operational). An additional critical roadway improvement is envisioned in order to add capacity to the network. A potential option is a Wicksteed Avenue roadway widening from Brentcliffe Road to Millwood Road via Beth Nelson Drive, including a CPR grade separation. This improvement will provide additional east-west roadway capacity, including increased connectivity and access to and from the employment lands.

Also noted, was that an achievable 10% TDM-related trip reduction rate with an associated 10% increase in the transit mode split, would provide a sufficient reduction in demand to accommodate the proposed development. To achieve the planned development levels, two scenarios are presented:

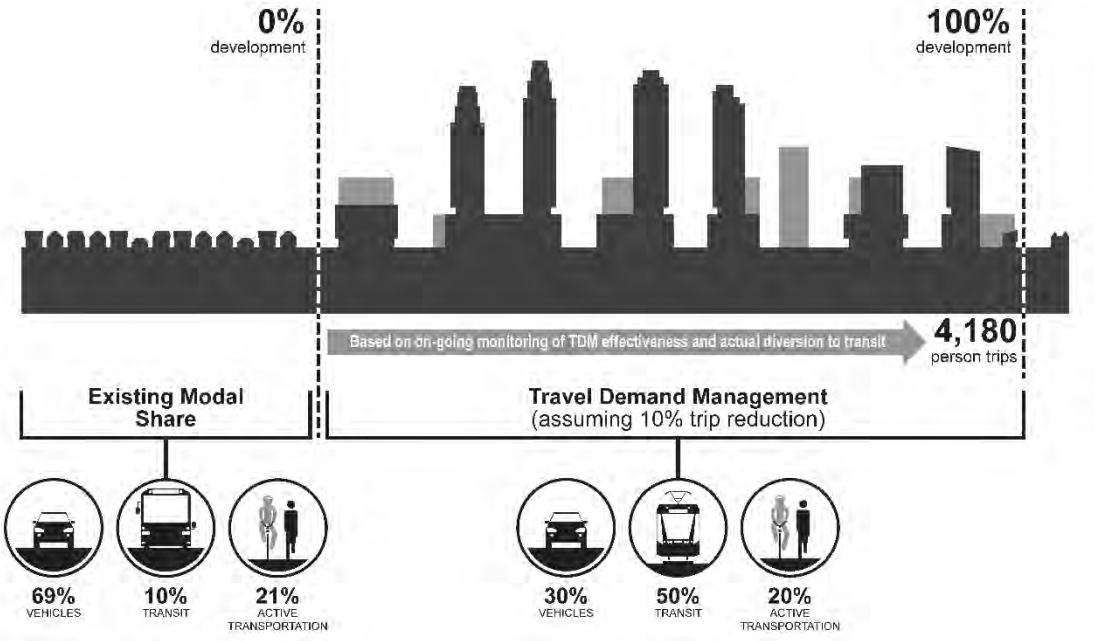
Option 1: Adopting a modest 5% TDM-related trip reduction, but including additional roadway infrastructure, such as a Wicksteed Avenue road widening and grade separation, at approximately the 80% development build-out phase.

Figure 9-24: Option 1 Key Benchmarks



Option 2: Successfully embracing TDM strategies to achieve a 10%-person trip reduction and an additional 10% person trip diversion to transit. Monitoring of the transportation network, pre-development and during development as it comes into service, is critical.

Figure 9-25: Option 2 Key Benchmarks



9.3.2 Policy Directions

Identified policy directions to implement the recommended mobility plan include:

- Official Plan Amendments – to secure all new public streets in Schedule 1 and 2 of the Official Plan;
- Cycling Network Amendment – to refine the Cycling Network Plan; and,
- Zoning By-Law 569-2013 amendment to include Policy Area 2 designations for developments within 500m of a transit station, and a Policy Area 3 designation elsewhere. Further site-specific parking space rate reductions should be considered when accompanied with additional TDM and innovative mobility measures that will contribute to additional person trip reduction.

9.3.3 Environmental Assessment (EA) Requirements

Based on the recommended mobility plan, potential EAs that need to be undertaken have been based on the recommended mobility plan, potential EAs to be undertaken have been identified:

- Road capacity improvements such as Wicksteed Avenue road widening and CPR grade separation; and,
- Laird Drive reconstruction, dependent on scope and capital costs, could include the addition of cycle tracks, roadway reconfiguration, municipal servicing and other utilities, and the extension of the proposed Laird cycle tracks across the CPR corridor to Millwood Road.

9.3.4 Development Charges

The City conducts development charges studies to identify funds to be collected for transportation infrastructure improvements under the Development Charges (DC) Act and associated DC By-Laws. These studies typically identify all types of transportation infrastructure required to serve development growth, including roads, transit, and active transportation. The City should consider amending their DC By-Law to include associated infrastructure for emerging TDM (i.e. ride-share, car-share and trip planning programs) and sustainable technologies (i.e. electric vehicle charging points).

9.3.5 TDM Monitoring and Assessment Plan

A multi-modal demand model generated trips for the area was developed considering each mode, each development block, each existing and planned land use and characteristics, provided mobility choice and quality (i.e. vehicle, transit, cycling and pedestrian networks), and existing mode splits, volumes and travel patterns. Given the area's presently limited existence of ride-sharing and other typical TDM measures and existing low-density residential characteristics, a modest trip reduction of 5% was adopted.

Given that a relatively modest TDM-related trip reduction rate was adopted, potential for a higher rate is considered highly feasible with innovative technologies, evolving societal behaviour, and emerging programs supported by developing policies. As such, a higher trip reduction rate of 10% rate was tested, which is presently achieved in other parts of the City. Based on these tests, a 10% reduction to peak hour total person trips, and an additional increase in transit mode share of 10%, would allow for the planned development to be built in full, and be supportable by existing infrastructure.

As such, developers will be required to submit a comprehensive TDM plan and contribute to a TDM monitoring program.