

Appendix B





Laird in Focus – Mobility Report

City of Toronto

Final Report July 2018 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:

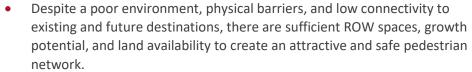
- Active transportation: walking and cycling modes provide both health and infrastructure capital and operating cost benefits;
- Transit network: higher-order transit lines, such as the Eglinton Crosstown, provide significant opportunities to not only draw regional trip choices away from vehicles, but 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 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 ongoing 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.

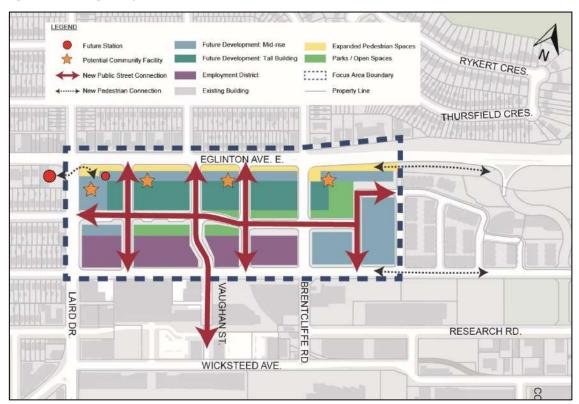
Together, Study Area A (original Laird Focus Area), Study Area B (Mixed Used Areas along the west side of Laird Drive), and the larger transportation study area form this study's overall Laird in Focus study area. For this Mobility Report, the term "study area" shall refer to the transportation study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





Regional

- Neigbourhood Traffic Patterns
 - Regional Transit Trips

Leaside

(incl. Business Park and Employment Area)

- Study
- Multi-modal Specific Strategies and Plans
- Local / Feeder Transit Network
- Walking and Cycling Connections

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

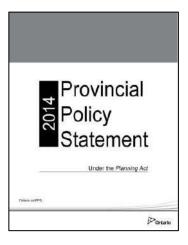
The 2014 Provincial Policy Statement, was a province-wide vision for the province's land use vision. It develops landscapes, built environments, and manages resources over a long term, to achieve a liveable and resilient community. The directions include:

- 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.



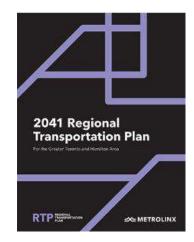


3.1.3 The Big Move, 2008 (2017 Update)

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;





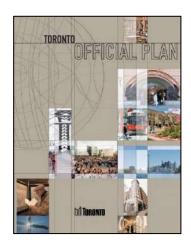


- Technological improvements;
- Education; and
- Enforcement.

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 EGLINTON connects 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 eastwest 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**

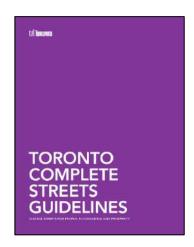
Further to the specific policies that influence the study area directly, there are several other provincial and municipal guidelines that provide guidance on a range of active transportation, design, and development related best practices. The follow sections present the relevant documents that will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

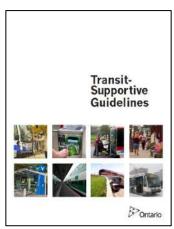


3.4.2 MTO Transit Supportive Guidelines, 2012

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 singleoccupant 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.

LEGEND Employment Mixed Use Institutional Parkland Retail

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.

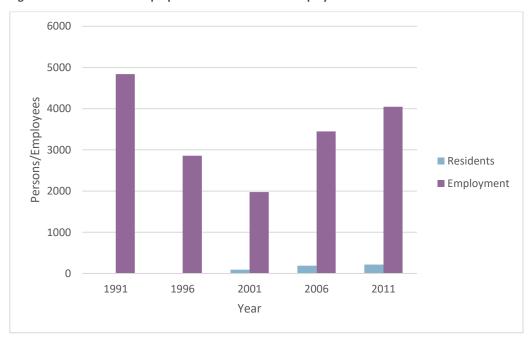


Figure 4-2: TTS Historical Employment and Residents for Employment Lands Area

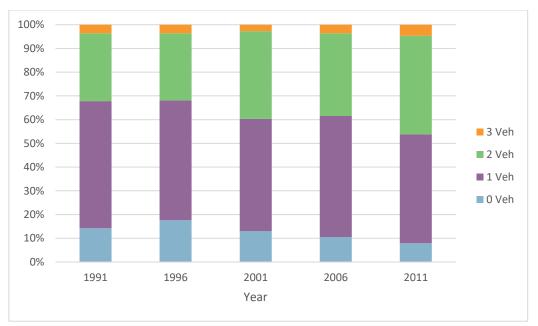


Figure 4-3: Vehicle Ownership Within Leaside Study Area

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.

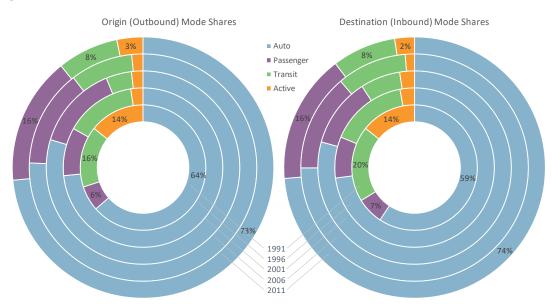


Figure 4-4: Travel Mode Shares

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.

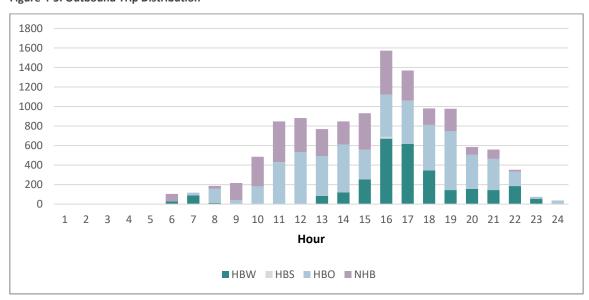
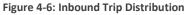
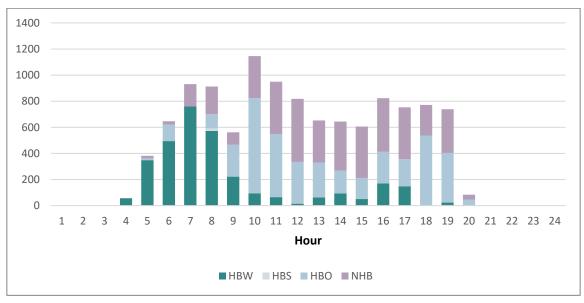


Figure 4-5: Outbound Trip Distribution





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.

GTA North Richmon Markham aughan **GTA East** 757 (5%) 257 (2%) 974 North York 5093 (34%) 4983 361 (2%) 365 (2%) 3797 (26%) 4107 (27%) 429 (3%) Toronto East York Short Distance **GTA West** Outbound Inbound 297

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

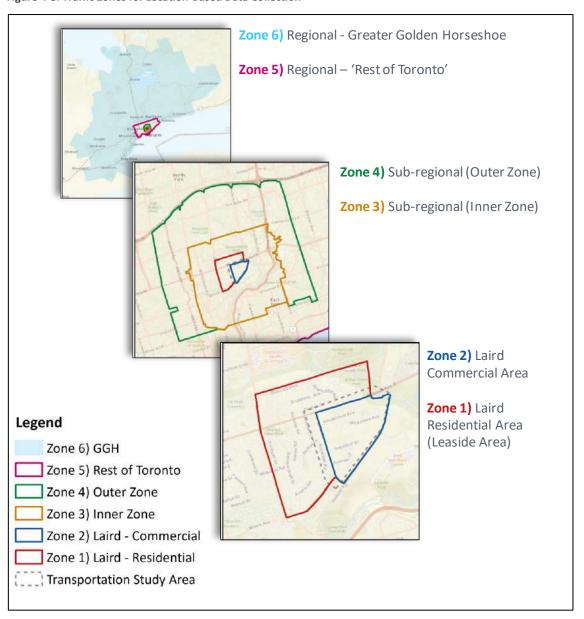
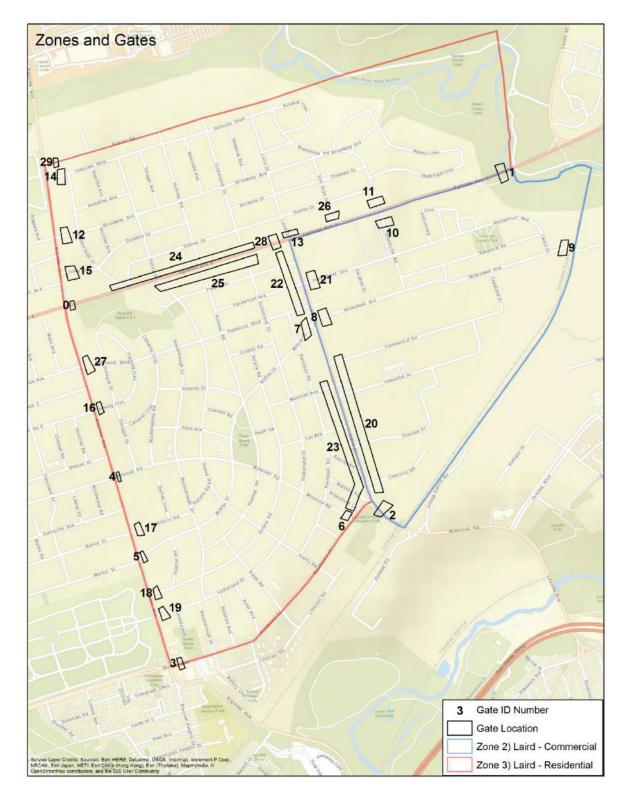


Figure 4-9: Zones and Gates



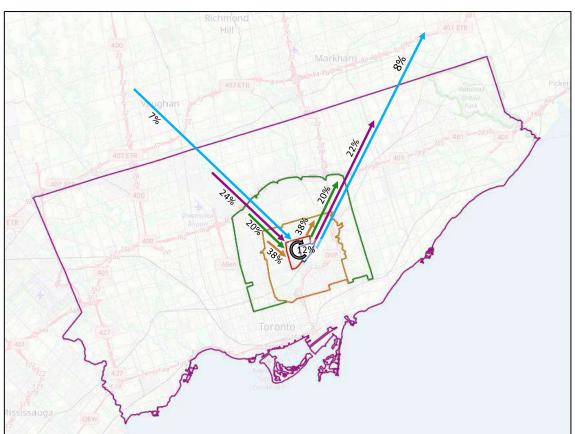


Figure 4-10: Streetlight 2016 Daily Regional Travel Patterns

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.

RYKERT CRES THURSFIELD CRES EGLINTON AVE. E. PARKHURST SUVD WICKSTEED AVE. WICKSTEED COMMERCIAL RD STICKNEY AVE LEA AVE THORNCLIFFE PARK DE **ROUTE CONNECTIVITY** CANVARCO RD. North-South East-West

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.

Edinton Avenue East

LEASIDE

Vinodented Ave

Commercial Re

PLANATOR

Commercial Re

Industrial St

Essorier D:

Commercial Re

PARK

Commercial Re

Commer

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

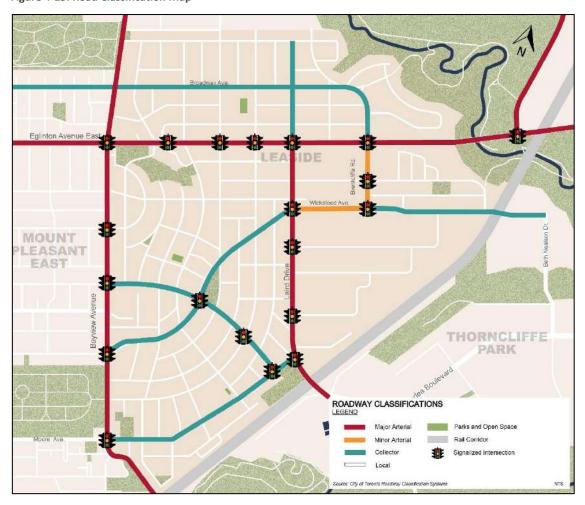
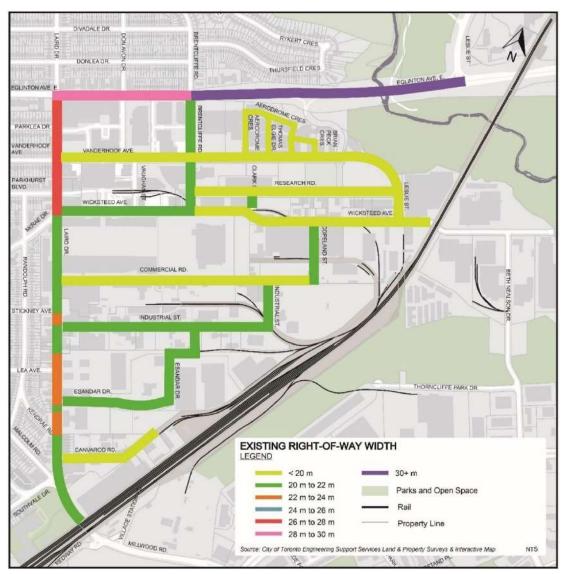


Figure 4-14: R.O.W. Widths



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)

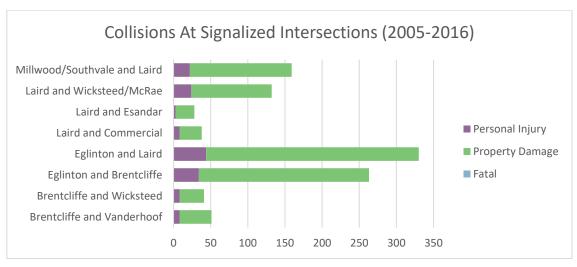


Figure 4-16: Collisions at Mid-Block Segments (2005-2016)

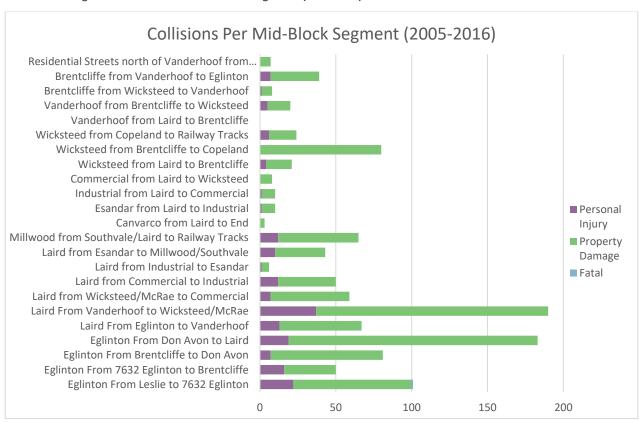
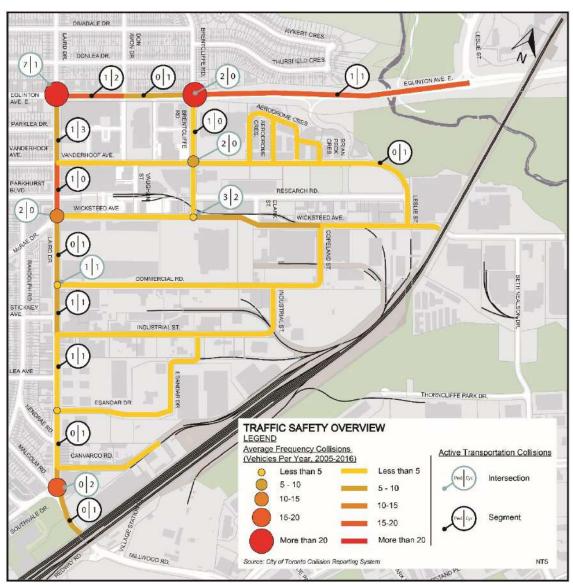


Figure 4-17: Collision Summary



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

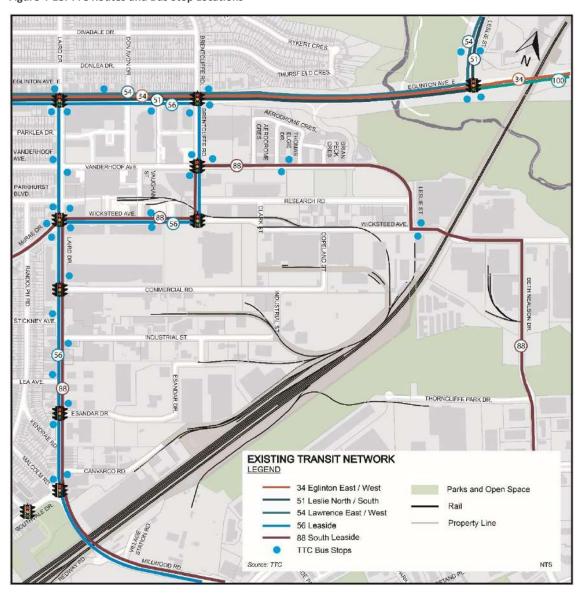


Table 4-1: TTC Route Information

Route No.	Route Name	Buses Per Direction Peak Hour	Max Transit Capacity*	Peak Direction AM Peak Hour Ridership	Peak Direction PM Peak Hour Ridership
34	Eglinton East	14 (34A) 6 (34C)	700 300	450	500
51	Leslie	4	200	50	50
54	Lawrence East	10	500	350	300
56	Leaside	6	300	200	100
88	South Leaside	4	200	50	50

^{*}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.

COUNTY OF SIMCOE REGIONAL MUNICIPALITY OF DURHAM REGIONAL OF YORK City of 3 City of 2 MUNICIPALITY OF PEEL (8) 4 City of 407 Study Area eorgetown City of REGIONAL 6 7 Railways CP Through Freight Traffic CN Through Freight Traffic GO Lines Major Roads City of Municipal Boundary Upper Tier Burlington Water Body

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).

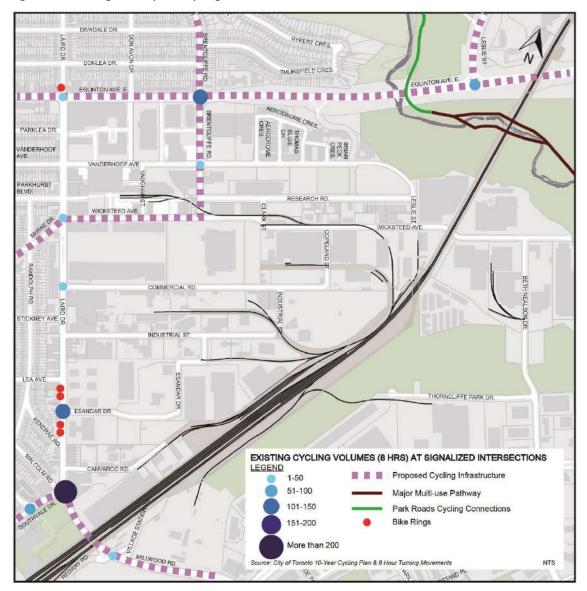


Figure 4-20: Existing and Proposed Cycling Facilities

RYKERT CRES PARKLEA DE VANDERHOOF PARKHURST BUVD RESEARCH RD EXISTING CYCLING CONDITIONS Segment Level of Service (LOS) Intersection Safety ISI Indices 1.0 - 2.9 (Low Risk) 3.0 - 4.9 (Moderate Risk) C-D 5.0 - 6.0 (High Risk) E Signalized Intersection MILLWOOD RD. NTS Source: City of Ottawa MMLOS & Federal Highway Administration

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.

Leslie Station Laird Station Primary Secondary ANDERHOOF INDUSTRIAL ST THORNCLIFFE PARK DR EXISTING PEDESTRIAN VOLUME (8 HRS) AT SIGNALIZED INTERSECTION CANVARCO RD LEGEND 250 and Less Sidewalk on one side only 250-500 No sidewalk on either side 501-750 Raised Median 751-1000 Station Catchment Area 500m Buffer 500m 1000 and More Eglinton Crosstown Stations NTS Source: City of Toronto 8 Hour Turning Mo St. The SANDER

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

RYKERT CRES THURSFIELD CRES EGLINTON AVE. E PARKLEA DR PARKHURST RESEARCH RD WICKSTEED AVE LEA AVE **EXISTING PEDESTRIAN CONDITIONS** Segment Level of Service (LOS) Intersection Safety ISI Indices A-B 1.0 - 2.9 (Low Priority) C-D 3.0 - 4.9 (Moderate Priority) E 5.0 - 6.0 (High Priority) Signalized MILLWOOD RD Source: City of Ottawa MMLOS & Federal Highway Administration

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
А	≤10 sec	≤10 sec
В	10–20 sec	10–15 sec
С	20–35 sec	15–25 sec
D	35–55 sec	25–35 sec
Е	55–80 sec	35–50 sec
F	>80 sec	>50 sec

DIVADALE DR RYKERT CRES THURSFIELD CRES PARKLEA DR VANDERHOOF AVE. VANDERHOOF AVE PARKHURST BLVD. RESEARCH RD WICKSTEED AVE STICKNEY AVE INDUSTRIAL ST THORNCLIFFE PARK DR ESANDAR DR. INTERSECTION LEVEL OF SERVICE (LOS) CANVARCO RD. Level of Service Indicator C-D AM Critical Movements PM Critical Movements MILLWOOD RD. Source: City of Toronto 8 Hour Turning Movements NTS Pro Co

Figure 4-24: Signalized Intersection Operations and Critical Movements

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

			Critical Movement			
Intersection	Intersection LOS	Intersection V/C Ratio	Movement	LOS	V/C Ratio	95th Percentile Queue (m)
	D	0.94	EBT	D	0.88	148
Brentcliffe Rd & Eglinton Ave			WBL	F	1.08	189
Lg.iiitoii / WC			SBT	D	0.59	87
		1.28	EBT	D	0.94	145
	E		WBL	F	1.25	235
Laird Dr & Eglinton Ave			NBL	F	1.14	109
Lg.iiitoii / WC			NBT	D	0.41	70
			SBT	Е	0.72	99
	F	1.421	EBL	Е	1.00	181
Eglinton Ave &			WBT	D	0.78	131
Leslie St			SBL	F	1.04	145
			SBR	F	3.16 ¹	529
Laird Dr & McRae Dr	С	0.72	EBL	В	0.37	23
	D	1.04	EBL	Е	0.96	104
Laird Dr & Southvale Dr			NBL	Е	1.02	182
Southvale Di			SBT	Е	0.92	84
Southvale Dr & Millwood Rd	В	0.61	None			
Brentcliffe Rd &	С	0.86	WBT	D	0.89	85
Vanderhoof Ave			SBT	В	0.85	164
Wicksteed Ave & Brentcliffe Rd	В	0.78	SBL	В	0.68	80
Laird Dr & Commercial Rd	А	0.49	None			
Laird Dr & Esandar Dr	А	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 LOS	Intersection V/C Ratio	Critical Movement			
Intersection			Movement	LOS	V/C Ratio	95th Percentile Queue (m)
	F	2.211	EBT	С	0.90	198
Brentcliffe Rd &			WBL	F	2.83 ¹	250
Eglinton Ave			NBR	D	0.88	210
			SBT	D	0.74	115
	E	1.57	EBT	D	0.87	130
			WBL	F	1.52	226
Laird Dr & Eglinton Ave			NBL	F	1.41	175
-8			NBR	D	0.81	151
			SBT	E	0.81	122
		1.01	EBL	E	1.02	209
Eglinton Ave &	E		WBT	D	0.81	135
Leslie St			SBL	E	0.85	99
			SBR	F	1.35	210
	D	0.99	EBL	Е	0.89	91
			EBT	E	0.81	83
Laird Dr & McRae Dr			WBL	D	0.48	50
			WBT	F	1.09	146
			SBL	F	0.99	100
			EBL	F	1.13	157
Laird Dr &	F	1.2	EBR	F	1.03	148
Southvale Dr		1.2	NBL	F	1.18	186
			SBT	F	1.06	167
Southvale Dr & Millwood Rd	В	0.82	SBT	D	0.92	87
Brentcliffe Rd & Vanderhoof Ave	В	0.79	None			
Wicksteed Ave &	С	0.9	EBL	D	0.90	85
Brentcliffe Rd	C		SBL	С	0.68	64
Laird Dr & Commercial Rd	А	0.63	None			
Laird Dr & Esandar Dr	А	0.67	SBL	В	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

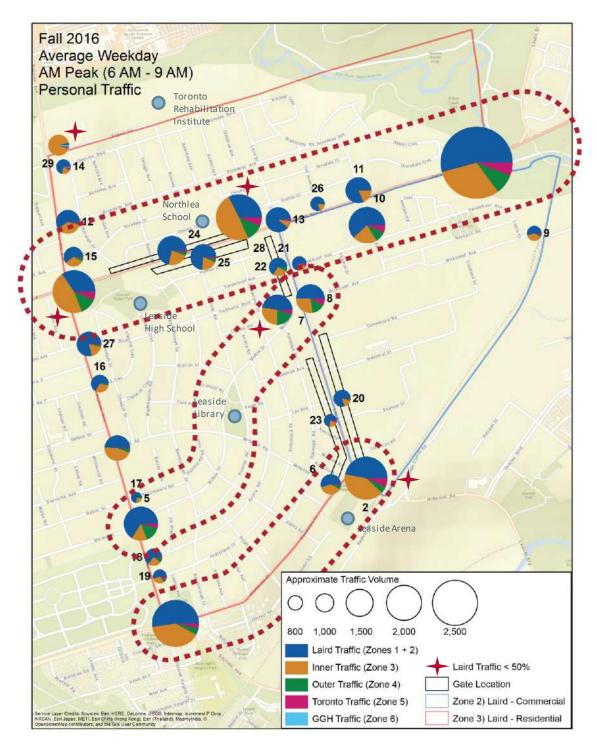
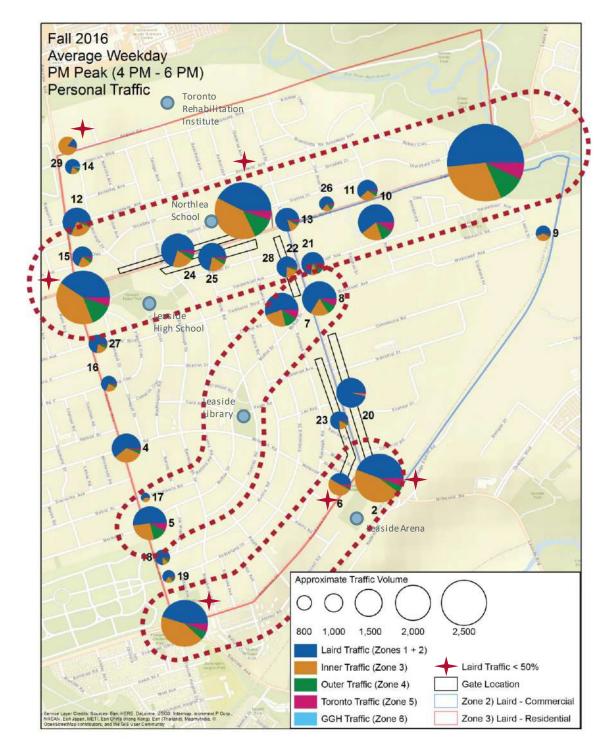


Figure 4-26: Average Weekday PM Peak Period Personal Vehicle Travel Patterns



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

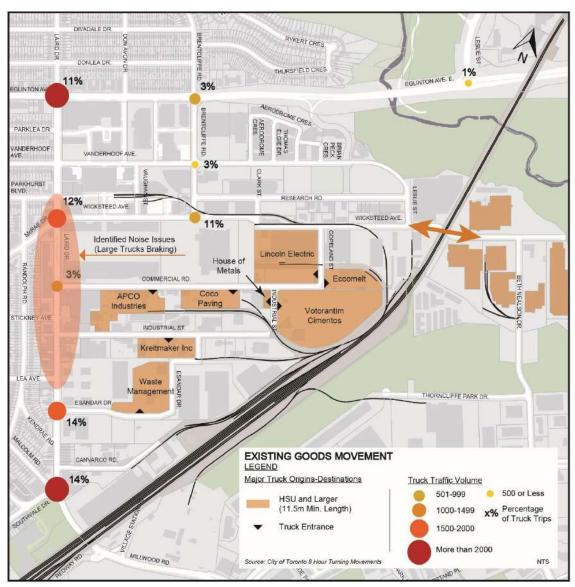


Figure 4-28: Average Weekday AM Peak Period Commercial Vehicle Travel Patterns

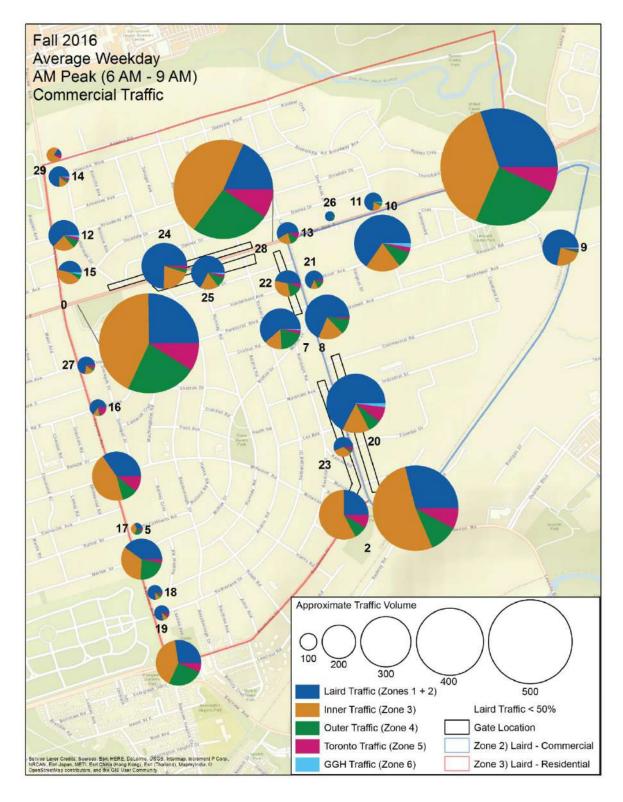
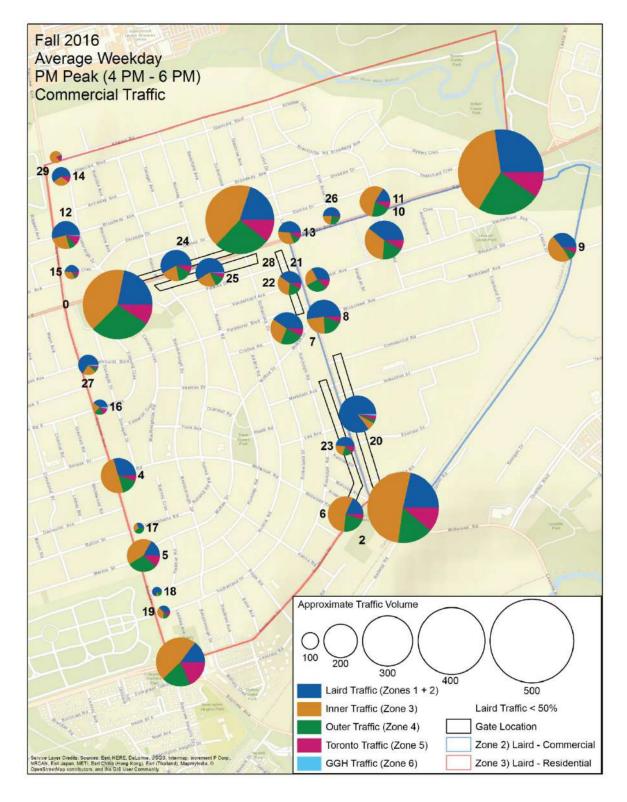


Figure 4-29: Average Weekday PM Peak Period Commercial Vehicle Travel Patterns



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 offstreet 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.

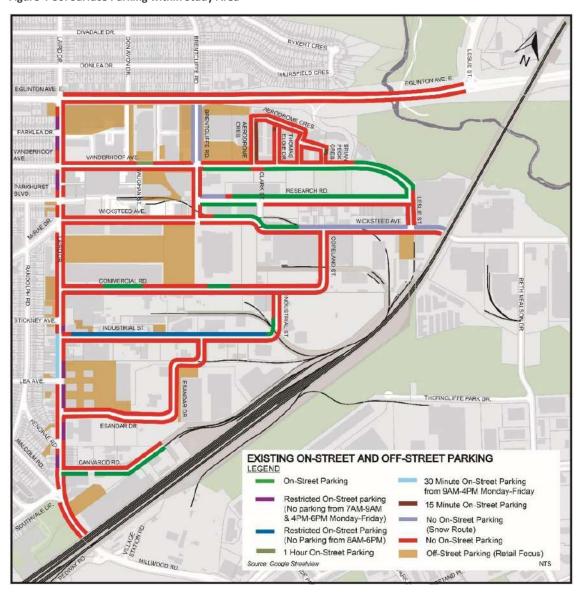
Several transportation demand management (TDM) strategies are implemented at regional and local scales that affect the study area. A potential program, in conjunction with the emerging redevelopment, is Metrolinx's Smart Commute program to help facilitate travel options other than auto driver. The program 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 ongoing 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

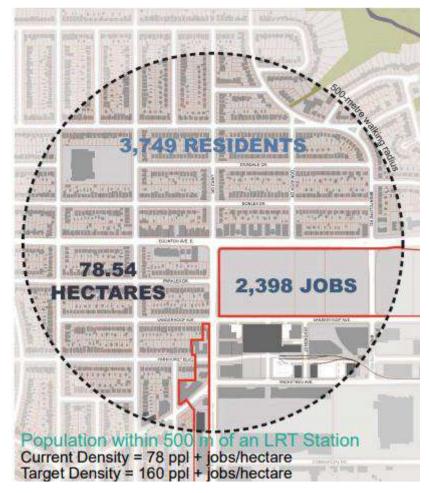
Within Study Area A and B, there are numerous opportunities to implement different land use options. Due to the constrained transportation environment, an iterative process to evaluate land use options and the resulting travel demands was conducted.

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.