3085 HURONTARIO STREET
CITY OF MISSISSAUGA

Mixed Use Development
Urban Transportation Considerations

Prepared For: Equity Three Holdings Inc.

September 2024

BA Group

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01/09/2023	Version 1	Zoning By-law Amendment – Final Report
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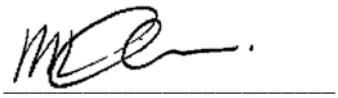

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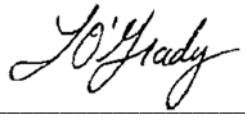

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1.0 INTRODUCTION

BA Group is retained by Equity Three Holdings Inc. (the "applicant") to provide transportation advisory services in support of their proposed mixed-use development known as 3085 Hurontario Street (the "site" or "proposed development"). The site is located on the southeast quadrant of the Hurontario Street / Kirwin Avenue intersection in the downtown area of the City of Mississauga. The site is bound by Hurontario Street to the west, Kirwin Avenue to the north, existing residential to the east, and existing commercial to the south. It is noted that the Community Youth development located at 3115 Hurontario Street is not part of the proposed development application. The site location is illustrated in **Figure 1**.

1.1 Background

An Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) application was initially submitted in July 2021 and the first Transportation Impact Study (TIS) was prepared by CGH Transportation Inc. Since that time, Mattamy Homes has joined the applicant team and BA Group has been retained to prepare a transportation report as part of the resubmission for the 3085 Hurontario Street OPA / ZBA application.

As part of the September 2023 TIS submission, comments have been provided from the City of Mississauga's Transportation and Works (Traffic and Transit) department, dated December 2023. Substantial changes have been made to the proposed development and site plan which are discussed in **Section 3.0** with responses to the comments received provided in **Section 2.0**.

1.2 Existing Site and Surrounding Uses

The site area is located within the Downtown Cooksville Character Area of the City and is in proximity (approximate 350-metre walking distance) to the existing Cooksville GO Station. The existing uses of the site comprise a surface parking lot and commercial and food establishment uses. These uses will be demolished as part of the proposed development. In addition, the surrounding area along the Hurontario Street and Hillcrest Avenue / Kirwin Avenue corridors are predominantly residential and mixed-use, including retail / commercial, educational, recreational, and institutional uses.

1.3 This Study

BA Group has prepared the following report based upon the following study scope:

- Review of the proposed development program and site plan;
- Documentation of existing transportation infrastructure and future improvements;
- Review of applicable transportation policy directives;
- Review of applicable bicycle parking and loading requirements;
- Outline of the proposed Transportation Demand Management (TDM) Plan;
- Multimodal travel demand forecasts for the site's proposed development programme;
- An analysis of traffic operations for the weekday morning and afternoon peak hour existing conditions, future background (without the proposed development), and future total (with the proposed development) scenarios within the proximate study area road network;
- Outline of specific road improvements, if necessary, to mitigate site traffic impacts; and
- A review of the site-generated transit trips and their relative impact on transit capacity.

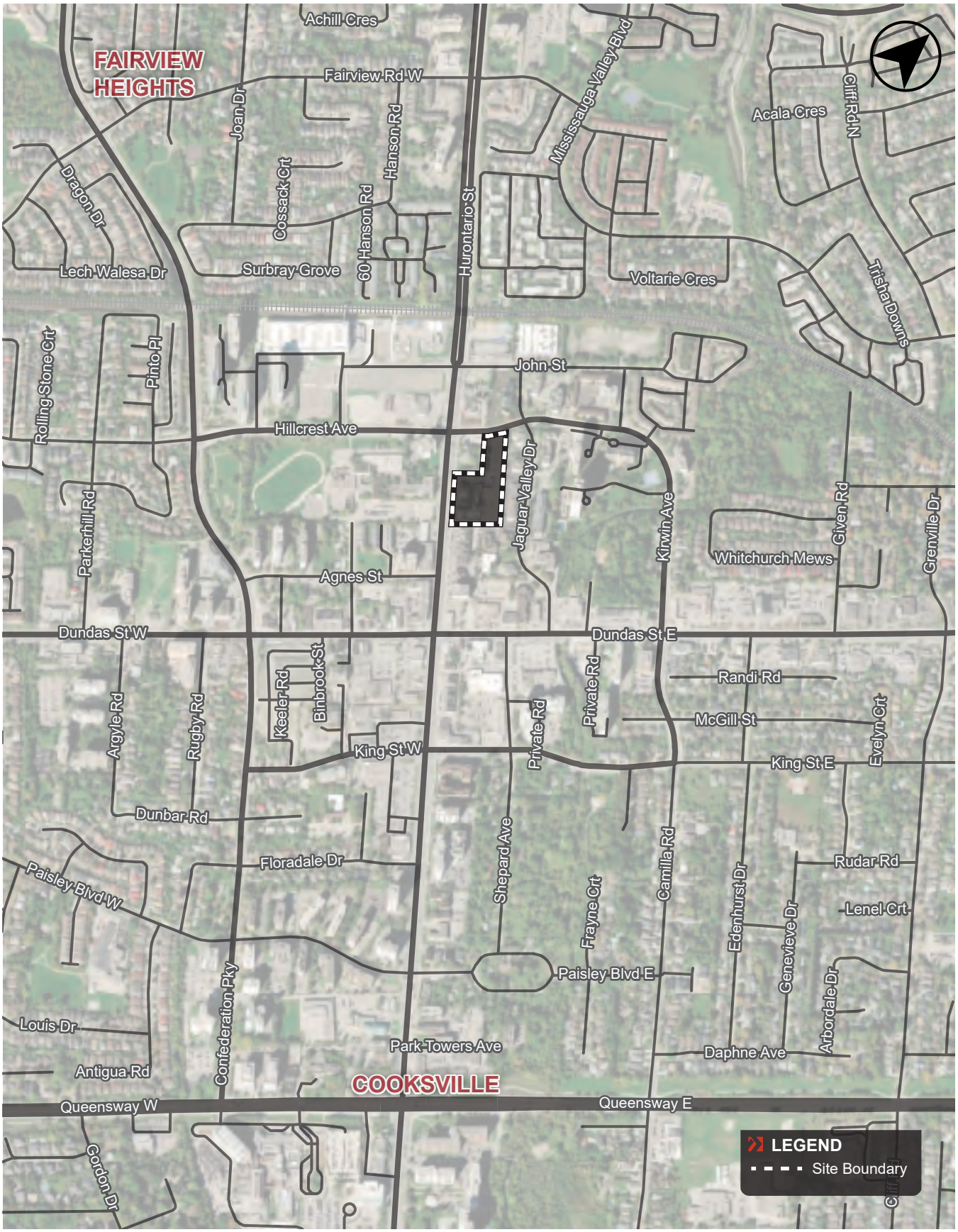

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FIGURE 1 SITE LOCATION

2.0 RESPONSE TO COMMENTS

Comments were provided from the City's Transportation and Works (Traffic and Transit) department, dated December 6, 2023. In summary, the comments received were in relation to the following key aspects:

- Vehicle parking rates and supply;
- Existing vehicle traffic data;
- Future vehicle access restrictions;
- Bicycle parking rates;
- New roadway / site access design and design vehicle manoeuvring;
- Response to community impacts and feedback; and
- Future transit impacts.

Responses to the transportation-related comments are provided below.

PART I – ZONING BY-LAW AMENDMENT APPLICATION, SECTION A

1. Transportation & Works – Traffic Review

Comment

The applicant will be required to a provide temporary turning facility as an interim condition for the terminus of C Street within the proposed development to ensure vehicles can be accommodated. The temporary turning facility will be removed once the municipal road can be extended through adjacent lands. The City will request the required lands to be conveyed through a municipal easement.

(i) The applicant shall provide interim conditions on an engineering plan to show the temporary turning circles that meets municipal requirements. It is agreed that a deviation from City standards will be considered. However, turning movement diagrams are required to demonstrate functionality.

Response

As previously discussed with the City, a standard turnaround facility is not provided at the terminus of the future public street (Street C) given that it will eventually be extended to Jaguar Valley Drive. Providing a standard turnaround facility would result in an awkward road alignment that would result in a less efficient site plan and building layout. Effectively, additional pavement for vehicle driving would be provided in lieu of homes for people, active transportation facilities, or landscaping which inconsistent with the goals and policies of the City.

In order to accommodate the turnaround of municipal service vehicles, i.e., a typical snowplow, a turning notch is at the terminus of Street C to allow for a service vehicle to execute a three-point turn. Once Street C is extended to Jaguar Valley Drive, this notch will no longer be required. **Appendix D** provides the vehicle manoeuvring diagrams (VMDs) that illustrate how the notch would be used and that it satisfies the turning requirements of the snowplow vehicles.

Comment

(A) ii) Provide raw data for typical trip generation rates at other GO stations.

Response

The available raw data for trip generation rates at other GO stations is provided in **Appendix J**.

Comment

(B) i) Remove all "Auto Passenger" counts for modal split reductions. Only non-auto counts can be considered reductions. Revise report accordingly.

Response

The mode split reductions come from vehicular modes of travel on the network, and not non-auto modes of travel. A 7% increase in transit modes of travel are derived from the auto driver (5%) and auto passenger (2%) vehicular modes of travel.

Comment

(C) (i) Clear throat lengths provided for the proposed site accesses do not meet TAC Guidelines. Sight lines (particularly veh/ped), operations/efficiency of the roadways and internal driveway and pedestrian safety are a concern. Shift layby spaces away from the access points to ensure adequate safety, visibility and operations. Furthermore, parking laybys, garage doors and activation units, etc. must be considered as potential "first conflict" when determining clear throat lengths. Please revise accordingly.
(ii) Review access alignment/offsets with opposing accesses.
(iii) Review veh/ped visibility/sightlines for pedestrians crossing the accesses.
(iv) Review access points from a safety perspective.

Response

The site plan has been revised since the previous submission. The driveway review is provided in **Section 12.0** of this Transportation Study.

Comment

(D) Turning Movement Diagrams not acceptable.

(i) It must be ensured that truck traffic (garbage/loading/fire) can enter and exit the site in forward motion and access to the waste storage and loading areas are functional. Illustrate truck turning movements with one continuous path with AutoTURN and insert the design vehicles on the plan. All site accesses, the temporary turnaround facility and the intersection of "C" Street and Hurontario Street must be evaluated. Please also confirm via Auto-Turn (PTAC design vehicle) that ramps and underground parking stalls located near corners/walls and/or at the end of the aisles are functional
(ii) TAC-HSU design vehicle indicates striking columns/walls as collecting waste. Remains outstanding.
(iii) Please clarify the marked red "X" on drawing VMD0-05.

Response

The site plan has been revised since the previous submission. The VMDs have been revised and are included in the updated **Appendix D.**

3.0 PROPOSED REDEVELOPMENT

3.1 Development Uses

The proposed development includes four (4) mixed-use buildings comprising the following uses:

- **Building 1:** 461 residential units and 918 square metres of retail GFA
- **Building 2:** 488 residential units and 304 square metres of retail GFA
- **Building 3:** 417 residential units
- **Building 4**: 325 residential units

Overall, the updated development plan includes 1,691 residential units (all market condominium) and 1,222 square metres of retail GFA. In comparison to the September 2023 submission, the number of residential units has increased slightly with a modest increase in retail GFA. A reduction in vehicle parking spaces is additionally proposed. The updated development proposal is outlined in **Table 1** and illustrated in **Figure 2**. Reduced scale architectural plans are provided in **Appendix B**.

Table 1 Development Proposal

Use	September 2023[1]	Current[2]	Net Change
Residential units	1,658 units	1,691 units	+ 33 units
Retail	1,160 square metres GFA	1,222 square metres GFA	+62 square metres GFA
Vehicle parking supply	1,056 parking spaces	802 parking spaces (170 non-residential, 589 resident, 43 car share spaces)	- 254 parking spaces
Bicycle parking supply	1,303 (1,217 long-term and 86 short-term)	1,126 (1,029 long-term and 97 short-term)	- 177
Loading supply	7 loading spaces	6 loading spaces	-1 loading space
Site access	Via driveways off new east-west municipal road and Kirwin Avenue	Via driveways off a north-south private road between Kirwin Avenue and Street C	All driveways now take access from a private north-south road, none from public roads

Notes:

1. Based on site statistics provided by Diamond Schmitt Architects on July 17, 2023.
2. Based on site plan prepared by 3XN Architects on September 13, 2024.

3.2 Transportation Improvements

3.2.1 New East-West Municipal Road (Street C)

As per the City's Official Plan and in discussions with the City, City staff identified the desire to see a new east-west municipal road (the "Municipal Road") identified as Street C on the site plan as part of the proposed development which would connect to Hurontario Street and Jaguar Valley Drive. To satisfy this request, the site plan identifies a 14.2-metre right-of-way (ROW) along the south edge of the property. This ROW will allow for a 6.6-metre pavement width, 5.6-metre boulevard on the north side (including a 2.2-metre sidewalk) and 1.5-metre boulevard on the south side for grading purposes. When the commercial property to the south develops, it is expected that they would make up the remaining boulevard including sidewalk on the south side of the Municipal Road.

The site does not have frontage on Jaguar Valley Drive. Consequently, in the interim, the Municipal Road will terminate as a dead-end at the east edge of the property. To facilitate a turnaround for City vehicles including snowplows, a custom-designed turnaround facility (turning notch) has been provided. This turnaround facility allows for the development of an efficient and urban built form that is compatible with both the interim and ultimate road condition. It is expected that when the properties immediately east of the site fronting onto Jaguar Valley Drive redevelop, the Municipal Road will be extended to Jaguar Valley Drive.

It should be noted that the commercial property to the south has a driveway at its northerly edge adjacent to the proposed development site. To satisfy the City's request to provide the new Municipal Road at the location shown, this will require the closure of the south commercial property northerly driveway to avoid a side-by-each driveway condition. The commercial property to the south will continue to have a driveway to Hurontario Street and means of providing alternative access such as a potential connection to the Municipal Road will be explored.

Further details on the design of the new Municipal Road are provided in **Section 11.0**.

3.2.2 New North-South Private Road

As part of the revised proposal, a north-south private road (the "Private Road") is proposed, connecting Street C to the south to Kirwin Avenue in the north. The Private Road provides two travel lanes (one in each direction), layby PUDO on both sides, and landscaping. All the loading areas and ramps to parking tie into the Private Road such that there are no direct loading or ramp connections to public roads.

Further details on the design of the new Private Road are provided in **Section 11.0**.

3.2.3 Public Realm (Active Transportation Facilities)

As part of the current proposal, the site is expected to further expand and improve the quality of the public realm with landscaping and a park and sidewalks that connect Building 1, Building 2, and Building 3.

Further details on the pedestrian realm of the site and the bicycle parking strategy are provided in **Section 5.3.1** and **Section 8.0**, respectively.

3.2.4 Pick-up / Drop-off Facilities

As part of the current proposal, PUDO areas will be provided in lay-by facilities along both sides of the Private Road as well as a loop in front of Tower 1. The lay-bys are located in close proximity to the front doors of each of the buildings. Four PUDO spaces are provided in the loop in front of Tower 1, two PUDO spaces in a lay-by in front of Tower 2, two spaces in a lay-by in front of Tower 3 and two spaces in a lay-by in front of Tower 4. These PUDO areas can accommodate a total of 10 vehicles.

Further details on the PUDO strategy are provided in **Section 10.0**.

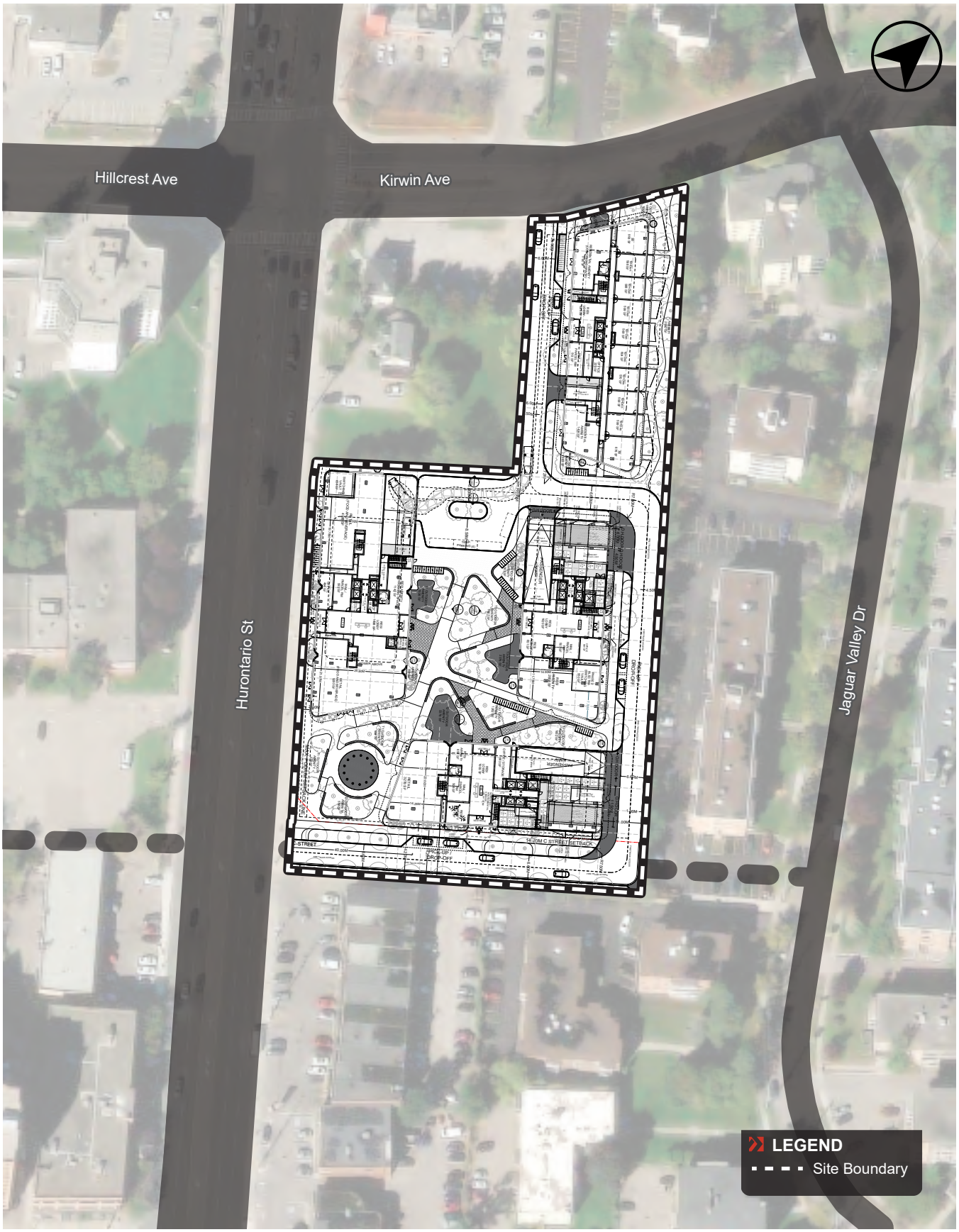

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FIGURE 2 SITE PLAN

4.0 POLICY AND PLANNING CONTEXT

The transportation-related policies and plans that directly or indirectly apply to the site are described below.

4.1 Provincial and Regional Policies

4.1.1 Cutting Red Tape to Build More Homes Act (Bill 185)

On April 10, 2024, the Provincial government introduced the *Cutting Red Tape to Build More Homes Act, 2024* – known as Bill 185 – as new legislation that focuses on increasing housing and infrastructure development. Bill 185 introduced several changes to Provincial Acts, including the Planning Act. One key change includes prohibiting or limiting the ability for municipal Official Plans and Zoning By-laws to require an owner to provide parking facilities (other than for bicycle parking) in Protected Major Transit Station Areas (PMTSAs) and areas around transit stations, also known as Major Transit Station Areas (MTSAs). It is understood that any minimum vehicle parking requirements (except for bicycle parking) within Zoning By-laws would no longer be in effect, and therefore, would no longer be applicable to lands located within any identified PMTSAs or MTSAs. Bill 185 received Royal Assent on June 6, 2024, and is now in-force and in effect.

Section 16 (22) of the Planning Act has been amended as follows:

> *(22) No official plan may contain any policy that has the effect of requiring an owner or occupant of a building or structure to provide and maintain parking facilities, other than parking facilities for bicycles, on land that is not part of a highway and that is located within,*
>
> > *(a) a protected major transit station area identified in accordance with subsection (15) or (16);*
> >
> > *(b) an area delineated in the official plan of the municipality surrounding and including an existing or planned higher order transit station or stop, within which area the official plan policies identify the minimum number of residents and jobs, collectively, per hectare that are planned to be accommodated, but only if those policies are required to be included in the official plan to conform with a provincial plan or be consistent with a policy statement issued under subsection 3 (1); or*
> >
> > *(c) any other area prescribed for the purposes of this clause.*

The site is located within the Dundas MTSA, which has been approved by the Regional Council on April 28, 2022 and the Province (i.e., Ministry of Municipal Affairs and Housing) on November 4, 2022 through the adoption of the Region of Peel Official Plan. As such, there are effectively no minimum vehicle parking requirements that apply to the proposed development for all uses.

4.1.2 Provincial Policy Statement / Provincial Planning Statement

On a general basis, the *Provincial Policy Statement (2020)* encourages the provision of transportation demand management (TDM) strategies within new developments to increase the efficiency of existing and planned transportation infrastructure. It also encourages transit-oriented development and higher density that adopts a mix of uses to promote non-auto travel. This suggests limiting the number of vehicular site trips, partially through reduced parking as proposed, which will support local transit investments within the site area.

4.1.3 Places to Grow: Growth Plan for the Greater Golden Horseshoe

Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan for the GGH) outlines the importance of reducing reliance upon the automobile and promoting transit and active transportation. Planning along priority transit corridors and major transit stations, such as the Cooksville GO Station, shall be prioritized and planned for minimum density targets and a mix of uses in order to maximize the number of potential transit users within walking distance of the Station.

In early 2022, the Ministry of Transportation and its partners developed a *Transportation Plan for the GGH* as a 30-year plan for improved mobility across the Province of Ontario. As the Greater Golden Horseshoe (GGH) continues to expand, the Region will require improvements to its transportation systems to accommodate increased demand. The Plan aims to

address the impact of predicted growth through a well-connected transportation system that provides safe, efficient, and convenient options for users. The 2051 vision of the Plan includes focuses on fighting gridlock and improving road performance by getting people moving on a connected transit system, supporting a more sustainable and resilient region, and efficiently moving goods. Within the Plan, an improved transit network is a key focus. To achieve a more sustainable and resilient region, it is necessary to motivate people to use the transit system by improving transit connectivity. Expanding service across the region would allow for greater inter-regional travel and connections to destinations that might have previously been difficult to reach by transit alone. As such, the Plan aims to expand routes and provide more frequent services and connections to enhance the network. In addition to expanding bus service, higher-order transit services, such as the Hurontario LRT, are being planned or underway.

4.1.4 Provincial Planning Statement

A draft of the Provincial Planning Statement (2024 PPS) was first introduced in 2022 to provide a set of adapted and integrated policies from the existing PPS (discussed in **Section 4.1.1**) and the Growth Plan for the GGH (discussed in **Section 4.1.3**), ultimately replacing both documents, to form a new provincial planning policy tool. Given the significance of the 2020 PPS and Growth Plan for the GGH in navigating land use planning decisions across the province (i.e., guiding growth, transportation infrastructure, public health, and more to achieve livable communities), the 2024 PPS aims to further leverage several policies to provide a streamlined land use planning policy framework.

As a result of all feedback received, the 2024 PPS proposed sets of responsive changes to updated policies under the following 5 pillars:

1. Appropriate Housing Supply;
2. Available Land for Development;
3. Infrastructure to Support Development;
4. Balance Housing with Resources; and
5. Implementation.

Based on the most updated set of policies published on April 10, 2024, proposed land development and transportation-related policies under these pillars indicate providing mixed housing options, meeting minimum density targets for MTSAs (including the site area), encourage transit-supportive development, require municipalities to implement intensification policies, require municipalities to plan for and protect corridors for transit infrastructure to accommodate growth, require the integration of land use planning and transportation through transit-supportive development, and require municipalities to reduce greenhouse gas emissions and improve air quality.

In addition, Chapter 2 (Building Homes, Sustaining Strong and Competitive Communities) of the 2024 PPS proposes policies in relation to accommodating access to multi-modal transportation options and facilitating low impact development and residential intensification near main transit corridors and stations. Further, Chapter 3 (Infrastructure and Facilities) propose several policies in relation to providing transit-supportive development where applicable and promoting healthy and active communities through facilitating active transportation, planning public streets to meet diverse needs, and providing opportunities for convenient public access to the recreational (i.e., waterfront) area.

It is noted that the 2024 PPS was released in August 2024 and was approved by the Lieutenant Governor in Council (Order in Council No. 1099/2024) and will come into effect on October 20, 2024. At this time, the 2024 PPS will replace the existing 2020 PPS and Growth Plan policies.

4.1.5 Bill 112: Hazel McCallion Act (Region of Peel Dissolution)

Announced in May 2023, the province established *Bill 112* (also known as the *Hazel McCallion Act / Peel Dissolution*), stating that the Region of Peel be dissolved and that the City of Mississauga, City of Brampton, and Town of Caledon continue as single-tier municipalities. Bill 112 was enacted / passed in June 2023 and is expected to come into effect starting January 1, 2025. Through the Hazel McCallion Act, municipalities are provided with the authority and resources necessary to address population growth and establish housing options. The Transition Board will oversee the orderly conclusion of the financial

operations of Peel Region and supervise and monitor the actions, duties, and decisions delegated to the Committees and staff of the Region, City of Mississauga, City of Brampton, and Town of Caledon.

The transition phase leading up to January 2025 aims to provide a seamless delivery of essential services and facilitate a smooth transfer of assets and responsibilities. Specifically, Mississauga Staff and Council will collaborate with the Transition Board to facilitate this process, delivering support and resources to ensure a seamless transition to the newly established single-tier municipality. The transition phase will also evaluate the long-term economic sustainability of each municipality, which is expected to bring several positive implications for the future growth of City of Mississauga.

As of early 2024, the province has suggested that some services delivered by the Region would continue as per the status quo while some public works services, particularly land planning, water and wastewater, stormwater, roads, and waste management would be subject to change. However these are still being considered by the Transition Board and final recommendations have not been issued at the time of writing.

4.1.6 Metrolinx: The Big Move, Mobility Hub Guidelines, and Regional Transportation Master Plan

Building upon the successes of *The Big Move (2008)*, the *Metrolinx 2041 Regional Transportation Master Plan (RTP)* supports intensification in accordance with sustainable transportation objectives. Additional rapid transit options, greater pedestrian connections, and mixed-use density should be considered for the City of Mississauga and the surrounding region. Emerging mobility hubs, such as the area surrounding the Cooksville GO Station, should adopt such elements and minimize parking in areas that may be more efficiently utilized by more sustainable infrastructure.

The Cooksville GO Station area is recognized as a "mobility hub" as per Metrolinx's *Mobility Hub Guidelines* and RTP. The site aims to support Cooksville GO through reduced parking.

4.1.7 Region of Peel Official Plan (2022) and Vision Zero (2018-2022)

The *Region of Peel Official Plan (RPOP)* was adopted by Council in April 2022, which the site must conform to as one of three (3) lower-tier municipalities that make up this jurisdiction. Originally adopted by Council in 1996, the RPOP is a long-term policy framework that is periodically updated to manage and plan the Region's growth and development.

The RPOP supports intensification and the development of well-designed, transit-supportive, complete communities, which offer multiple transportation choices and accommodate an appropriate combination of mixed uses. Intensification and development within Urban Growth Centres, designated Intensification Corridors, nodes, and Major Transit Station Areas (MTSAs) are emphasized. Based on the site's proximity to the City Centre, it is also considered one of the City's designated Urban Growth Centres. Given its location along Hurontario Street as a Regional Intensification Corridor, it offers strong links between Mississauga and Brampton's Urban Growth Centres (e.g. Square One and Shoppers World). The Plan encourages these areas to support the development of compact, pedestrian-friendly, and transit-supportive urban forms which provide convenient access to higher-order transit, such as the Hurontario LRT, which is currently under construction adjacent to the site. Given the site's proximity to Hurontario LRT, it is subject to impacts as a designated MTSA. Developments within these areas must possess an interconnected and multimodal street pattern that encourages walking, cycling, and transit as opposed to personal vehicles.

Notably, the RPOP is highly supportive of active modes of transportation (e.g. non-automobile). By 2041, the Region hopes to achieve a 50% sustainable modal share split by providing sustainable transportation infrastructure and promoting its use. Ensuring that communities are developed and enhanced to support active transportation connections to higher-order transit is essential. In addition to the Hurontario LRT project that is currently underway, Dundas Street has been designated as a planned Bus Rapid Transit (BRT) corridor, which will support this goal.

Additionally, the RPOP encourages local municipalities, relevant agencies, and the private sector to develop parking management strategies that make more efficient use of parking resources and encourage the use of sustainable

transportation modes. Working with municipalities to develop Transportation Demand Programs is a key aspect of this. Measures such as reducing parking standards and redeveloping existing surface parking lots, particularly within Major Transit Station Areas, to support intensification are highly encouraged.

4.1.7.1 VISION ZERO

Guided by the RPOP, the *Road Safety Strategic Plan* (RSSP) was approved by council in September 2018 as the Region's version of adopting *"Vision Zero"*, a road safety approach first introduced in Sweden in 1994. The RSSP aims to create safer roads by reducing motor vehicle collisions which result in injury or death until they are ultimately eliminated to zero.

To achieve this goal, the RSSP focuses on creating safer intersections, reducing aggressive driving, reducing distracted driving, reducing impacted driving, protecting pedestrians, and protecting cyclists. Vehicle-related countermeasures include increased traffic calming measures such as red-light cameras, automated speed enforcement, electronic radar speed signs and general infrastructure improvements. Pedestrian-related countermeasures include ladder crosswalks, midblock pedestrian connections and leading pedestrian intervals to allow pedestrians with safe passage on roadways. Cycling-related countermeasures focus on providing cyclists with designated road space using cross rides, bike boxes, and urban shoulders. As the City strives towards its 50% sustainable modal share split goal outlined in the RPOP, the implementation of these countermeasures will ensure that all road users are safe on the Region of Peel's roadways.

Notably, the proposed north-south Private Road has been designed with unique streetscaping elements and horizontal curvature to reduce vehicle speeds and the severity of potential vehicle collisions with pedestrians and cyclists.

4.1.8 Region of Peel Zero Emission Vehicle Strategy (2022)

The *Region of Peel Zero Emission Vehicle Strategy* was brought by Council in 2022, which the site is subject to as one of three (3) lower-tier municipalities that make up this jurisdiction. The Strategy aims to accelerate the uptake of light-duty battery and plug-in hybrid electric vehicles in the Peel Region over the next five (5) years.

The Strategy recognizes that passenger vehicles will continue to be a significant mode of travel within the Region of Peel and that their greenhouse gas emissions and air pollution levels may be reduced through adequate zero emission vehicle (ZEV) uptake. The Strategy has five (5) primary goals, including the following:

- To reduce greenhouse gas emissions and air pollution;
- To improve business and resident knowledge on the costs and benefits of ZEVs;
- To increase ZEV driving experiences, availability and ownership;
- To enhance planning processes and access to charging infrastructure; and
- To promote local job creation and economic development.

To achieve these goals, regional and municipal By-laws within the three (3) lower-tier municipalities have been updated. In addition to requiring new developments to include ZEV-ready parking spaces and meeting updated Green Development Standards, the Region is exploring municipal on-street ZEV charging infrastructure requirements within high-density areas, such as mixed-use developments, business improvement areas, and tourist locations. As a mixed-use development within a high-density area, the proposed site is an ideal candidate for on-street ZEV charging infrastructure.

4.2 Municipal Policies

4.2.1 Mississauga Official Plan Review and Strategic Plan (2009)

The *City of Mississauga Official Plan* (OP) outlines a policy framework that aims to protect the natural heritage system, direct growth to where it will benefit the urban form, support a strong public transportation system, and address the long-term sustainability of the City. A focus of the OP includes creating a multi-modal transportation system consisting of transit, vehicular, active transportation, rail, and air travel. The OP recognizes that vehicle trips will account for most of the total trips and intends to shorten trips lengths through the increase of opportunities to travel by transit, walking, and cycling. The City is currently undertaking the process of reviewing and updating the plan to ensure it reflects the changing needs, opportunities, and aspirations of the City. To position Mississauga for the next phase of growth, an important change to

the City's urban structure is derived from Growth Plan requirements to identify and plan for minimum density targets at major transit station areas (MTSAs). Thus, a key component of the review process includes a comprehensive policy review related to the Transportation theme of the OP, as well as the implementation of new land-use and transportation-related policy initiatives and strategies. The site is located within the Hurontario LRT / 5 (Dundas) and Dundas BRT / 11 (Hurontario) MTSA boundary, which have a minimum density target of 300 residents and jobs per hectare. Although this MTSA already meets the Growth Plan minimum density of 160 residents and jobs per hectare, there are no established maximum density values thus regular monitoring and further planning should be explored to enhance existing conditions at the site level, including encouraging mixed uses and increasing walkability.

Six (6) proposed policy priority areas are to be captured in the new OP, which includes creating convenient alternatives to the car; establishing a "complete streets" network to promote shared space among all road users; increasing the use of active transportation, carpooling, etc. to support healthy communities; establishing development densities and patterns that support transit; supporting greater connectivity throughout the City; and supporting efficient and effective movement of good throughout the City.

The recommended policy changes to be made in the new OP addresses matters of conformity, simplification, certainty, and innovation that supports coordinated urban design, land use, and transportation planning. The OP Review is currently in the final phase of the three-year program, in which the Plan is to be finalized for regional submission this year.

Further, the site is currently located within the "Downtown Cooksville Character Area", which encourages pedestrian amenities, active mixed-use frontages, and intensified development in a more urban form along the key corridors, such as Hurontario Street.

4.2.1.1 OFFICIAL PLAN AMENDMENTS

In December 2021, the City's Planning and Development Committee received initial Draft Official Plan Amendments and Built Form Standards for the Downtown Cooksville Area, as well as Downtown Fairview and Hospital areas. The following proposed OPA By-laws have been prepared:

- OPA #145 (Zoning By-law 0193-2022 – Under appeal) – policies related to vision, guiding principles, infrastructure, urban design, pedestrian, and road connections; and
- OPA #146 (Zoning By-law 0194-2022 – In effect; approved by Peel Regional Council in March 2024) – Protected Major Transit Station Area (PMTSA) policies related to heights and land uses.

Passed and enacted by City Council in August 2022, these OPA documents were developed to update the OP policies for this area (as well as two adjacent areas) given the substantial transit investments (e.g., Hurontario LRT, Dundas BRT, and two-way all-day GO Transit service) and expected growth in population and employment. OPA #145 is currently under appeal and OPA #146 is in effect.

OPA #145 envisions Downtown Cooksville as a "15-minute city", in which basic amenities such as parks, jobs, grocery stores, medical offices, and schools, can be safely and conveniently accessed within 15 minutes on-foot. Guiding principles specified to achieve this includes a mixed-use community, planning for more housing and people, creating a walkable and connected community, and planning for high quality transit. Based on the latter, this OPA identifies the lands around the Cooksville GO Station (i.e., the site) as a one-stop destination where the greatest mix of uses and amenities are readily available and accessible by walking or cycling.

OPA #145 indicates the following new pedestrian connections (as illustrated in Figure 1 of the OPA and **Figure 10** of this report):

- North-south connection midpoint between Hurontario Street and Jaguar Valley Drive (extending from Kirwin Avenue in the north to Dundas Street East in the south, with a slight offset near Agnes street);

- North-south connection midpoint between Hurontario Street and Cook Street (extending from the existing Cooksville GO Station in the north to King Street West in the south);
- East-west connection south of Hillcrest Avenue and Kirwin Avenue (extending from Jaguar Valley Drive in the east to the existing TL Kennedy Secondary School in the west); and
- East west connection extending eastward of the current Agnes Street terminus (extending from Jaguar Valley Drive in the east to Agnes Street in the west).

In addition, OPA #145 indicates a network of a new conceptual road connection (as illustrated in Map 12-4.2 of the OPA and **Figure 5** of this report) immediately south of the site to form smaller blocks, including an east-west connection ('C' Street Type) approximately mid-way between Hillcrest Avenue and Agnes Street. This road connection would extend between January Valley Drive to the east and Confederation Parkway to the west. Provisions of this street type would support a pedestrian environment with vehicle / servicing access for multiple buildings with residential, retail, and commercial uses. Secondary entrances for pedestrian access and minimizing visual impacts of parking, loading, and service areas should also be considered.

Policy 12.1.8.3 indicates that any new developments should provide enhanced connections to transit routes and open spaces that can be accessed by cycling, walking, or transit, and with limited dependency of a vehicle. Vehicle access along the surrounding main streets is to be minimized to reduce conflicts with non-auto travelers within the area.

OPA #146 policies under Section 12.4.7 indicate the provision of "Special Site 2" within the Downtown Cooksville Character Area, which directly impacts the site. This area is generally bounded by the east and west sides of Hurontario Street, between the existing railway (Canadian Pacific Railway) and north of Agnes Street. According to policy 12.4.8.2.2, it is required that the Special Site provides three (3) floors of non-residential uses for buildings designated with mixed use or residential (high density) uses adjacent to Hurontario Street.

4.2.2 Mississauga Climate Change Action Plan (2021)

The *City of Mississauga Climate Action Change Plan* outlines a clear course of action for the City over the next 10 (ten) years and includes specific goals aimed at climate change adaptation and mitigation. The Plan outlines 89 actions to be implemented under five (5) 'pathways' over the next 10 years. From a transportation perspective, noted actions related to the Low Emissions Mobility pathway are key considerations for the site.

The primary goal of the Low Emissions Mobility pathway is to support the transition towards lower-emission transportation modes, such as transit and cycling, as well as accelerate the adoption of zero-emission vehicles. The City hopes to further diversify the travel mode use by encouraging driverless vehicles, electric vehicles and trucks, car-sharing, ride hailing, and e-bikes. The Plan also aims to encourage and enable micro-mobility systems through the establishment of a micro-mobility policy framework. The City plans to expand its bicycle parking supply on commercial, residential, and city-owned properties to facilitate the transition towards micro-mobility.

As of 2021, the City has set 16 low-emissions mobility related actions. Thus far, the City has completed its green fleet policy to prioritize electrification opportunities for all City fleets and equipment and continue to identify opportunities for proper vehicle allocation, route optimization, and right-sizing fleet. Actions, such as the electrification of light duty transit vehicles, assessment of charging infrastructure for future electrification of transit, identification of gaps and inconsistencies in the pedestrian network, and the development of a micro-mobility policy framework are underway. Moreover, actions related to developing a zero-emissions vehicle strategy and micro-mobility policy framework, expanding the City's bicycle parking supply, prioritizing active transportation improvements in roadway developments, and developing transportation demand management requirements for new developments are ongoing.

4.2.3 Mississauga Transportation Master Plan (2019), Vision Zero Action Plan (2021), and Pedestrian Master Plan (2021)

The *Transportation Master Plan* (TMP) is a long-term strategic plan which focuses on determining appropriate actions to achieve a city where people and goods can move safely, easily, and efficiently to anywhere at any time. The TMP particularly focuses on moving away from single-occupancy vehicle use towards more sustainable, equitable and accessible modes of travel. Travelling by transit, cycling, walking and other forms of active transportation are highly emphasized.

The TMP has outlined 100 specific actions to achieve six (6) primary goals – including safety, inclusion, integration, connectivity, health, and resilience – which outline changes to various guidelines, plans, programs, and standards. The site is located along a designated intensification corridor, therefore making it a key part of the City's transportation system. These corridors will have better sidewalks, road crossing points and new walkway connections to adjacent areas to increase accessibility to and from corridors. Improved connections between the street and the main entrances of destinations will also create a more pedestrian-friendly environment.

Corridors are also the focus of high-frequency transit services, such as the Hurontario LRT. To further promote intensification along the corridor, the TMP encourages changes to parking regulations to result in the rightsizing of parking lots and ideally free up additional land for other uses, such as housing, retail, and office space. The City also plans on expanding bicycle parking on municipal, commercial, and residential properties in line with the Cycling Master Plan to further promote active transportation methods. The site supports the City's transportation-related policies and plans by proposing reduced vehicle parking and bicycle parking for the development.

Based on the City's TMP, a new *Vision Zero Action Plan* was developed, which contributes to the Vision Zero goal of eliminating fatalities and serious injuries in the City's transportation system. The Action Plan expands upon the recommendations of the City's Transportation Master Plan (TMP) to prioritize vulnerable road users.

The City's plan discusses five (5) primary focus areas to enhance road safety conditions within the City. All recommended actions can be categorized under one of the following groups: evaluation, engineering, enforcement, empathy, and education. Actions such as narrower lane widths, speed reductions, protected and dedicated cycling infrastructure, protected pedestrian crossings, centre medians, improved transit stop infrastructure, increased street lighting and bicycle signals would be relevant to the roads located in the vicinity of the site.

Further building upon the City's TMP, the *Pedestrian Master Plan* (PMP) is a long-term plan that was developed and approved in 2021 to review the City's existing pedestrian network and identify improvements to be made to the network, infrastructure, policies, programs, and environment to enhance the pedestrian experience. Upon reviewing the City's existing pedestrian network, 232 kilometres of high-priority pedestrian gaps were identified. The Plan identifies numerous actions to fill in these gaps and develop a continuous pedestrian network across the City. Many of the actions identified within the Pedestrian Master Plan overlap with actions that have been identified and will be delivered through other City plans and initiatives, such as the TMP, Vision Zero, and the Changing Lanes Complete Streets Guidelines.

Near the site, pedestrian network gaps have been identified along both Hurontario Street and Dundas Street West. Given the site's prime location, these gaps are identified as high priority to be addressed as soon as possible. In addition to developing additional infrastructure to fill these gaps, the Plan lists numerous other actions which would enhance the pedestrian environment, such as establishing public amenity guidelines, planting street trees and landscaping, installing public art, increasing lighting, and installing pedestrian signals.

The site supports the City's pedestrian-related policies and plans by including walkways throughout the site to ensure the pedestrian network is cohesive and provides connections to and from the Hurontario Street intensification corridor. **Section 6.1.5** also discusses numerous pedestrian-related transportation demand management measures that will be taken to support active transportation and reduce vehicle dependency.

4.2.4 Mississauga Parking Master Plan (2019), Parking Regulations Study (2021), and Zoning By-law 0117-2022

Building upon the City's TMP, the *Parking Master Plan and Implementing Strategy* (PMPIS) has been developed and approved in June 2019 to review and analyze the evolving parking needs for all areas of the City. Recent parking trends and mobility characteristics has led to a push towards more balanced parking provisions and management strategies to support a multi-modal city. The PMPIS recommends that the minimum parking requirements be reduced and replaced with a policy designed to manage parking more deliberately.

Shortly after the approval of the PMPIS, the City developed the *Parking Regulations Study* and *Zoning By-law 0117-2022* in 2021 to amend the off-site parking regulations in the City's Comprehensive Zoning By-law 0225-2007. These are considered key action documents that focus on establishing an appropriate amount of (privately-owned) parking to be provided for new development applications in the City. The documents further aim to investigate existing and future parking demand and travel patterns, develop neighbourhood-specific "precincts" with specified rates across the City, and ensure that parking regulations appropriately reflect the number of zoning and minor variance applications being requested by landowners. The proposed off-street parking standards were passed (now in effect) by Council on June 8th, 2022.

As such, the site is subject to the standards in Precinct 1 of Zoning By-law 0117-2022, which proposes reduced residential parking rates to pre-amended standards of Zoning By-law 0225-2007. The subject Precinct also recommends a relatively high level of parking management strategies and consideration of parking maximums for most land uses.

4.2.5 Mississauga Cycling Master Plan (2018) and Zoning By-law 0118-2022

Building upon the City's TMP, the *Cycling Master Plan* was initially developed in 2010 (updated in 2018), which outlines specific recommendations and actions to foster a culture of cycling, improve the safety for cycling, increase the number of cycling trips in Mississauga, and build a connected, convenient, and comfortable bicycle network. One of the City's recommended actions in the Cycling Master Plan is to expand the City's bicycle parking supply, including short-term and long-term facilities on commercial, residential, and city-owned properties.

More recently, the City developed the Parking Regulations Study and *Zoning By-law 0118-2022*, both of which amend the latest off-street bicycle parking standards outlined in the Cycling Master Plan and Comprehensive Zoning By-law 0225-2007. These minimum bicycle parking rates are considered contemporary standards representing updated active transportation trends observed across the City. The proposed bicycle parking standards were passed (now in effect) by Council on June 8th, 2022.

The site supports the City's cycling-related policies and plans with an increased supply of both long-term and short-term bicycle parking spaces. This increase can supplement the proposed vehicle parking reduction while fostering the cycling culture within the City due to its close proximity to prominent cycling routes.

4.2.6 Vision Cooksville (2016)

Vision Cooksville is a City-led initiative that was established to develop a long-range community vision for the area of Downtown Cooksville through public engagement. The Downtown Cooksville study area is centred on the intersection of Dundas Street and Hurontario Street – it is bound by the railway in the north, King Street East in the south, Kirwin Avenue in the east, and Confederation Parkway in the west.

Transportation-related feedback received by the public includes the need to improve open spaces and walkability, increase safety for pedestrians in the area (e.g., concern for heavy traffic), enhancement of the public realm, and maintain the excellent access to public transit offered via GO and MiWay transit.

The site is located within the Downtown Cooksville study area. It is expected that the proposed development will directly influence and transform the character of the surrounding area in a way that supports and achieves the goals and objectives of the City's vision.

4.2.7 Dundas Connects Master Plan (2018)

The *Dundas Connects Maser Plan* was established, in collaboration with the City and Metrolinx, to undertake an environmental assessment (or Transit Project Assessment Process) for the planned bus rapid transit project along the Dundas Street corridor. The Dundas BRT is planned to extend 48 kilometres, connecting various municipalities, between Highway 7 in the City of Hamilton (in the west) to the Kipling Transit Hub in the City of Toronto (in the east). It is proposed for 20 out of 48 kilometres of the BRT to operate within a dedicated bus lane / right-of-way, permitting safer, faster, and more reliable transit connections.

A number of focus areas have been identified at key intersections along the BRT corridor, including Etobicoke Creek, Dixie, Cawthra, Cooksville, Erindale Station, Erin Mils, and Winston Churchill. These focus areas share the following transit, access, and development characteristics:

- Support for intensification as per Official Plan;
- Interchange transit area including one or more higher-order transit stations; and
- Gateway areas that border neighbouring municipalities.

Recognizing that the site is adjacent to / within the general Cooksville area, it is anticipated that any future development support or help achieve these characteristics with consideration to the planned Dundas BRT as a key integrated, multi-modal and regional transit system as identified in the Metrolinx RTP. This notion suggests capitalizing on such investments through encouraging existing and future transit ridership while limiting certain factors (e.g., provision of parking) opposing these characteristics and objectives.

4.2.7.1 METROLINX INITIAL BUSINESS CASE (2020)

As part of the *Initial Business Case* document prepared by Metrolinx in 2020, the exploration of several options and analyses confirmed the need and benefit of the Dundas BRT. Based upon the presented alignment concept, near the site, the BRT is contemplating transit stops at Confederation Parkway, Hurontario Street, and Kirwin Avenue / Camilla Road. In addition, within the site area, it is contemplated to provide a dedicated median-running transit lane with four travel lanes (two lanes in each direction) within the pavement right-of-way. The nearest concept transit stop at Hurontario Street would potentially be considered as an intermodal transit stop that coincides with the proposed Hurontario LRT stop, further discussed in **Section 4.2.8**.

4.2.8 Hurontario / Main Street Corridor Master Plan (2020)

With consideration to the future LRT, the *Hurontario / Main Street Corridor Master Plan* was developed for the evolving corridor within the cities of Mississauga and Brampton. This Master Plan places emphasis on integration planning for rapid transit, intensification, and enhanced urban design along Hurontario / Main Street.

The intent for the Hurontario / Main Street corridor is to link urban growth centres while traversing the mobility hubs (one being the Cooksville GO Station area) through transit-oriented development and general redevelopment.

Near the site, there is a proposed transit LRT station at the Hillcrest Avenue / Cooksville GO Station intersection, which will provide greater mobility opportunities as a gateway hub. This will allow for more intensified developments that leverage these transit investments and minimize the number of single occupant vehicle trips generated during the peak hours.

5.0 AREA TRANSPORTATION CONTEXT

5.1 Area Road Network

5.1.1 Existing Road Connections

The characteristics of the roads and intersections near the site are described below. The area road network and existing lane arrangements and traffic control are illustrated in **Figure 3** and **Figure 4**, respectively.

Hurontario Street

Hurontario Street is a north-south arterial road under the jurisdiction of the City of Mississauga, with a posted speed limit of 60 km/h within the site vicinity. This road generally extends between Lakeshore Road in the south and Steeles Avenue in the north, where it continues northward as Main Street.

Hurontario Street currently has a six (6) lane cross-section (3 travel lanes in each direction), with auxiliary left-turn lanes at key intersections within the vicinity of the site. It is noted that a lengthy extent of this road (between the Port Credit GO Station in the south to the Brampton Gateway Terminal in the north) is under construction to accommodate for the Hazel McCallion LRT. Within the site vicinity, it is being planned to reduce the number of travel lanes by one lane in both directions. Further information is provided in **Section 5.2.2**. Lastly, on-street parking is generally not permitted along this roadway. **Exhibit 1** illustrates the current condition of the roadway as of 2022.

Source: BA Group (August 2023)

Exhibit 1: Hurontario Street at Hillcrest Avenue / Kirwin Avenue (Facing South)

Kirwin Avenue

Kirwin Avenue is a north-south and east-west major collector road under the jurisdiction of the City of Mississauga with a posted speed limit of 40 km/h. Kirwin Avenue extends between Dundas Street East in the southeast to Hurontario Street in the northwest and continues westwards as Hillcrest Avenue. This road has a two (2) lane cross-section (1 travel lane in each direction) with auxiliary left-turn lanes at its intersections with Hurontario Street, Jaguar Valley Drive, and Dundas Street East. As part of the existing right-of-way, dedicated bicycle lanes are provided along both sides of the roadway. Further, on-street parking, for a maximum of 15 hours, is permitted along the north side for most of the roadway. No parking is allowed on Kirwin Avenue between Hurontario Street and Jaguar Valley Drive. **Exhibit 2** illustrates the current condition of the roadway.

Source: BA Group (August 2023)

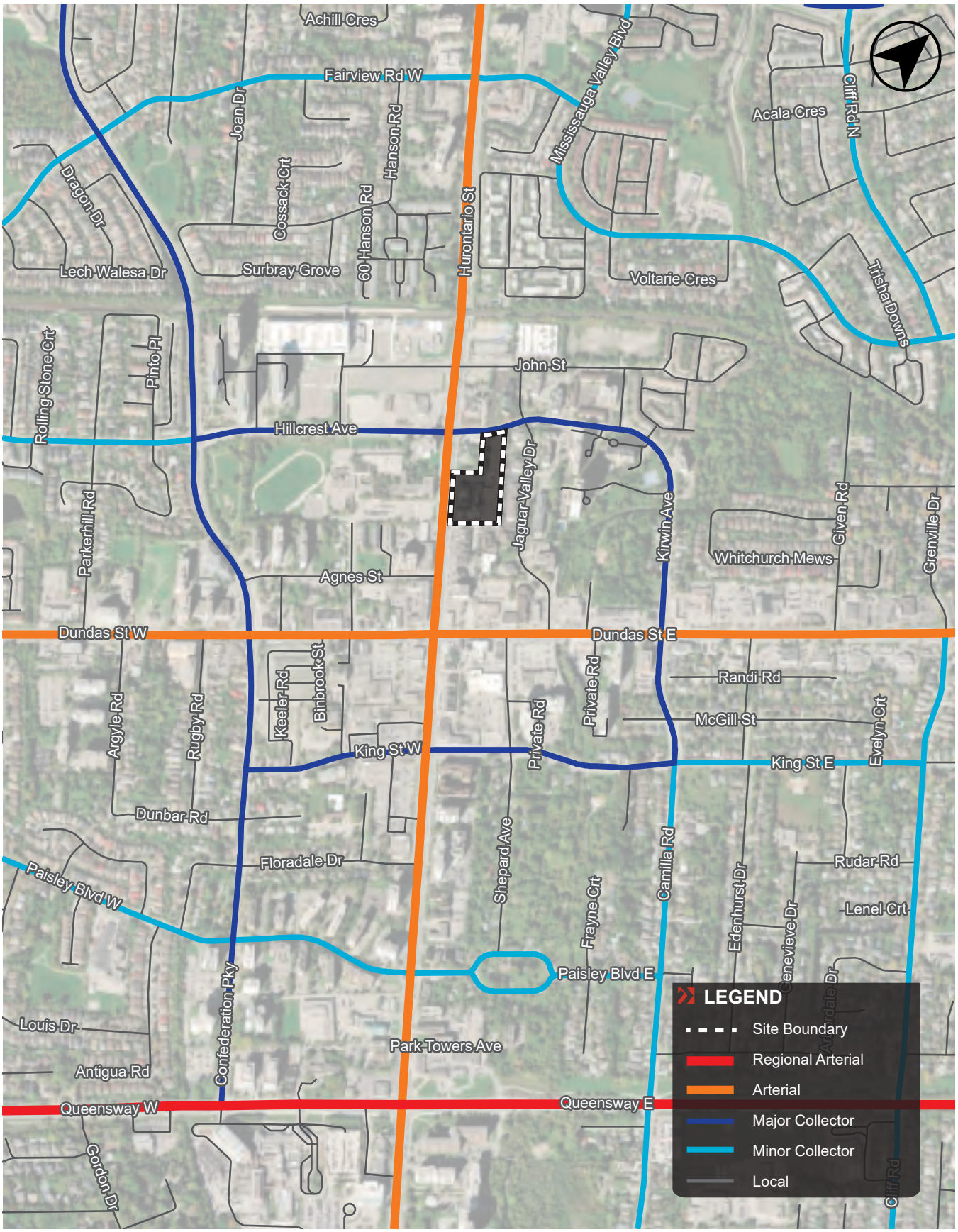
Exhibit 2: Kirwin Avenue / Hillcrest Avenue at Hurontario Street (Facing East)

Jaguar Valley Drive

Jaguar Valley Drive is a north-south local road under the jurisdiction of the City of Mississauga with a posted speed limit of 40 km/h. Jaguar Valley Drive extends between John Street in the north and Dundas Street East in the south. This road currently has a 2-lane cross-section (1 travel lane in each direction). The road forms intersections with John Street, Kirwin Avenue, and Dundas Street East, which all operate under STOP control. On-street parking is permitted along the east side of most of the roadway for a maximum of 15 hours.

Dundas Street

Dundas Street is an east-west arterial road under the jurisdiction of the City of Mississauga with a posted speed limit of 50 km/h. This road extends between Highway 6 in the City of Hamilton in the west and Kingston Road in the City of Toronto in the east. As noted, this road spans across the entire City and provides a direct connection to its neighbouring municipalities. In the vicinity of the site, Dundas Street has a four (4) lane cross section (2 travel lanes in each direction), with auxiliary left and right turn lanes at key intersections (e.g., Hurontario Street and Kirwin Avenue). On-street parking is generally not permitted along this roadway.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 3 EXISTING STREET NETWORK

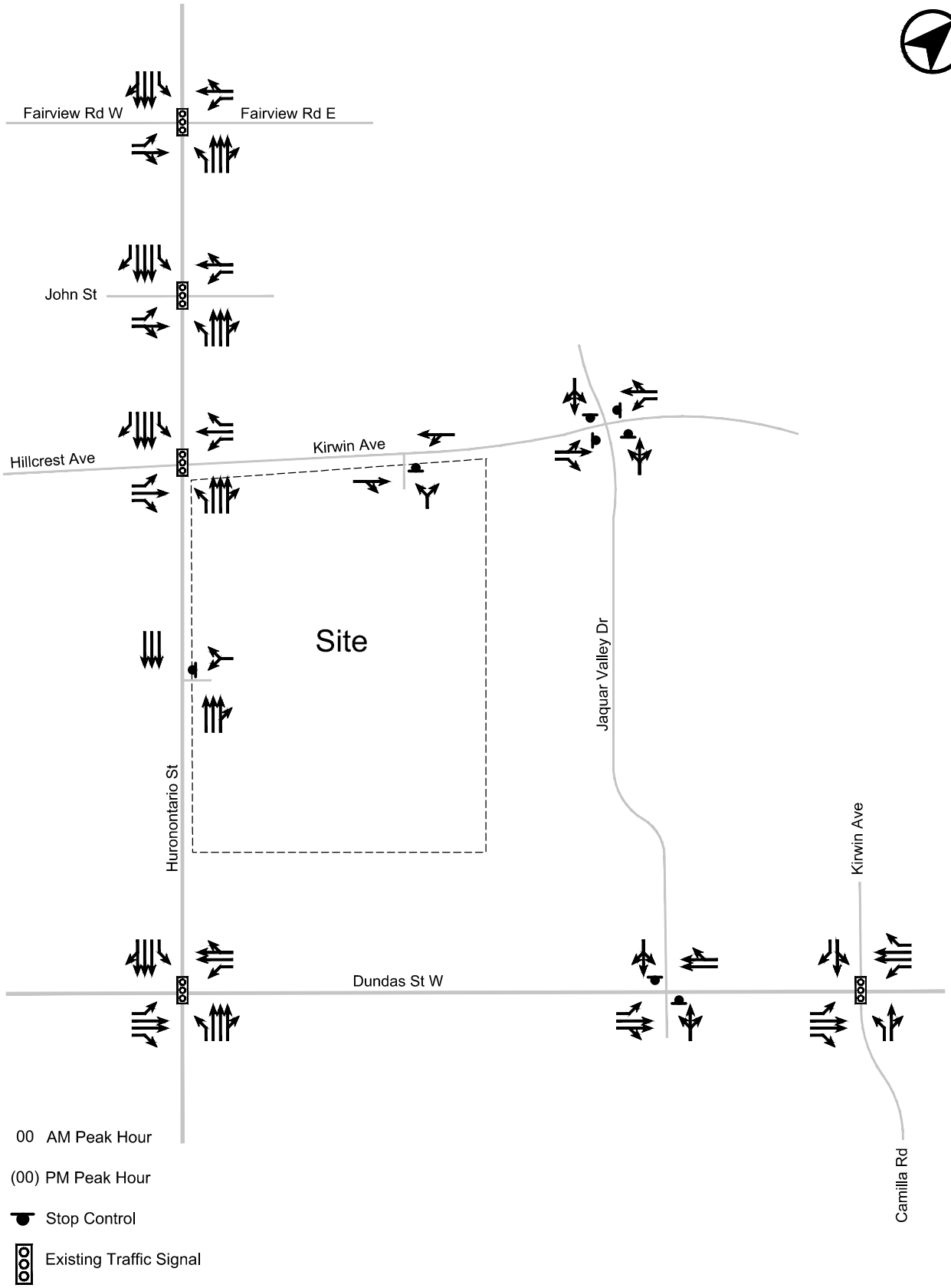

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FIGURE 4 EXISTING LANE CONFIGURATION & TRAFFIC CONTROL

5.1.2 Planned Road Connections

5.1.2.1 OPA 145 CONNECTIONS

As mentioned in **Section 4.2.1.1**, OPA #145 (under appeal) proposed a series of new midblock and full roadway connections to help strengthen the transportation system by forming a grid-like network for increased connectivity and accessibility for all mobility users. It is noted in the OPA that various improvements will be achieved through new development along existing and planned roads. Moreover, development along the Hurontario Street corridor is desired as transit-oriented developments.

As part of the key policy changes, the study area is planned to be improved through the transformation of the network based on three (3) street types guiding new development:

- 'A' Streets: primarily arterial streets with active frontages that will prioritize at-grade retail and commercial uses.
- 'B' Streets: primarily residential in character with suitable building setbacks to accommodate landscaping.
- 'C' Streets: intended to support a suitable pedestrian environment, as well as accommodate any consolidated or individual loading and parking access.

Figure 5 illustrates the proposed street network changes within the site area.

The provision of the new Municipal Road (Street C) satisfies the new public east-west road connection planned as part of OPA 145.

5.1.2.2 NEW ON-SITE PRIVATE ROAD CONNECTION

The new north-south Private Road will provide a connection between Kirwin Avenue and the new Municipal Road (Street C). It also will provide loading and parking garage access as well as accommodating PUDO facilities for the proposed development. The new Private Road will consist of a two-lane cross section (one travel lane in each direction) with pedestrian sidewalks and landscaping. There will be laybys along both sides of the new Private Road and STOP-control signage at its intersections with Kirwin Avenue and Street C.

Further details on the functional road design are provided in **Section 11.0**.

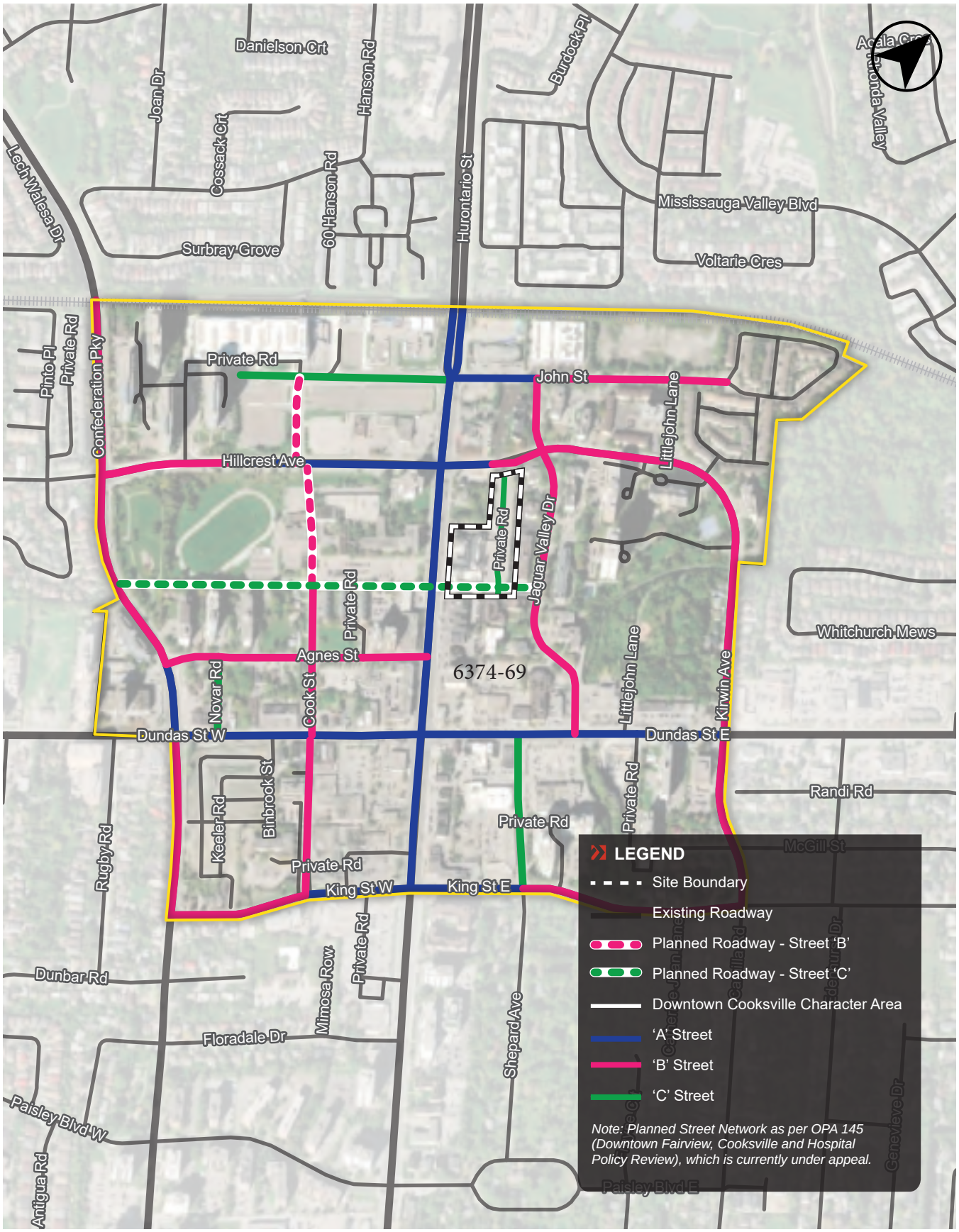


FIGURE 5 PROPOSED STREET NETWORK CHANGES

5.2 Area Transit Network

5.2.1 Existing Transit Connections

The site is currently well served by transit services neighbouring the property and at the Cooksville GO Station, which accommodates bus services operated by the Mississauga transit service provider MiWay. GO Transit is also provided at Cooksville GO Station in the form of the 21 Milton bus service as well as train service on the Milton GO line, which provides peak hour service between Milton and Union Station in Toronto and Kipling Station on the Toronto Transit Commission (TTC) subway network. The bus routes adjacent to the site also provide access to the Square One GO Bus Terminal, which provides connections to locations such as Toronto, Kitchener, Milton, and Brampton. An existing MiWay transit stop is located northwest of the site at the intersection of Hurontario Street / Kirwin Avenue. Bus routes located within an 800-metre radius of the site are outlined below in **Table 2**. The existing transit network is illustrated in **Figure 6**.

Table 2 Existing Area Transit Services

Route	Nearest Stop Location	Peak Headway	Description
GO Metrolinx – Train Service			
Milton GO Line	Cooksville GO (John Street / GO Access Road)	Every 15 to 45 minutes during peak hours.	This GO train operates east-west between the Milton GO station and Union Station. This train offers weekday rush-hour service, operating eastward in the morning and westward in the afternoon.
GO Metrolinx – Bus Service			
21 Milton	Cooksville GO (John Street / GO Access Road)	Every 25 to 35 minutes during peak hours.	This bus service operates east-west between Union Station in the east and Milton GO station in the west. Within the study area, this bus service operates along Hurontario Street and Dundas Street East. This route operates from Monday to Friday.
MiWay Transit – Bus Service			
1 Dundas / 101 Dundas Express	Dundas Street / Hurontario Street	Every 15 minutes or less during peak hours.	This bus service operates east-west between the Kipling Bus Terminal in the east and Laird Road/Ridgeway Drive in the west. The Dundas Express service operates east-west between the Kipling Bus Terminal in the east and South Common Centre in the west. Both routes operate from Monday-Sunday along Dundas Street.
2 Hurontario / 103 Hurontario Express	Hurontario Street / Hillcrest Avenue	2 Hurontario: Every 10 minutes or less during peak hours. 103 Hurontario Express: Every 15 minutes during peak hours.	This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Port Credit GO Station in the south. Within the study area, this bus service operates along Hurontario Street. The express service of Hurontario operates north-south between Queensway at Confederation Parkway to the south and the Brampton Gateway Terminal to the north. Both routes operate from Monday-Sunday.

Route	Nearest Stop Location	Peak Headway	Description
4 Sherway Gardens	Hurontario Street / King Street East	Every 30 minutes during peak hours.	This bus service operates east-west between Sherway Gardens to the east and the Cooksville GO Station to the west.
28 Confederation	Confederation Parkway / Dundas Street West	Every 15 minutes or less during peak hours.	This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Trillium Health Partners Mississauga Hospital at Hurontario Street and the Queensway in the south. During peak hours, the bus services the Cooksville GO Station. Within the study area, this bus service operates along Confederation Parkway.
38 Creditview	Confederation Parkway / Dundas Street West	Every 30 minutes during peak hours.	This bus service operates north-south between the Meadowvale Town Centre in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Creditview Road from Monday-Friday.
53 Kennedy	Hurontario Street / John Street	Every 15 minutes during peak hours.	This bus service operates north-south between the Hurontario/Highway 407 Park & Ride in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Hurontario Street from Monday-Friday.

5.2.2 Planned Transit Connections

Based on the *MiWay Five Year Transit Service Plan (2021-2025*) several improvements are proposed to the local transit network. As the City continues to grow and evolve, new policies and plans have been established to further guide and shape future goals. As such, the MiWay Transit Plan works in conjunction with the Transportation Master Plan, Climate Change Action Plan, Parking Master Plan, and more to meet the future transit demand.

The transit-related improvements within the local area include the following items described below. The future area transit network is illustrated in **Figure 7**.

5.2.2.1 HAZEL MCCALLION LIGHT RAIL TRANSIT LINE

The Hazel McCallion Light Rail Transit (LRT) Line, also known as the Hurontario LRT, is a new and transformational transit service being introduced to the Region of Peel, primarily bridging the cities of Mississauga and Brampton. The LRT will provide 18 kilometres of higher-order transit and is proposed to run along Hurontario Street, between Port Credit (in the south) and Brampton (in the north). It will bring high quality and high frequency transit service to the Downtown Cooksville area, including the subject site.

The Hazel McCallion Line will also provide direct links to various other transit services, including GO Metrolinx (e.g., Port Credit station and Square One bus), the Mississauga Transitway, and key MiWay and Brampton Transit routes.

This new transit service will create a significant linkage to various businesses and residents along the Hurontario Street corridor; it also invites greater intensification and employment due to its rapid and reliable service operating in its own dedicated right-of-way.

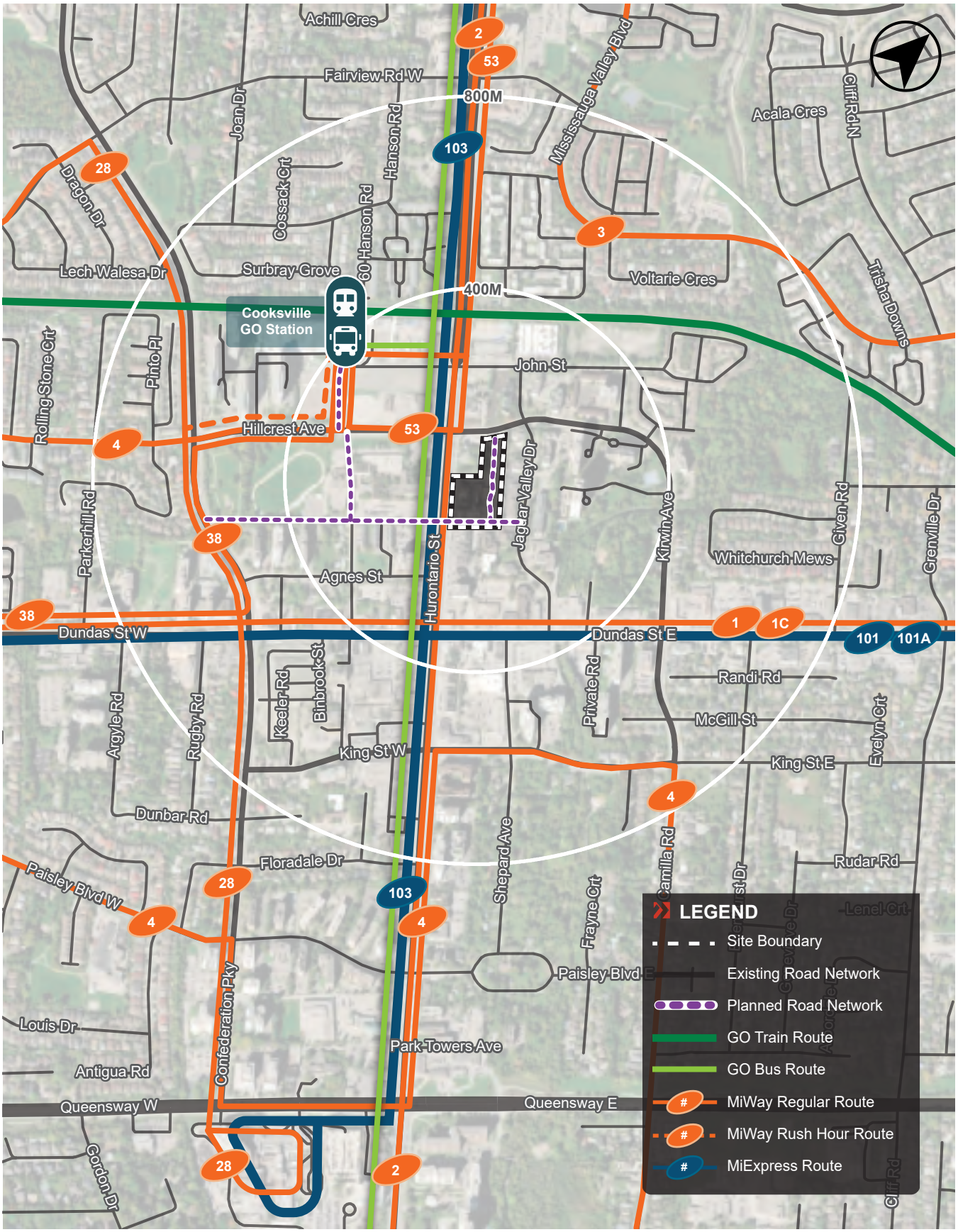
Construction began in spring 2020 with anticipated completion in fall 2024. The nearest LRT station to the site is located at the existing Cooksville Station located approximately 350 metres from the site.

5.2.2.2 OTHER TRANSIT SERVICE IMPROVEMENTS

In addition to the notable Hazel McCallion Line, there are further (broader) transit improvement projects within the City of Mississauga, including:

- Improvement of GO transit services (e.g., Cooksville and Port Credit stations);
- Development of Dundas Street BRT (i.e., Dundas Connects Master Plan);
- More service outside of weekday rush hours; and
- More express routes between key destinations and improved connectivity.

These improvements will further increase the transit mode share and assist in encouraging the use of alternative modes of transportation (other than personal vehicles) to residents and employees within the study area, particularly during the weekday morning and afternoon peak hours.



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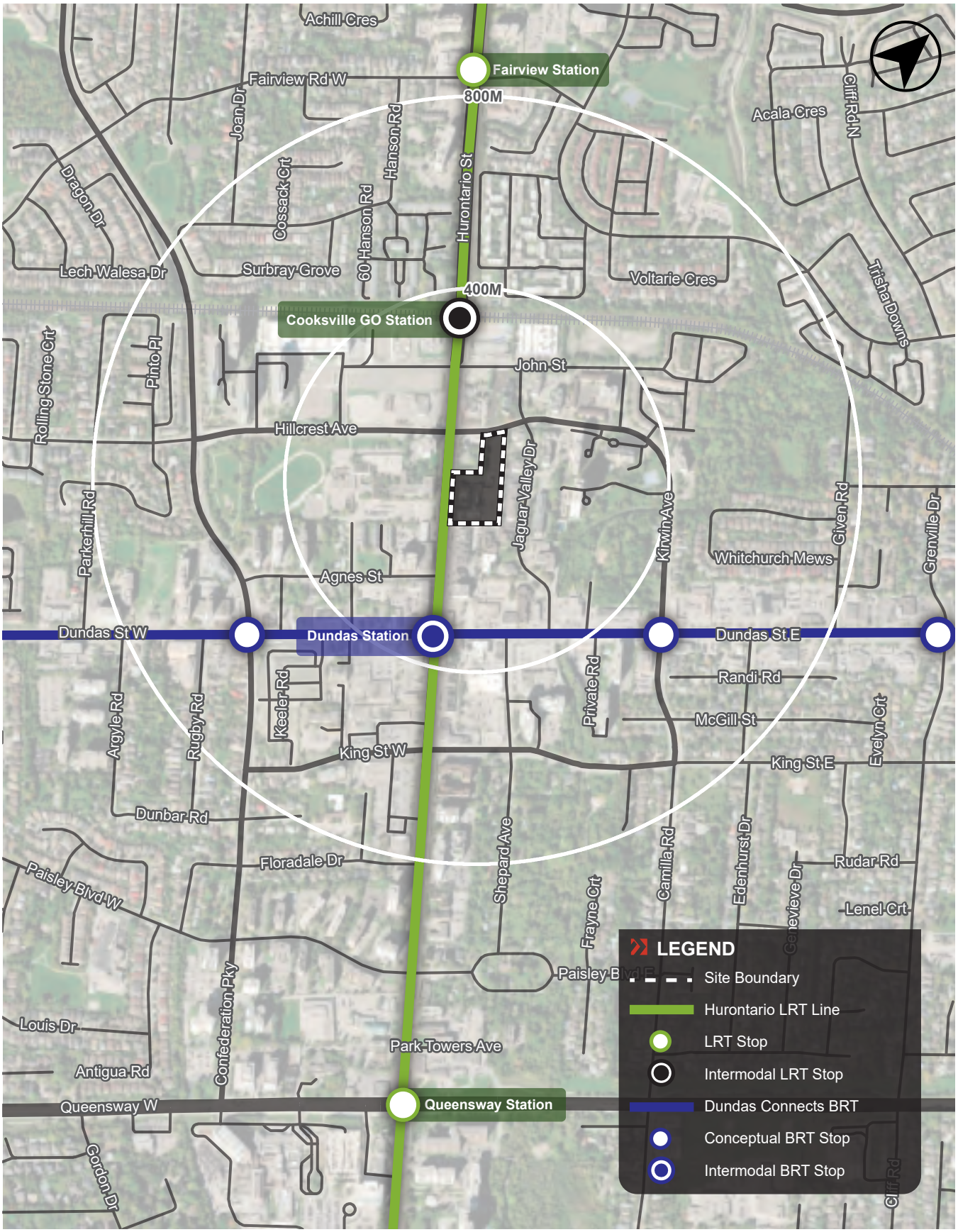
Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 6 EXISTING TRANSIT NETWORK



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 7 FUTURE TRANSIT NETWORK

5.2.3 Transit Reach Assessment

To understand the changing transportation context, transit service area analyses for the existing and future transit network were conducted using Geographic Information Systems (GIS). These analyses look at the service area of a transit network that a visitor of the Site has access to, within a given time frame. This type of analysis is useful in understanding the transit accessibility and can also be used to quantify the impact of transit service changes.

Existing Transit Travel Reach

A 15, 30, and 45-minute transit reach from the site during the weekday morning travel period was analysed for existing conditions as is illustrated in **Figure 8**. Transit travel times include walking time to and from transit stops, as well as the transit schedules during peak hour (i.e., service frequency and wait times), which are based upon existing transit service.

Future Transit Travel Reach

A review of projected transit travel times assumed the various public transit network improvements included in **Section 5.2.2** is illustrated in **Figure 9**. A comparison of areas that are reachable is provided in **Table 3** below.

Table 3 Existing and Future Transit Service Area Analysis Comparison

Transit Scenario	15-minute reach	30-minute reach	45-minute reach
Existing Conditions (Travel Away From Site)	• North along Hurontario St to the Hwy 403 corridor (access to City Centre Terminal and Square One GO Bus Terminal); • South along Hurontario St to just past the QEW corridor; • East along Dundas St E to short of Arena Rd (beyond Tomken Rd); and • West along Dundas St W to short of Erindale Station Rd / Glengarry Rd.	• North along Hurontario St to before Britannia Rd; • South along Hurontario St to the waterfront (access to Port Credit GO Station); • East along Dundas St E to Kipling Ave (access to Kipling Station), and along the Mississauga Transitway to Etobicoke Creek Station; and • West along Dundas St W to before Winston Churchill Blvd, and along Rathburn Rd W to Erindale GO Station.	• North along Hurontario St to beyond Steeles Ave (access to Brampton Gateway Terminal); • South along Hurontario St to the waterfront (access to Port Credit GO Station); • East along Bloor St W (via TTC Line 2) to Dundas West Station, along Eglinton Ave W to short of Islington Ave, and along the Lakeshore West GO Line to Long Branch GO Station; and • West along Dundas St W to Ninth Line, along the Hwy 407 corridor to Trafalgar Rd, and along the Lakeshore West GO Line to Clarkson GO Station.
Future Conditions (Travel Away From Site) *with the addition of Hazel McCallion LRT, Dundas BRT, etc.*	• North along Hurontario St (via future Hazel McCallion LRT) to City Centre Terminal (access to Square One GO Bus Terminal); • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E (via planned Dundas BRT) to beyond Dixie Rd (access to Dixie GO Station); and • West along Dundas St E (via planned Dundas BRT) to just past Old Carriage Rd (short of The Credit Woodlands).	• North along Hurontario St (via future Hazel McCallion LRT) to future Derry Station; • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E (via planned Dundas BRT) to Kipling Ave (access to Kipling Station), and along the existing Mississauga Transitway to Spectrum Station, and along the improved Lakeshore West GO Line to Long Branch GO Station; and • West along Dundas St W (via planned Dundas BRT) to beyond Ninth Line, and along the existing Mississauga Transitway to Erin Mills Station.	• North along Hurontario St (via future Hazel McCallion LRT) and Main St S to before Queen St; • South along Hurontario St (via future Hazel McCallion LRT) to Port Credit GO Station and the waterfront; • East along Dundas St E and Bloor St W (via planned Dundas BRT and existing TTC Line 2) to Lansdowne Station, along Eglinton Ave W (via future Eglinton Crosstown West Extension) to Royal York Rd, and along the improved Lakeshore West GO Line to Exhibition GO Station; and • West along Dundas St W (via planned Dundas BRT) to Third Line, along the Hwy 407 corridor to Trafalgar Rd, and along the improved Lakeshore West GO Line to Bronte GO Station.

Notable findings include:

- Within 15 minutes, a sizeable area around the site, including transit connections at City Centre Transit Terminal, Square One GO Bus Terminal and Cooksville GO Station, can be accessed under existing conditions, primarily north-south along Hurontario Street and east-west along Dundas Street. Under future conditions, completion of the Hazel McCallion LRT will greatly improve access south to Port Credit GO station and the waterfront. Additionally, implementation of the Dundas BRT will extend reach east to Dixie Rd, providing access to Dixie GO Station, and west to just short of The Credit Woodlands.

- Within 30 minutes, access expands throughout Mississauga and into neighbouring Toronto, extending north-south along Hurontario Street, east-west along Dundas Street, and east-west along the Mississauga Transitway corridor, providing access to Erindale GO, Dixie GO and Kipling GO stations, and to Kipling TTC Station. Under future conditions, completion of the Mississauga Transitway will extend reach north to future Derry Station, while implementation of the Dundas BRT will provide additional access west past Ninth Line. The completion of GO Expansion along the Lakeshore West GO Line will also extend access east to Long Branch GO Station, while general improvements to transit connections will slightly improve reach along the Mississauga Transitway to Spectrum Station.

- Within 45 minutes, transit reach now extends into Brampton, as well as further throughout Mississauga and deeper into Toronto, primarily along Hurontario Street to the north, along Bloor Street West and Eglinton Avenue West to the west (via the Mississauga Transitway and TTC Line 2 Bloor–Danforth) and along Dundas Street West, and the Highway 407 and Lakeshore West GO Line corridors to the west, providing access to Pearson Airport, Dundas West TTC Station, and Long Branch GO and Clarkson GO Stations. Under future conditions, completion of the Hazel McCallion LRT will extend reach north beyond Brampton Gateway Terminal to just short of Brampton GO Station, while implementation of the Dundas BRT will extend reach along Dundas Street and Bloor Street Wewwt to between Third Line and Lansdowne TTC Station. The completion of GO Expansion along the Lakeshore West GO Line will also provide further access between Exhibition GO and Bronte GO Stations, while projects including the Waterfront West LRT and Eglinton Crosstown West Extension will provide increased reach eastbound along the waterfront and Eglinton Avenue West, respectively.

In summary, under existing conditions, the site possesses good access to transit due to its proximity to several major transit corridors and hubs, including Hurontario St and the Mississauga Transitway, and City Centre Transit Terminal and Square One GO Bus Terminal. Furthermore, transit access from the site is set to improve greatly under future conditions with the completion of several Ontario priority projects, including the Hazel McCallion LRT, Dundas BRT, GO Expansion, Waterfront West LRT, and Eglinton Crosstown West Extension.

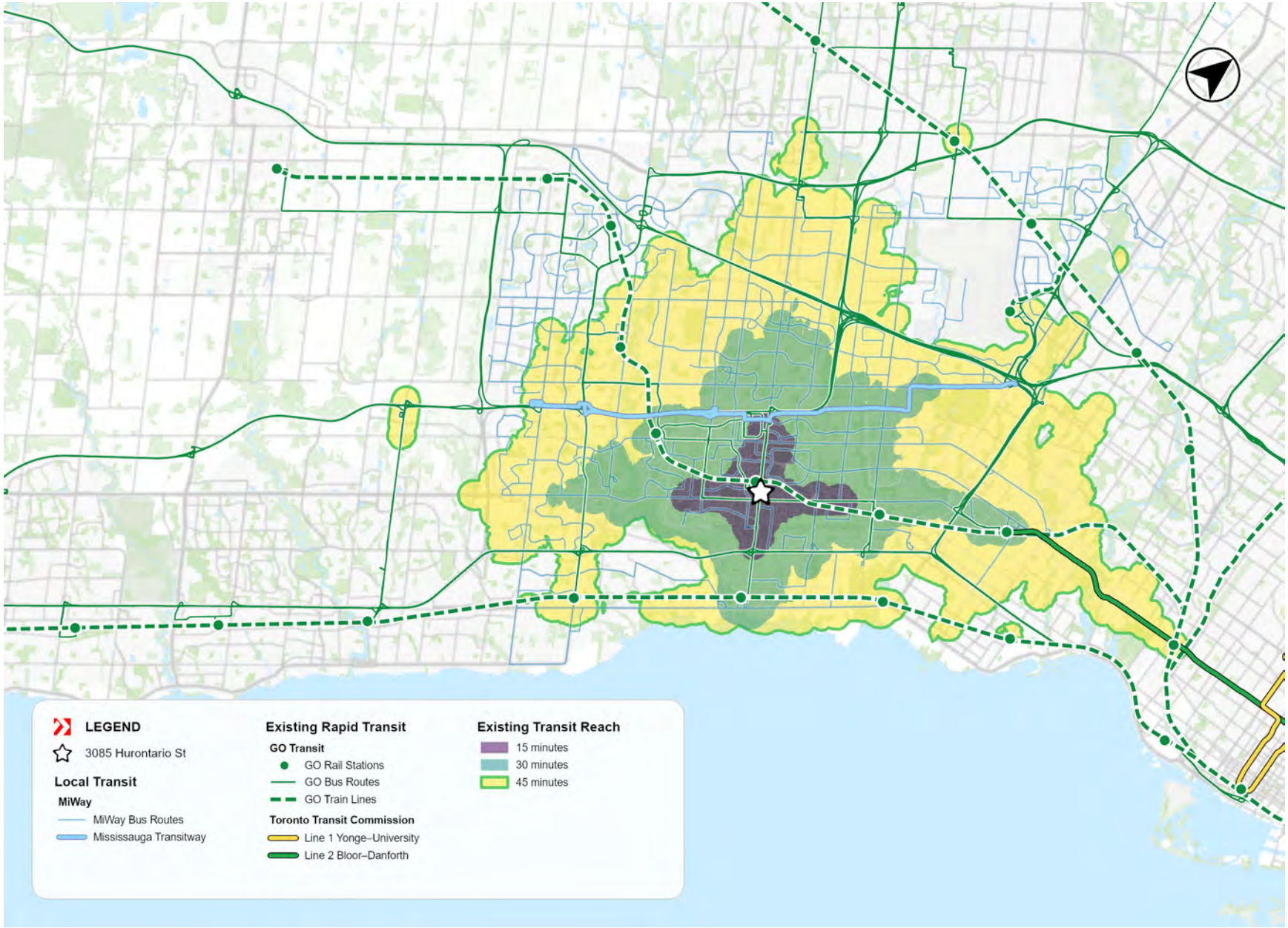

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FIGURE 8 EXISTING TRANSIT REACH

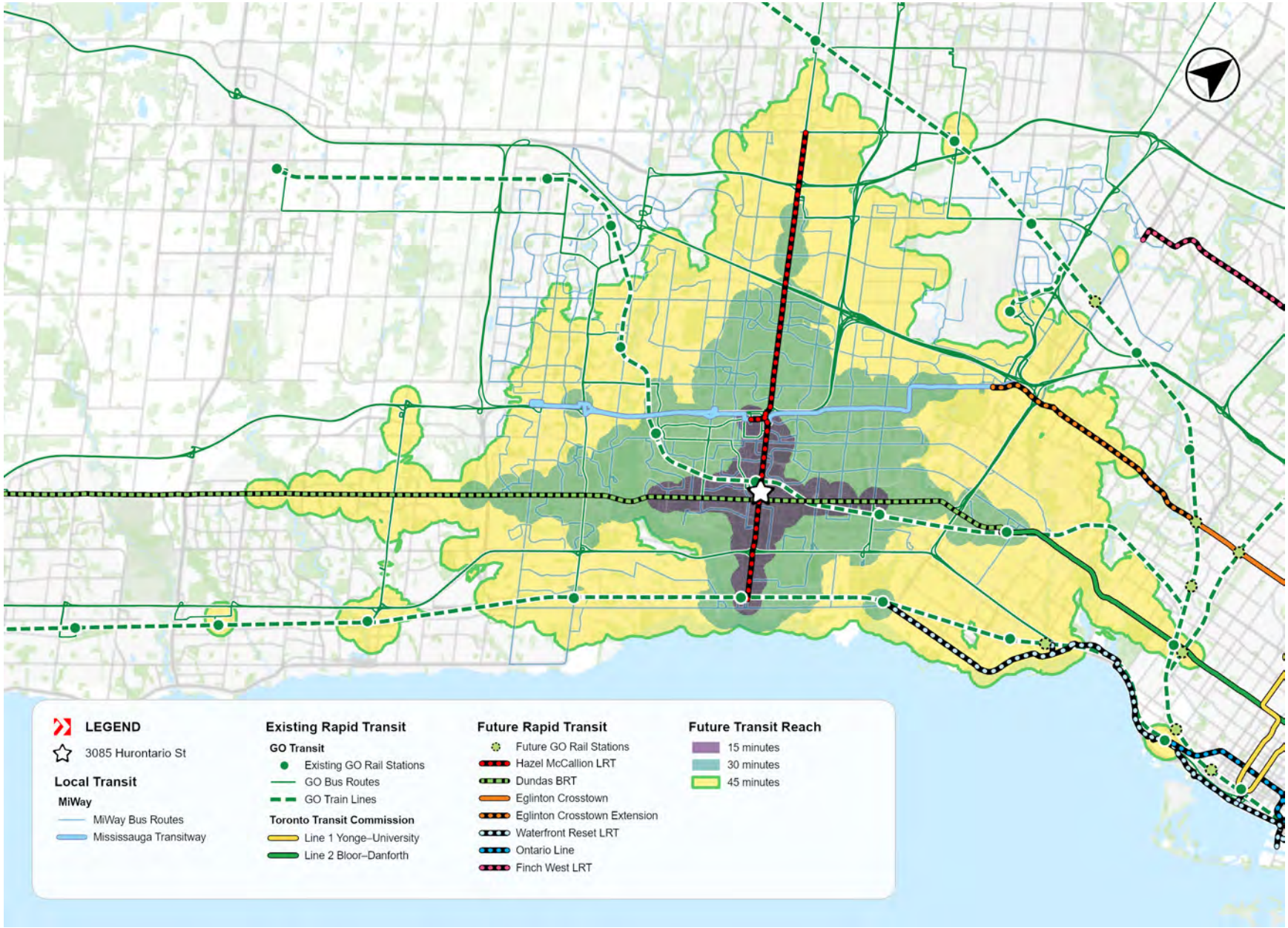

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FIGURE 9 FUTURE TRANSIT REACH

5.3 Area Active Transportation Context

5.3.1 Pedestrian Network

5.3.1.1 EXISTING PEDESTRIAN CONNECTIONS

Currently, pedestrian facilities are provided by means of sidewalks on both sides of all streets throughout the study area. Pedestrian signal heads and crosswalks are provided at all signalized intersections in the study area. There is a multi-use path that extends through John C. Price Park into Richard Jones Park, north of Dundas Street East. Destinations of note within 800 metres of the site include, but are not limited to: Cooksville Park, Richard Jones Park, Cooksville GO Station, Anderson College Mississauga Campus, and T.L. Kennedy Secondary School.

Additionally, Hurontario Street serves as an active frontage with mixed uses and provides pedestrians with convenient access to a variety of transit facilities, amenities, and services. Near the site, pedestrians can access GO and MiWay stations, restaurants, cafes, medical facilities, social services, schools, parks, community centres, grocery stores and more.

Crosswalk widths ranging from 2.1 metres to 3.1 metres are also provided at both major, signalized intersections as well as smaller, unsignalized intersections, which contribute to a positive pedestrian experience. There are existing sidewalk facilities along the public streets in the site vicinity including Hurontario Street, Kirwin Avenue, Hillcrest Avenue, Dundas Street East, and Dundas Street West.

An overview of the existing pedestrian network is illustrated in **Figure 10.**

5.3.1.2 PLANNED PEDESTRIAN CONNECTIONS

External Connections

As mentioned in **Section 4.2.1.1**, there are numerous planned improvements which would enhance the pedestrian environment in the vicinity of the site. As per City of Mississauga OPA #145, numerous new pedestrian connections have been planned, including the following:

- A north-south connection midpoint between Hurontario Street and Jaguar Valley Drive (extending from Kirwin Avenue in the north to Dundas Street East in the south, with a slight offset near Agnes Street) at the location of Private Street;
- A north-south connection midpoint between Hurontario Street and Cook Street (extending from the existing Cooksville GO Station in the north to King Street West in the south);
- An east-west connection south of Hillcrest Avenue and Kirwin Avenue (extending from Jaguar Valley Drive in the east to the existing TL Kennedy Secondary School in the west); and
- An east west connection extending eastward of the current Agnes Street terminus (extending from Jaguar Valley Drive in the east to Agnes Street in the west).

Additionally, OPA #146 policies under Section 12.4.7 indicates the provision of “Special Site 2” within the Downtown Cooksville Character Area, which directly impacts the site. It is suggested that the Special Site provides non-residential uses on the ground floor for buildings designated with mixed use or residential (high density) uses adjacent to Hurontario Street. The proposed development provides just over 1,000 m^2 of retail on the ground floor of the site, which would contribute to meeting these recommended standards.

As outlined in the City's Pedestrian Master Plan (PMP), the site is a part of an Urban Growth Centre and the Hurontario Intensification Corridor. As such, the provision of an extensive and complete pedestrian network is necessary. Near the site, the PMP outlines a pedestrian trail crossing gap along Hurontario Street as well as network gaps along Dundas Street West. These gaps have been identified as gaps with high priority to be addressed immediately to further enhance the pedestrian environment within the site vicinity. The PMP also outlines TDM requirements for new sites, such as reduced parking rates and enhanced pedestrian facilities to support and encourage walking as a viable mode of transport.

The PMP also discusses several general improvements to the City's pedestrian network, many of which would apply to the entire pedestrian network within the vicinity of the site. These improvements include, but are not limited to, the following:

- The establishment of urban and streetscape design guidelines and sidewalk design requirements;
- The establishment of public amenity guidelines, such as seating or washrooms, street trees and landscape treatments, public art and urban features;
- Increased lighting to enhance visibility;
- Pedestrian signals to ensure pedestrian safety;
- Proper maintenance and snow removal to limit obstructions year-round; and
- The establishment of monitoring programs such as pedestrian counters.

Internal Connections

The new north-south Private Road is being proposed on-site. This road will provide pedestrian connections between Kirwin Avenue and the new Municipal Road (Street C) which will connect to Hurontario Street and Jaguar Valley Drive in the future. Additional pedestrian only connections are provided between the towers to / from the Municipal Road, Hurontario Street and Kirwin Avenue. Landscaping is provided throughout the site and along these connections and roads to improve the pedestrian realm and experience. Further details on the proposed right-of-way design including the pedestrian facilities along the new roadways are discussed in **Section 11.0**.

The improvements mentioned above will contribute to enhancing the pedestrian experience within the vicinity of the site as well as improved safety, accessibility, and comfort for site users. An overview of the existing and proposed active transportation network are illustrated in **Figure 10**. Further, the proposed on-site pedestrian facilities and pedestrian circulation plan are illustrated in **Figure 2** and **Appendix C.**

5.3.2 Cycling Network

5.3.2.1 EXISTING CYCLING CONNECTIONS

The site is currently served by several cycling infrastructure options including dedicated bike lanes, multi-use pathways, and on-street shared cycling routes. The following cycling-supportive routes and facilities are located within an 800-metre radius of the site:

- Multi-use path through Richard Jones Park;
- Bicycle lanes along Kirwin Avenue;
- Bicycle lanes along Camilla Road;
- Shared route along King Street East;
- Bicycle lanes along Confederation Parkway; and
- Shared route along Hillcrest Avenue.

The site is primarily served by north-south bicycle lanes located along both sides of Confederation Parkway. Cycling infrastructure along Kirwin Avenue provides connections to Camilla Road, which continues southwards towards dedicated cycling lanes along the Queensway. The cycling infrastructure along the Queensway extends eastward into Etobicoke and westward until its terminus at Old Carriage Road. The multi-use trail through Richard Jones Park extends northward towards Central Parkway East and provides connections to additional multi-use paths. These cycling supportive routes provide site users with access to a well-connected cycling network that spans the City of Mississauga. An overview of the existing and proposed active transportation network are illustrated in **Figure 10**.

5.3.2.2 PLANNED CYCLING CONNECTIONS

As mentioned in **Section 4.2.5**, the City of Mississauga has planned numerous improvements to the cycling infrastructure of the City. These cycling infrastructure improvements will contribute to the City's end goals of improving safety for cycling, increasing the number of cycling trips taken in the City, and building a connected, convenient, and comfortable cycling network. Based on the City's 2018 Cycling Master Plan, two cycling network improvements within an 800-metre radius of the site are planned, including the following:

- Cycle track / separated bike lane along Dundas Street; and
- Cycle track / separated bike lane along Hurontario Street.

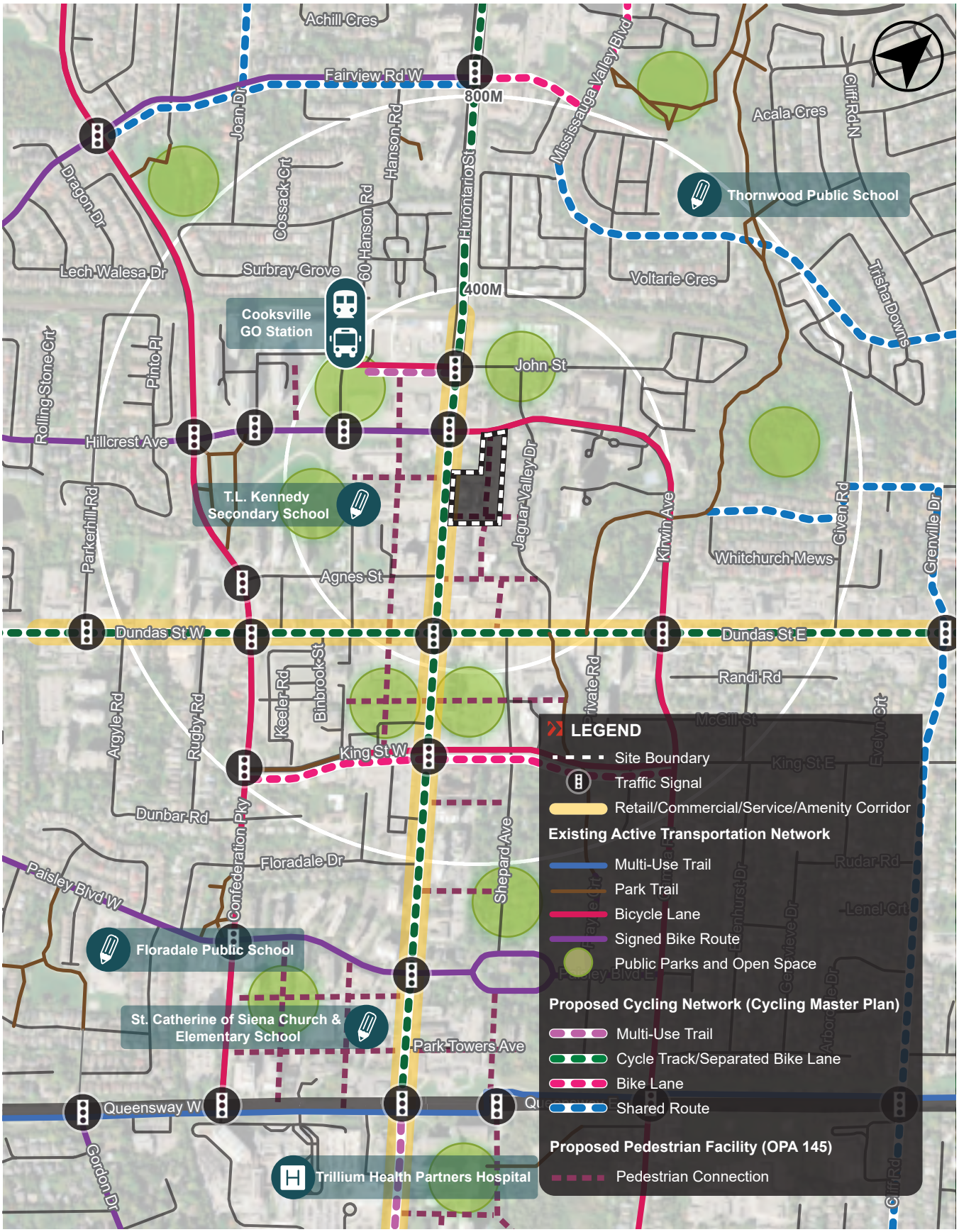
The future bicycle facilities along Hurontario Street will enhance use experience to and from the site in north-south directions, while the bicycle facilities along Dundas Street would provide enhanced east-west connections. These connections would allow for the creation of a more robust network and would allow users of the site to access the greater cycling network that spans the city. An overview of the existing and proposed active transportation network are illustrated in **Figure 10.**

5.3.3 Other Active Mobility Options

As the City's transportation needs continue to evolve, it has begun to explore the feasibility of introducing other forms of active mobility within the City, such as the potential behind introducing bike-share and micro-mobility programs as discussed in the Mississauga Cycling Master Plan and Climate Change Action Plan, respectively, as per **Section 4.2**. Regarding the latter, the City is currently exploring how a shared micro-mobility system of bicycles, electric bikes (e-bikes), and / or electric scooters (e-scooters) may be used for travel.

As the City works to define an appropriate micro-mobility system that suits the City's needs and size, it has launched a shared micro-mobility pilot program where users are able to choose between an e-bike and e-scooter for travel within Mississauga. This pilot program is based on a hybrid model of both docked and dockless parking systems and is privately owned and privately operated. Currently, e-scooters may be ridden on roads with a posted speed limit of 50km/h or less, on any designated bicycle lane or path, and on multi-use trails within the road right-of-way. As such, within the immediate vicinity of the site, e-scooters may be operated along Kirwin Avenue, Hillcrest Avenue, Dundas Street, and Jaguar Valley Drive.

An overview of the existing and proposed active transportation network are illustrated in **Figure 10.**



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 10 EXISTING & PROPOSED ACTIVE TRANSPORTATION NETWORK

6.0 TRANSPORTATION DEMAND MANAGEMENT

6.1 Transportation Demand Management Plan

Transportation Demand Management (TDM) plans are developed with a focus on reducing single occupant vehicle trips and supporting alternative modes of transportation including walking, cycling and transit.

The site is located within the Downtown Cooksville area, which is a mixed-use area with residential, employment / commercial / retail, and educational uses. These land uses allow for residents to potentially live and work in close proximity to each other (i.e., the walkable 15-minute city envisioned by City policies). Around the site today, transit, sidewalks, and cycling paths are provided, which make non-vehicular modes of travel a viable alternative. Notably, the Cooksville GO Station is within a convenient distance to the site, along with the future Hurontario LRT (located at Cooksville GO Station) and Dundas BRT (located at Hurontario Street / Dundas Street intersection) stations.

In the future, in accordance with the Official Plan, intensification of the area is encouraged for the City of Mississauga, and the construction of new uses and transportation-related improvements will assist in supporting non-vehicular modes of travel for future site users.

The following strategies will be implemented as part of the preliminary TDM plan for the proposed mixed-use development. It is noted that the proposed TDM measures will be further discussed and refined throughout later stages (i.e., Site Plan Approval) of the application process.

The completed TDM checklist is provided in **Appendix C**.

6.1.1 Vehicular Travel Management

- Reduced vehicular parking supply from the City's current by-law rates.
- Resident parking spaces will be unbundled (i.e., sold separately from the unit).
- Provide on-site pick-up / drop-off facilities central to the residential and retail uses of the buildings to encourage carpooling or ridesharing.
- Provide car share spaces on site (to be confirmed with the car share operator).
- Provide a free one-year membership to the car share service to first time residents of each dwelling unit that do not purchase a parking space as a one-time provision.

It should be noted that the applicant has reserved up to 43 parking spaces for the provision of car-share vehicles. They are in discussion with car share providers to provide a higher level of car-share availability such that it becomes an amenity to both residents and visitors to the site and a fundamental part of the site's mobility strategy. It is acknowledged that this is a significantly larger amount of car share than what is typically provided, but is intended to ensure availability to residents and attract owners who do not own a personal car given the reduced quantity of vehicle parking provided on site.

6.1.2 Transit Incentives

- Provide a pre-loaded PRESTO card pass to first-time residents of each dwelling unit that do not purchase a parking space as a one-time provision.
- Provide transit information screens in the lobbies of each residential building.
- Distribute or display MiWay promotional materials to provide information on transit service to residents, employees, and visitors.

6.1.3 Bicycle Parking and Services

- Provide an ample number of bicycle parking spaces for the overall development based on City's current by-law rates.
- Provide wayfinding and signage for on-site bicycle parking, amenities, and nearby cycling facilities.
- Provide on-site bike repair stations adjacent to long-term bicycle parking areas.
- Provide information to residents and employees about City bike events.
- Provide copies of the City's Bikeway and Trails Map and Cyclists Handbook to residents and employees.
- Provide information about camps and "CAN-Bike" education / safety classes to residents and employees.

6.1.4 Micro-mobility Services

- Provide a shared micro-mobility service (e-bikes and e-scooters) on site.
- Provide a free one-year membership to the shared micro-mobility service to first time residents of each dwelling unit that do not purchase a parking space as a one-time provision
- In partnership with the City, support the provision of a City-wide shared micro-mobility system through the e-scooter pilot or other programs as they develop.

6.1.5 Pedestrian Access and Walkability

- Provide an improved public realm within and around the site, including the provision of landscaped pedestrian paths between the buildings that permeate the overall site.
- Provide wayfinding and signage to guide pedestrians within and around the site.

6.1.6 Land Use and Infrastructure

- Provide a complementary mix of uses on site (e.g., residential and retail).

6.2 Pedestrian Circulation Plan

As per the City of Mississauga Transportation Impact Study guidelines dated December 2022, a pedestrian circulation plan is required.

The proposed development includes a combination of sidewalks, pathways, plaza, and parks to create a safe and accessible pedestrian environment. Important pedestrian linkages within and around the site include:

- Sidewalks along Hurontario Street, Kirwin Avenue, the new Private Road and the new Municipal Road
- Pedestrian-only pathways between the towers crossing through the site and connecting to the roads noted above

All functional building entrances are oriented towards the streets and plazas to create an active frontage. Lighting, benches, and street furniture are provided throughout the site.

Access to public transit from the site can be made by walking along the pathways within the site to Hurontario Street, then north to the intersection of Hurontario Street / Kirwin Avenue or south to Hurontario Street / Dundas Street. Alternatively, pedestrians can also access short-term bicycle parking and transit stops by walking north along the Private Road, then west along Kirwin Avenue to the intersection of Hurontario Street / Kirwin Avenue.

The pedestrian circulation plan is provided in **Appendix C**.

7.0 VEHICLE PARKING CONSIDERATIONS

7.1 Bill 185 Vehicle Parking Standards

As noted in **Section 4.1.1**, Bill 185 is now in effect and directly impacts the vehicle parking provisions within MTSAs across the Region of Peel. Since the site is located within the Dundas MTSA, there are effectively no minimum vehicle parking requirements (as per subject municipal Zoning By-law regulations) that apply to the proposed development for all uses.

7.2 Zoning By-law Vehicle Parking Standards

As noted in **Section 4.1.1** and **Section 7.1**, there are no minimum vehicle parking requirements in effect for the proposed development, and therefore, the current Zoning By-law standards no longer apply based on the site's location within the Dundas MTSA. Notwithstanding the foregoing, application of the current Zoning By-law requirements (Precinct 1) to the proposed development are outlined in **Table 4** for reference.

It is noted that the proposed development contemplates a range of non-residential uses. For the purposes of this TIS and the associated parking requirements, the non-residential land use was considered to be retail.

Table 4 Zoning By-law 0225-2007 (Precinct 1) Minimum Vehicle Parking Requirements

Land Use	Units[1]/GFA[1]/Threshold	Minimum Rate	Minimum Requirement[2]
Resident (Condo)			
Total Units	1,691 units	0.80 spaces/unit	1,352 spaces
Non-resident			
Resident Visitor	1,691 units	0.20 spaces/unit	338 spaces
Retail[3]	1,222 m^2	3.00 spaces/100 m^2	36 spaces
Non-resident Subtotal (Before Sharing Arrangement)			374 spaces
Non-resident Subtotal (After Sharing Arrangement)[4]			338 spaces
Non-resident Subtotal			*338 spaces*
Total Vehicle Parking Requirement[5]			**1,690 spaces**
Accessible Parking Requirement[2]			
Non-resident	201 - 1,000 spaces	2 + 2% of required spaces	9 spaces (4 Type A and 5 Type B)
Electric Vehicle (EV) Ready Parking Requirement[6]			
Resident	-	20% of required spaces or 1 space, whichever is greater	270 spaces
Non-resident	-	10% of required spaces or 1 space, whichever is greater	34 spaces

Notes:

1. Based on site plan prepared by 3XN Architects on September 13, 2024.
2. Parking calculations are rounded to the nearest whole number, except accessible parking, which is rounded up to the nearest whole number.
3. The proposed development contemplates a range of non-residential land uses. For the purposes of this TIS and the associated parking requirements, the non-residential land use was considered to be retail.
4. Sharing arrangement for non-residential uses as per Zoning By-law 0225-2007 Section 3.1.2.1.3 are based on the greater of: a) 0.15 visitor spaces per unit, or b) parking required for all non-residential uses located in the same building or same lot as the residential use, excluding banquet hall/conference centre/convention centre, entertainment, overnight establishment, place of worship, recreational establishment, restaurant.
5. Parking spaces provided for persons with disabilities and for EV ready parking spaces shall be included in the total number of required parking spaces, as per Zoning By-law 0225-2007 Section 3.1.1.1.2.
6. EV ready parking spaces shall only be required for new buildings, or portions thereof (greater than three additional residential units) effective June 8, 2023, as per Zoning By-law 0225-2007 Sections 3.1.1.12.2 and 3.1.1.12.4.

Application of Zoning By-law 0225-2007 (Precinct 1) vehicle parking standards to the proposed development results in a minimum requirement of 1,690 parking spaces, including 1,352 resident spaces and 338 shared non-resident spaces.

As per Zoning By-law 0225-2007 Section 3.1.1.4.4, a parking space shall provide a minimum width of 2.6 metres and a minimum length of 5.1 metres, exclusive of any aisle or driveway. A minimum width of 2.9 metres is required on both side(s) where the parking space abuts a building or structure that extends more than 1.0 metres into the front and/or rear of the parking space.

7.2.1 Accessible Parking Requirement

Application of Zoning By-law 0225-2007 accessible parking standards to the proposed development results in a minimum requirement of 9 accessible spaces, including 4 Type A and 5 Type B spaces.

As per Zoning By-law 0225-2007 Section 3.1.1.4.5, accessible parking spaces are to be provided in two sizes and maintain a 1.5-metre-wide access aisle abutting the entire length of each parking space:

- "Type A" accessible parking spaces shall have an unobstructed rectangular area with a minimum width of 3.4 metres and a minimum length of 5.2 metres.
- "Type B" accessible parking spaces shall have an unobstructed rectangular area with a minimum width of 2.4 metres and a minimum length of 5.2 metres.

7.2.2 EV Ready Parking Requirement

Application of Zoning By-law 0225-2006 EV ready parking standards to the proposed development results in a minimum requirement of 270 resident EV ready spaces and 34 non-resident EV ready spaces.

7.3 Proposed Vehicle Parking Supply

The architectural plans illustrate a total parking supply of 802 vehicle parking spaces, which provides 590 for residents, 170 for visitors / retail and 43 car-share parking spaces. Studies have suggested that a car-share service can reduce the parking requirement by 4-8 parking spaces per car-share vehicle. Conversely, the 43 car-share adds an effective parking supply of 172 - 344 spaces. Accounting for car-share in this way, the total effective resident parking supply is proposed to be 761 - 933 vehicle parking spaces which results in a resident parking supply ratio of 0.45 - 0.55 spaces / unit.

The vehicle parking spaces will be distributed across the three proposed underground parking garage levels. Access to the underground garage will be via two ramps, one within Tower 2 and one within Tower 3.

Table 5 outlines the proposed vehicle parking supply as part of this development.

Table 5 Proposed Vehicle Parking

Use	Units	Parking Spaces	Parking Rate
Non-Resident	1,691	170	0.10 sps / unit
Resident (with Car-Share)		589 (761 - 933)	0.35 sps / unit (0.45 - 0.55 sps /unit)
Car-Share (effective supply)		43 (172 – 344)	--
Total Development (with car-share)		**802 (931 - 1,103)**	**0.47 sps / unit (0.55 - 0.65 sps / unit)**

Notes:
1. Based on site plan prepared by 3XN Architects on September 13, 2024.

7.4 Appropriateness of the Proposed Vehicle Parking Standards and Supply

7.4.1 Royal Assent of "Cutting Red Tape to Build More Homes Act, 2024" (Bill 185)

As mentioned in **Section 4.1.1** and **Section 7.1**, Bill 185 limits the ability for municipal policies (i.e., Official Plans and Zoning By-laws) to require an owner to provide or maintain vehicle parking facilities (other than bicycle parking) within Protected Major Transit Station Areas (PMTSAs) and other prescribed areas around transit stations that are designated for higher density. The rationale behind this change is that lands within a PMTSA have a higher level of transit service which is the case given the site context as discussed below.

7.4.2 Reduced Residential Parking Requirements along the Hurontario LRT

Although the City of Mississauga recently undertook a Parking Regulations Study in 2021 and enacted a Zoning By-law Amendment in 2022 to reduce vehicle parking requirements citywide for most uses, the site is in a key location in which makes it a strong candidate for a substantial parking reduction, due to its proximity to a series of existing and planned higher-order transit services. It has been raised and contemplated by city staff to emphasize the true meaning of transit-oriented development and its relative impact on minimum vehicle parking requirements.

During a City Council meeting held on June 28, 2023, the Ward 7 (Cooksville) Councillor made a motion for staff to report back on the feasibility of reducing the vehicle parking requirement in parking precincts that are or will be served by the Hurontario LRT, including investigating an elimination of minimum parking requirements for resident land uses by September 30, 2023. Most councillors supported the motion to further study the feasibility of eliminating parking minimums.

Following this more recently, a Planning and Development Committee meeting was held on April 8, 2024, in request for a public meeting and recommendation report regarding reduced minimum residential vehicle parking requirements along the Hurontario LRT. The Commissioner of Planning and Building prepared a report entitled, "*Zoning By-law Amendment to Reduce Residential Parking Requirements along the Hazel McCallion Line*" dated March 20, 2024, with recommendations for the proposal to be considered in a public meeting and brought forward to City Council.

As part of the proposed Zoning By-law Amendment, it has been recommended that the minimum resident parking requirement for apartments (including condominium and rental dwelling types) be reduced to 0.50 spaces per unit and the visitor parking requirement be 0.15 spaces per unit along the Hurontario LRT, between the Queen Elizabeth Way to the south and the Brampton border to the north (known as proposed "Parking Precinct 1a"). It is further recommended that the resident parking reduction also be applied to public authority and non-profit housing providers (i.e., further reduced by half the Zoning By-law parking requirement rate). Extensive analysis and evaluation criteria have been provided within the Corporate Report at the time of the meeting held.

As a result, the Mississauga Planning and Development Committee unanimously approved the staff report in request for reduced vehicle parking requirements for new developments within Parking Precinct 1a.

At this time, it is not known if or when a Zoning By-law Amendment will be brought before Council to implement these changes. Notwithstanding the implications of Bill 185, the proposed resident parking supply with the transportation demand management plan and extensive car-share availability, the effective resident parking supply falls within the range of the 0.50 spaces per unit adopted by the Committee.

7.4.3 Provincial and Local Policies

As previously discussed in **Section 4.0**, Mississauga's transportation policy and planning regime is evolving such that it actively responds to the changing transportation needs of the City. Specifically, current policies and initiatives better reflect and prioritize the mobility and experience of people with less emphasis on the efficiency of car movement. Common themes across relevant transportation-related policies to the site area include:

Planning transit from a network perspective.
Public transit is being transformed to achieve an interconnected network of transit service. Planning and funding efforts are being undertaken on different scales (locally and regionally) to achieve this vision.

Designing streets and public realm for people.
While the efficient movement of automobiles has previously been the focus in transportation planning, this is no longer true. The enjoyment, safety, and efficiency of the pedestrian realm has become the new focus of mobility planning in the City of Mississauga, especially along corridors such as Hurontario Street.

Connecting and expanding active transportation infrastructure.
The City has been undertaking a greater expansion of cycling infrastructure through the Cycling Master Plan. The Plan aims to connect the gaps in the existing network of off-street multi-use paths and bicycle lanes, spanning across different neighbourhoods of the City. The Plan seeks to establish major corridors and expand the amount of cycling infrastructure.

Reducing parking in transit-accessible areas.
Support for public transit and active transportation facilities and usage has increased with the decreasing need / demand for excessive parking. Existing and new provincial and local plans have recognized the need to establish appropriate parking standards in response to the transportation advancements occurring in transit-focused areas, as well as the increasing number of rezoning and minor variance applications requested for new developments.

The proposed development and the design of its transportation components support these policy objectives including the concept of a 15-minute city and leverage the substantial transit investments made by the City, particularly along Hurontario Street and Dundas Street West. The availability of non-auto modes of travel with access to LRT, MiWay bus, GO train, provision of bike parking, and future cycling facilities allows for a critical level of density that supports non-residential uses and a range and mix of housing opportunities. This accommodates future residents of Downtown Cooksville with a range of household sizes, life stages, and lifestyle preferences.

7.4.4 Comprehensive TDM Plan

As discussed in detail in **Section 6.0**, a TDM Plan for the site is proposed to guide the provision of viable alterative personal transportation options beyond the single-occupant, private automobile. The objective is to encourage the use of active and sustainable transportation modes, respond to the mobility needs of site residents, employees, and patrons, and reduce dependence on automobiles.

The future site context provides frequent, public transit services and improved pedestrian and cycling connectivity. The TDM Plan supplements and further leverages the physical infrastructure and attributes of the site area with a goal of reducing or minimizing auto-mode share. The proposed TDM strategies considered for the site include but are not limited to the following: provision of a reduced parking supply, provision of car-share spaces, provision of ample bicycle parking, unbundling of units and parking spaces, provision of PRESTO card passes, provision of mixed uses on site, and promotional materials for transit services and bicycle events near the site.

This TDM Plan will be sufficiently developed at the time of sale for the units to ensure that buyers understand the alternative modes of transportation that are available to them and supported by the development to limit the number of parking spaces purchased.

It is noted that the mix of uses being proposed (e.g., residential and retail) will support the proposed parking supply for residents through shorter trips (achieving a walkable 15-minute city) and increased dependency on affordable transportation options, such as public transit.

7.4.5 Enhanced Transit

As previously discussed in **Section 5.2**, the Hazel McCallion LRT, also known as the Hurontario LRT, will provide 18km of higher-order transit along Hurontario Street between Port Credit and Brampton. It will bring high quality and high frequency transit service to the Downtown Cooksville area, including the subject site. In addition, this LRT line will provide direct links to various other transit services, including GO Metrolinx (e.g. Port Credit station and Square One bus), the Mississauga Transitway, and key MiWay and Brampton Transit routes. The nearest LRT station to the subject site is located at the existing Cooksville Station, which is approximately 350m from the site. The LRT line is anticipated to be completed by the fall of 2024.

In addition to the Hurontario LRT, there are several transit improvement projects in Mississauga, including:

- Improvement of GO transit services (e.g., Cooksville and Port Credit stations);
- Development of Dundas Street BRT (i.e., Dundas Connects Master Plan);
- More service outside of weekday rush hours; and
- More express routes between key destinations and improved connectivity.

The above noted transit improvement projects will increase the transit mode share in Mississauga and will assist in encouraging the use of alternative modes of transportation for residents and visitors to the subject site. Once the future transit improvement projects are completed, transit access to / from the site is set to improve greatly, which will make traveling via transit a more viable option for future residents of and visitors to the subject site. With the reliability and viability of transit increasing, the need for car ownership will decrease, which will result in a lower future parking demand for the subject site. This will help to support the lower parking ratio proposed as part of the subject development.

8.0 BICYCLE PARKING CONSIDERATIONS

8.1 Zoning By-law Bicycle Parking Requirements

The site is subject to City of Mississauga Zoning By-law 0225-2007 general bicycle parking standards. The bicycle parking requirements for the overall Site are provided in **Table 6**.

Table 6 Zoning By-law 0225-2007 Minimum Bicycle Parking Requirements

Land Use	Units/GFA[1]	Minimum Rate	Minimum Requirement	
			Class A	Class B
Resident				
Residential	1,691 units	Class A: 0.60 spaces / unit Class B: 0.05 spaces / unit	1,015 spaces	85 spaces
Non-resident				
Retail	1,222 m^2	Class A: 0.15 spaces / 100 m^2 GFA Class B: 0.20 spaces / 100 m^2 GFA	2 spaces	3 spaces
Subtotal			*1,017 spaces*	*88 spaces*
Total Bicycle Parking Requirement			**1,105 spaces**	

Notes:
1. Based on site plan prepared by 3XN Architects on September 13, 2024.

Application of Zoning By-law 0225-2007 bicycle standards to the proposed development results in a minimum requirement of 1,105 bicycle spaces, including 1,017 Class A spaces and 88 Class B spaces.

As per the City of Mississauga's Zoning By-law 0225-2007, bicycle parking spaces are to be provided as two types and are defined as:

- Class A: an indoor bicycle parking space in an enclosed area with controlled access
- Class B: an outdoor bicycle parking in a publicly accessible location

As per Zoning By-law 0225-2007 Section 3.1.6.3, bicycle parking is to be provided in either of the following sizes:

1. Minimum length of 1.8 meters, a minimum width of 0.6 metres, and a minimum vertical clearance from the ground of 1.9 metres; or,
2. Minimum clearance from the wall of 1.2 metres, minimum width of 0.6 metres, and a minimum vertical clearance from the ground of 1.9 metres (reduced to 1.2 metres for stacked bicycle parking spaces).

8.2 Proposed Bicycle Parking Supply

The architectural plans illustrate a total of 1,126 total bicycle spaces on-site, including 1,029 Class A bicycle parking spaces and 97 Class B bicycle spaces.

Bicycle parking access will be provided via driveways off the new public roads. All Class B spaces will be distributed throughout the site at-grade for visitors, while all Class A spaces will be provided within underground parking garage for residents.

Further, it is noted that all the bicycle parking spaces will be provided with a width of approximately 0.50 metres, which is slightly deficient from the minimum zoning by-law requirement of 0.60 metres, as specified in **Section 8.1**. It is anticipated that the proposed bicycle parking width reduction is considered modest and standard practice in the Greater Toronto Area. As such, the proposed bicycle parking space dimensions remain appropriate for the development.

Notwithstanding the minor adjustment to the bicycle parking space width, the proposed bicycle supply and arrangements are considered appropriate for the site given the multi-modal goals and objectives of reducing peak hour single occupant private vehicle travel.

9.0 LOADING CONSIDERATIONS

9.1 Zoning By-law Loading Requirements

The site is subject to City of Mississauga Zoning By-law 0225-2007 general loading standards. The loading requirements, per Building, are provided in **Table 7**.

Table 7 Zoning By-law 0225-2007 Minimum Loading Requirements

Building	Land Use	Units/GFA[1]	Threshold	Minimum Requirement
1	Resident	461 units	30 or more units	1 space
	Retail[2]	918 m^2	250 - 2,350 m^2	1 space
2	Resident	488 units	30 or more units	1 space
	Retail[2]	304 m^2	250 - 2,350 m^2	1 space
3	Resident	417 units	30 or more units	1 space
4	Resident	325 units	30 or more units	1 space
Total Loading Requirement				**6 spaces**

Notes:
1. Based on site plan prepared by 3XN Architects on September 13, 2024.
2. Loading requirement based upon uses other than office and/or medical office uses, as per Zoning By-law 0225-2007 Section 3.1.4.3.

Application of Zoning By-law 0225-2007 loading standards to the proposed development results in a minimum requirement of 6 loading spaces.

As per Zoning By-law 0225-2006 Section 3.1.4.4, a loading space shall have an unobstructed rectangular area with a minimum width of 3.5 metres and a minimum length of 9.0 metres.

9.2 Proposed Loading Supply

The architectural plans illustrate a total of 6 loading spaces at-grade. Vehicular access provided off the Private Road (serving at-grade loading spaces via driveway).

Tower 1 will feature a single dedicated loading space that will service both retail and residential moving needs. Towers 2 and 3 will each have two loading spaces; however, one of these spaces in each tower will be allocated for waste management. This arrangement allows for the consolidation of garbage collection within Towers 2 and 3, ensuring a streamlined waste management process. Towers 1 and 4, which each only have one loading space, will primarily serve retail operations and residential uses. All loading spaces across all towers are located at-grade.

As such, the loading provisions for the current proposal will meet the servicing needs of the overall site in a way that minimizes the amount of ground floor GFA set aside for loading activity.

10.0 PICK-UP / DROP-OFF CONSIDERATIONS

The emergence and convenience of auto-based shared mobility services, including car-share, taxi, and ride-hailing services (e.g., Uber and Lyft), and general carpooling, have grown in recent years and are being used as an increasingly suitable alternative for private vehicle ownership or single-occupancy vehicle travel. Furthermore, increased use in auto-based shared mobility services is often being observed in central, higher-density, and intensification areas of urban cities, including the City of Mississauga (e.g., along several major intersections and corridors with frequent heavy traffic). Based on the foregoing, pick-up / drop-off spaces, in the form of laybys and on-street spaces, are proposed within the new Private Road.

Within the site, lay-bys are proposed along both sides of the proposed Private Road to serve Tower 4 (on the east side), and Tower 3 (on the west side). A lay-by on the north side of the Municipal Road / Street C provides pick-up / drop-off spaces for Tower 2. The Private Road also provides access to a pick-up / drop-off courtyard that serves Tower 1. These pick-up / drop-off spaces will serve as efficient short-term parking facilities for day-to-day activities associated with each new Tower (i.e., pizza delivery, passenger or retail-related pick-up / drop-off, and ride-sharing services). These spaces will be provided upon full completion of the Private Road.

As such, a total capacity of approximately 10 short-term pick-up / drop-off spaces are planned to meet the anticipated short-term parking demands of the proposed development. The locations of the layby spaces are illustrated in **Figure 2** and **Appendix B**.

The current pick-up / drop-off strategy is generally appropriate for the site and will operate safely to accommodate short-term parking activity for the proposed uses.

11.0 FUNCTIONAL ROAD PLAN

11.1 East-West Municipal Road

As per the City's Official Plan and in discussions with the City, staff identified the desire to see a new east-west Municipal Road as part of the proposed development which would connect to Hurontario Street and Jaguar Valley Drive. This road will serve as an additional connection for those destined to Hurontario Street from the Downtown Cooksville neighbourhood as well as create a more permeable roadway network which will improve the overall pedestrian and cycling network.

To satisfy this request, the site plan now identifies a 14.2 metre ROW along the south edge of the property. This ROW will allow for a 6.6 metre pavement width (one 3.3 metre travel lane in each direction), 5.6 metre boulevard on the north side (including a 2.2 metre sidewalk) and 1.5 metre boulevard on the south side for grading purposes. When the commercial property to the south develops, it is expected that they would make up the remaining boulevard including sidewalk on the south side of the Municipal Road. The provision of 14.2 metres or approximately 81% of the future Municipal Road ROW allows for a fully functional road, even in the interim condition, without unnecessarily burdening the proposed development with the entirety of the lands required.

The site does not have frontage on Jaguar Valley Drive. Consequently, in the interim, the Municipal Road will terminate as a dead-end at the east edge of the property. To facilitate a turnaround for City vehicles including snowplows, a custom-designed turnaround facility (notch) has been provided. This turnaround facility allows for the development of an efficient and urban built form that is compatible with both the interim and ultimate road condition. It is expected that when the properties immediately east of the site fronting onto Jaguar Valley Drive redevelop, the Municipal Road will be extended to Jaguar Valley Drive. Under both the ultimate and interim condition, the roadway will provide access to the north-south Private Road.

It should be noted that the commercial property to the south has a driveway at its northerly edge adjacent to the proposed development site. To satisfy the City's request to provide the new Municipal Road at the location shown, this will require the closure of the south commercial property northerly driveway in order to avoid a side-by-each driveway condition. The commercial property to the south will continue to have a driveway to Hurontario Street and means of providing alternative access such as a potential connection to the Municipal Road will be explored.

The functional road plans for the interim and ultimate condition are illustrated in **Appendix E**.

11.2 North-South Private Road

As part of the revised proposal, a new north-south Private Road is provided to serve the new buildings on-site as well as the two properties located in the southeast quadrant of the Hurontario Street / Kirwin Avenue intersection. This road will serve as a connection for those destined to / from the site as well as create a more permeable roadway network between the Municipal Road and Kirwin Avenue which will improve the overall pedestrian and cycling network. The road configuration is proposed to include a 6.6 metre driveway, including two 3.3 metre travel lanes (one lane per direction), lay-by parking, sidewalks and landscaping.

The functional road plans for the private road are illustrated in **Appendix E**.

12.0 SITE ACCESS REVIEW

12.1 TAC Guideline Review

The specific design of the site driveways were reviewed against the *TAC Geometric Design Guide for Canadian Roads, June 2017,* (the "TAC Guide") guidelines based upon the following elements:

- Driveway corner clearance;
- Driveway spacing from adjacent driveways;
- Driveway width;
- Driveway clear throat length; and
- Driveway curb radii.

Drawings illustrating the Site driveway dimensions referenced in the subsequent sections, sight distance measurements demonstrating that adequate sightlines are provided, and relevant TAC references are provided in **Appendix F.**

The TAC driveway requirements are summarized in **Table 8.**

Table 8 Site Access Review Summary

TAC Measure	Guideline	Intersection Driveway Value	
		Private Road / Kirwin Road	Private Road / Municipal Road
Driveway corner clearances[1]	15.0 metres	78.0 metres (east) 63.0 metres (west)	96.5 metres (west)
Driveway spacing[2]	3.0 metres	N/A	N/A
Driveway widths[3]	2.0 - 7.3 metres	6.6 metres	6.6 metres
Driveway clear throat length[4]	25 metres	25.0 metres	10.7 metres
Driveway right turn curb radius[5]	3.0 - 4.5 metres	6.0 metres (east) 6.0 metres (west)	7.5 metres (west)

Notes:
1. TAC Geometric Design Guide for Canadian Roads, June 2017, Figure 8.8.2
2. TAC Geometric Design Guide for Canadian Roads, June 2017, Figure 8.9.2
3. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.1
4. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.3
5. TAC Geometric Design Guide for Canadian Roads, June 2017, Table 8.9.1

Private Road / Kirwin Road Driveway

The driveway corner clearance length, spacing length, clear throat length, and driveway width meet the suggested dimensions in the TAC Guide for this access. Notably, the driveway curb radii are slightly larger than the suggested design standard for residential driveways identified in the TAC Guide. This acknowledges that adjusted curb radii are suitable where larger vehicles are anticipated to appropriately accommodate loading activity on-site. The proposed curb radii as a result of the loading manoeuvres analyzed for this access are illustrated in **Appendix D**. It is noted that there are two offset driveways located in close proximity on the north side of Kirwin Avenue. In discussions with the City, staff have identified the importance of locating the north-south Private Road in a location that provides access to the two properties located in the southeast quadrant of the Hurontario Street / Kirwin Avenue. The most effective way to do this is locate the north-south Private Road adjacent to these properties which effectively fixes its connection location to Kirwin Avenue.

Private Road / Municipal Road (Street C)

The driveway corner clearance length and driveway width meet the suggested dimensions in the TAC Guide for this access. Notably, the driveway curb radius is slightly larger than the suggested design standard for residential driveways identified in the TAC Guide. This acknowledges that adjusted curb radii are suitable where larger vehicles are anticipated to appropriately accommodate loading activity on-site. The proposed curb radius as a result of the loading manoeuvres analyzed for this access are illustrated in **Appendix D**. It is also acknowledged the clear throat length is less than the suggested design standard. However, this is a result of both the loading spaces and ramp to the underground parking garage needing to be located within the building footprint. Accommodating a 25-metre clear throat length would require relocation of at least the loading spaces outside of the building reducing the amount of landscaping provided and creating highly undesirable urban design and operational issues with respect to residential move-ins and waste management.

12.2 Sight Distance Review

A review of the available sight distance for the Private Road on Kirwin Avenue was completed as part of this analysis and is attached in **Appendix F**.

The sight distance east and west of the Private Road on Kirwin Avenue meets the minimum intersection sight distance requirements as identified in the TAC Guidelines for a design speed of 50km/h (65 metres and 65 metres, respectively).

Therefore, there are no issues with the sight distance for the Private Road.

13.0 MULTIMODAL TRAVEL DEMAND FORECASTING

The existing context to the site provides various opportunities for non-automobile modes of travel (i.e., cycling, walking, and transit). As part of this study, travel demand forecasts have been established for both auto-based and non-auto-based trips for the residential and non-residential land uses.

13.1 Residential Travel Demand

13.1.1 Residential Person Trip Generation

The residential multi-modal travel demand is forecasted for the site based on several person trip surveys conducted for proximate developments and the Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition). A summary of the collected trip generation data and resulting trip rate is provided in **Table 9**.

Based on the selected trip rate, the residential uses on site expect in the order of 930 and 930 two-way person trips in the weekday morning and afternoon peak hours, respectively.

Table 9 Residential Proxies and Site Generated Person Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
3504 Hurontario Street Tuesday, January 28, 2020	0.07	0.33	0.40	0.25	0.15	0.40
3515 & 3525 Kariya Drive Tuesday, January 28, 2020	0.05	0.50	0.55	0.31	0.14	0.45
ITE Land Use Code 2022 (Close to Rail Transit), Dense Multi-Use Urban	0.16	0.49	0.65	0.34	0.23	0.57
Average Rate	0.09	0.44	0.53	0.30	0.17	0.47
Selected Rate	0.05	0.50	0.55	0.35	0.20	0.55
Residential Person Site Trips [1,691 total residential units]	**85**	**845**	**930**	**590**	**340**	**930**

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per unit.
3. This information is property of BA Consulting Group Ltd. It should not be altered, abbreviated, taken out of context, or used for any purpose other than the intended purpose in connection with the 3085 Hurontario Street development application.

13.1.2 Residential Mode Splits

For the purposes of analysis, existing residential mode split data was adopted based on the 2016 Transportation Tomorrow Survey (TTS). The TTS data outputs are provided in **Appendix G**.

Given the site's proximity to the GO Station and the expected completion of Hurontario LRT, the auto mode splits for travel to and from the site are decreased by 7% to reflect a corresponding increase in the transit mode to reflect a transit mode split target of 30%. The existing and future site mode splits for the weekday morning and afternoon peak hours are summarized in **Table 10**.

Table 10 Existing and Future Mode Splits

Travel Mode	Directional Mode Splits			Difference	Future Adopted
	Inbound	Outbound	Average		
Auto Driver	50%	47%	*48%*	-5%	43%
Auto Passenger	14%	16%	*15%*	-2%	13%
Auto	**64%**	**63%**	***63%***	**-7%**	**56%**
Transit	21%	25%	*23%*	+7%	30%
Cycling	1%	1%	*1%*	--	1%
Walking	14%	11%	*13%*	--	13%
Non-Auto	**36%**	**37%**	***37%***	**+7%**	**44%**
Total	**100%**	**100%**	***100%***	**--**	**100%**

Notes:
1. Travel modes are based on home based trips within TTS zones 3723, 3724, 3862, 3867, 3871, and 3872.
2. The data presented in the table above have been filtered to only include apartment types.

The 2016 data demonstrates that a large proportion of home-based trips in the area rely on non-auto modes. Given the Site's proximity to the GO station and the presence of the future Hurontario LRT, the non-auto proportion is expected to increase. The future mode splits are applied to the external person trip generation derive multimodal trip forecasts for the residential uses on site.

It should be noted that the adopted 30% transit mode share represents a conservative, (i.e., erring on the low side) assumption. In the Hurontario / Main Street Corridor Master Plan (2010) prepared by the City of Mississauga and City of Brampton as part of the Hurontario LRT development process, it identified significantly higher transit mode shares in the 2031 base LRT case with transit mode shares in excess of 60%. If these transit mode share assumptions were carried through the analysis, it would result in substantially fewer auto trips being generated.

13.1.3 Residential Multimodal Forecasts

Residential multi-modal trip forecasts are calculated based on the external person trip generation summarized in **Section 13.1.1** and the area mode splits summarized in **Section 13.1.2**.

The forecasts are provided in **Table 11**. Of the total person trips, 400 and 400 two-way auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively. These trips will be analyzed on the area road network.

Approximately 280 transit site trips are expected during both the weekday morning and afternoon peak hours, respectively.

Table 11 Multimodal Residential Site Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**85**	**845**	**930**	**590**	**340**	**930**
Auto Driver	35	365	400	255	145	400
Auto Passenger	15	105	120	75	45	120
Transit	25	255	280	180	100	280
Cycle	0	10	10	5	5	10
Walk	10	110	120	75	45	120

Notes:
1. All site trips are rounded to the nearest five (5).

13.2 Retail Travel Demand

13.2.1 Retail Person Trip Generation

The retail multi-modal travel demand is forecasts based on person trip surveys for shopping plazas published in the ITE Trip Generation Manual (11th Edition) and a proxy retail trip generation survey. The proxy survey consisted of door counts at multiple restaurants, services such as banks or dry-cleaners, convenience stores, coffee shops, a grocery store, and general retail.

A summary of the collected trip generation data and resulting trip rate is provided in **Table 12**.

The retail uses on site expect in order of 75 and 110 two-way person trips in the weekday morning and afternoon peak hours, respectively. It is noteworthy that a portion of these total person trips will be internal to the Site (i.e., not impact the external transportation network) and will be discussed further in relation to the mode splits.

Table 12 Retail Site Person Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Proxy Survey – Shoppes on Steeles & 404						
Person Trip Rate (Thursday, June 6, 2019)	3.89	2.95	6.84	4.29	5.13	9.42
ITE Trip Surveys – Land Use Code 821 Shopping Plaza (Without Supermarket)						
Person Trip Rate (General Urban / Suburban) • AM Peak: Weekday, AM Peak Hour of Generator PM Peak: Weekday, PM Peak Hour of Generator	3.36	3.37	6.73	6.03	5.80	11.83
Person Trip Rate (Dense Multi-Use Urban) • **AM Peak:** Weekday, AM Peak Hour of Generator **PM Peak:** Weekday, PM Peak Hour of Generator	1.38	0.91	2.29	2.94	2.72	5.66
Person Trip Rate (Dense Multi-Use Urban) • AM Peak: Street Peak Data Not Available. PM Peak: Peak Hour of Adjacent Street Traffic (Hour Between 4:00 p.m. to 6:00 p.m.)	No Data Available.			3.22	3.10	6.32
Adopted Trip Rate						
Selected Rate	3.20	2.80	6.00	4.45	4.55	9.00
Retail Person Site Trips [1,222 m² total retail GFA]	40	35	75	55	55	110

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per 100 m² gross leasable area (GLA).
3. For the purposes of a conservative analysis, the gross leasable area (GLA) is assumed to be analogous to the gross floor area (GFA).
4. Since the ITE trip generation manual provides rates in trips / 1000 ft² GFA, the trip rates were converted to trips / 100 m² GFA.
5. This information is property of BA Consulting Group Ltd. It should not be altered, abbreviated, taken out of context, or used for any purpose other than the intended purpose in connection with the 3085 Hurontario Street development application.

13.2.2 Existing Retail Mode Splits

Existing market / retail mode split data were obtained from the 2016 Transportation of Tomorrow Survey (TTS). The mode splits for the weekday morning and afternoon peak hours are summarized in **Table 13**. The TTS data outputs are provided in **Appendix G**.

Table 13 Retail TTS Mode Splits

Travel Mode	Directional Mode Splits		
	Inbound	Outbound	Average
Auto Driver	60%	64%	*62%*
Auto Passenger	17%	18%	*17%*
Auto	**77%**	**82%**	***79%***
Transit	16%	11%	*14%*
Cycling	0%	0%	*0%*
Walking	7%	7%	*7%*
Non-Auto	**23%**	**18%**	***21%***
Total	**100%**	**100%**	***100%***

Notes:
1. Travel modes are based on market-based trips within TTS zones 3723, 3724, 3862, 3867, 3871, and 3872.

13.2.3 Retail Multi-modal Forecasts

Retail multi-modal trip forecasts are calculated based on the total person trip generation summarized in **Section 13.2.1** and the area mode splits summarized in **Section 13.2.2**. However, in recognizing the mixed-use nature of the proposed development, it is expected that most trips will be from the immediate surrounding area and from the residential uses located on site and so the cycling and walking trip mode splits have been increased accordingly.

The retail forecasts are summarized in **Table 14**. Approximately 10 and 20 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

Table 14 Multi-Modal Retail Site Trips

Travel Mode	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Persons / Total	**40**	**35**	**75**	**55**	**55**	**110**
Auto Driver	0	0	0	0	0	0
Auto Passenger	0	0	0	0	0	0
Transit	5	5	10	10	10	20
Cycling	5	5	10	10	10	20
Walking	30	25	55	35	35	70

Notes:
1. Retail site trips are rounded to the nearest five (5).

14.0 VEHICULAR TRAFFIC VOLUME FORECASTING

14.1 Existing Traffic Volumes

14.1.1 Recent Data Collection

On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts (TMC) for the study area intersections in October of 2021, and November of 2022. The counts were completed during the weekday morning and afternoon peak periods (the busiest hours of traffic are between 7:30 a.m. to 9:30 a.m. and 4:00 p.m. to 6:00 p.m., respectively).

14.1.2 Pre-Pandemic Volume Calibration

Given that Hurontario Street is currently undergoing construction, with several lanes closed for traffic, historical counts were required to generate the existing base volume layer along the Hurontario Street corridor. Available traffic counts were conducted during the COVID-19 pandemic, and additional counts prior to the pandemic were also obtained dated 2019 (at Hurontario Street / Dundas Street) and 2020 (at Hurontario Street / Fairview Road). The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the pre-pandemic counts, the Cooksville GO Station was under construction and not fully operational.

The counts conducted in November of 2022 were used for existing site access intersections, as well as intersections along Dundas Street East and Kirwin Avenue (east of Hurontario Street).

Traffic count information adopted as the basis for the traffic operations analysis and undertaken to assess the operation impacts of the proposed development are summarized in **Table 15**. All count data is provided in **Appendix H**.

Table 15 Traffic Data Information

Intersection	Date of Count
Signals	
Hurontario Street / John Street	Wednesday, October 13, 2021
Hurontario Street / Hillcrest Avenue / Kirwin Avenue	
Hurontario Street / Fairview Road East & West	Wednesday, January 22, 2020
Hurontario Street / Dundas Street East & West	Thursday, September 19, 2019
Kirwin Avenue / Camilla Road / Dundas Street East	Wednesday, November 9, 2022
Unsignalized / "Stop" Control	
Hurontario Street / 3085 Hurontario Street Access	Wednesday, November 9, 2022
Kirwin Avenue / 3085 Hurontario Street Access	
Jaguar Valley Drive / Kirwin Avenue	
Jaguar Valley Drive / Dundas Street East / 60 Dundas Street East	

Notes:
1. All counts were conducted during peak travel periods between 7:30 a.m. to 9:30 a.m. and 4:00 p.m to 6:00 p.m.

14.1.3 Cooksville GO Station Traffic Forecasts

The construction of the Cooksville GO Station was recently completed in September of 2020. However, given pandemic restrictions and an increase in working-from-home at the time of the October 2021 counts, travel flows to and from the GO station (including transit ridership numbers) do not represent typical conditions.

To forecast the appropriate quantity of GO-related vehicle trips under typical conditions, BA Group conducted a review of typical trip generation rates at other GO stations in similar contexts. The vehicle trip generation rates are summarized in **Table 16** below. The difference between the anticipated typical GO-related trips and the currently observed GO-related trips (in the order of 1,580 and 1,405 two-way trips in the peak hours) were then manually assigned onto the area road network based on existing travel patterns in the area.

Table 16 GO Station Vehicle Trip Rates

		AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Observed Trip Rates (Trips / Parking Supply)	Parking	0.51	0.03	0.54	0.08	0.40	0.48
	Pick-Up / Drop-Off	0.09	0.09	0.18	0.08	0.08	0.16
	Total	0.60	0.12	0.72	0.16	0.48	0.64
Cooksville GO Generated Trips (~2,500 spaces)	Parking	220	225	445	195	200	395
	Pick-Up / Drop-Off	1265	75	1340	200	990	1190
	Total	1485	300	1785	395	1190	1585
Existing Cooksville GO Trips (October 2021 Count)	Parking	45	40	85	35	30	65
	Pick-Up / Drop-Off	95	25	120	30	85	115
	Total	140	65	205	65	115	180
Additional GO Trips[2] (Assigned in this Study)	Parking	175	185	360	160	170	330
	Pick-Up / Drop-Off	1170	50	1220	170	905	1075
	Total	1345	235	1580	330	1075	1405

Notes:
1. All site trips are rounded to the nearest five (5).
2. Difference between Cooksville GO Generated Trips and Existing Cooksville GO Trips

14.1.4 Resultant Baseline Existing Traffic Volumes

The baseline traffic volumes consist of the balanced count data and the adjusted GO vehicle trips that are expected under typical conditions. All turning movement volumes were rounded to the nearest five (5) vehicles and were reviewed to ensure a general consistency in the traffic volumes on links between intersections. Where necessary, traffic volume adjustments were made to balance through traffic volumes between intersections to ensure consistency along the corridor.

The baseline existing traffic volumes for the weekday morning and afternoon peak hours are illustrated in **Figure 11**.

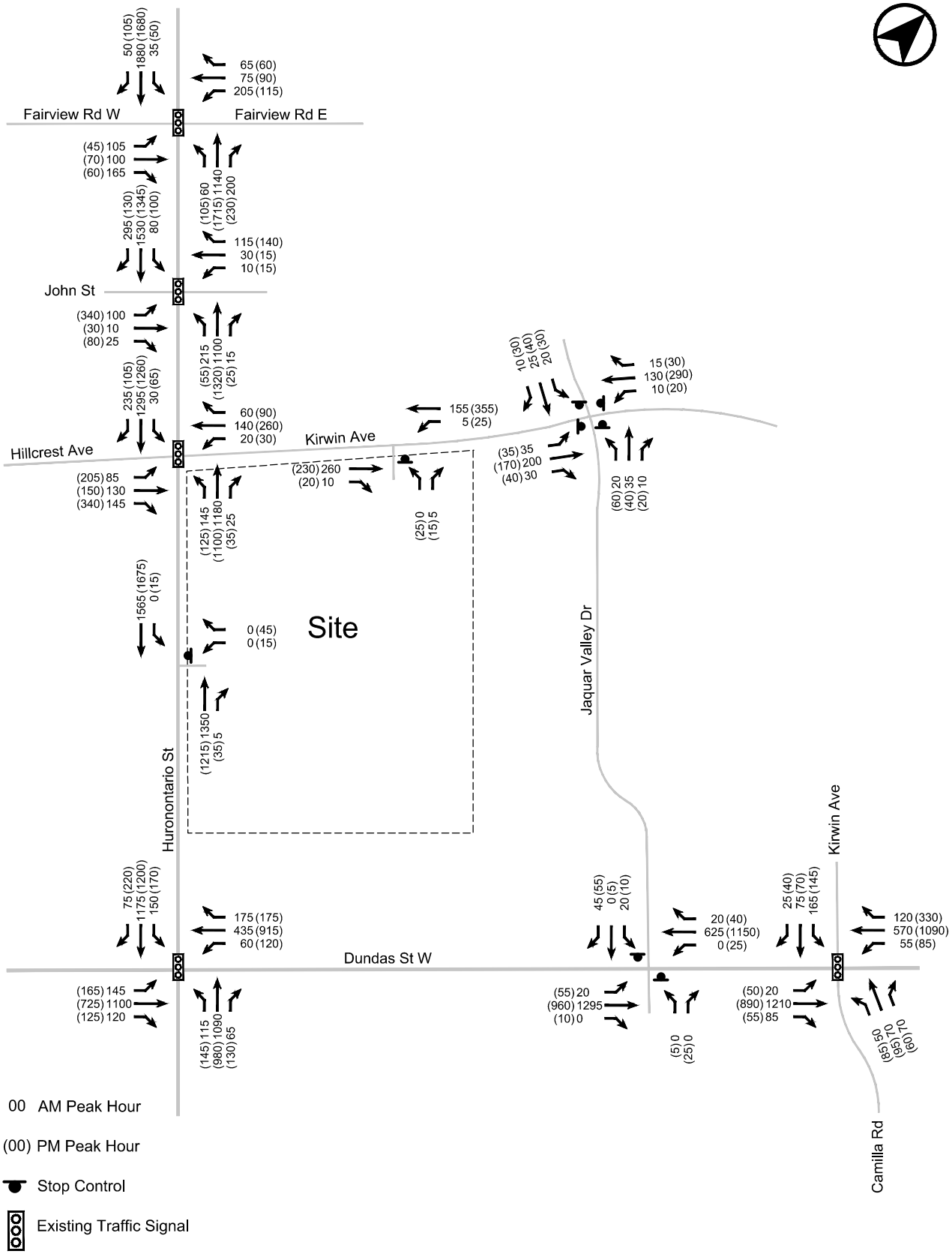

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FIGURE 11 BASELINE EXISTING TRAFFIC VOLUMES

14.2 Future Background Traffic Volumes

14.2.1 Background Development Traffic Allowances

Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

Based on current planning, there are 21 background developments planned for the area within the next five years. The total development programme for these 21 background developments includes approximately 11,246 residential units and 14,033 m^2 non-residential GFA. **Table 17** summarizes the list of background developments considered in this study.

Table 17 Background Developments List

Development	Description	Report Source	Traffic Source
1 Fairview Road East	485 residential units 270 m² retail GFA	LEA	TIS Report
600 Lolita Gardens	270 residential units	WSP	TIS Report
3575 Kaneff Crescent	282 residential units	Nextrans	TIS Report
16 Elm Drive	1,365 residential units 492 m² daycare GFA 452 m² retail GFA	Poulos & Chung	TIS Report
86-90 Dundas Street East	336 residential units 300 m² retail GFA	GHD	TIS Report
100 Dundas Street West	140 residential units	Not available	
85-95 Dundas Street West	419 residential units 385 m² retail GFA	GHD	TIS Report
2512-2532 Argyle Road	101 residential units	Nextrans	TIS Report
2444 Hurontario Street	215 residential units 3 live-work units	IBI	TIS Report
2487 Camilla Road	24 residential units	Nextrans	TIS Report
2570 Argyle Road	255 residential units	BA Group	TIS Report
3420 Hurontario Street	680 residential units 2,000 m² retail GFA	Crozier	TIS Report
3606 Hurontario Street	821 residential units 956 m² non-residential GFA	BA Group	TIS Report
45 Agnes Street	268 residential units	Not available	
71 Agnes Street	264 residential units	Not available	
185 Enfield Place (Phase 1)	366 residential units 116 m² retail GFA 121 m² office GFA	BA Group	TIS Report
60 Dundas Street East	1,224 residential units 847 m² retail GFA	Burnside	TIS Report
189 Dundas Street West	966 residential units 531 m² retail GFA	LEA	TIS Report
255 Dundas Street West	393 residential units 1,293 m² retail GFA	LEA	TIS Report
3016 Kirwin Avenue	148 residential units	LEA	TIS Report
33 Hillcrest Avenue	2,224 residential units 6,270 m² retail GFA	BA Group	TIS Report

Notes:

1. Where the TIS excerpts did not include background development traffic volumes, trip generation and distribution parameters similar to those adopted in this report were assumed.

14.2.2 Corridor Growth Calibration

Corridor growth rates provided by City of Mississauga staff are summarized in **Table 18**. The total growth rates along Hurontario Street from the current year of 2023 to the year of 2026 represent the traffic reduction resulting from the construction of the Hurontario LRT and the removal of vehicular travel lanes.

Table 18 Corridor Growth Rates

Corridor	Travel Direction	Existing 2023 to 2026		2026 to 2028	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hurontario Street	Northbound	-20.5% *in total*	-20.5% *in total*	1.0% *per annum*	0.5% *per annum*
	Southbound	-23.5% *in total*	-17.5% *in total*	0.5% *per annum*	0.5% *per annum*
Dundas Street	Eastbound	0.0% *per annum*	0.5% *per annum*	0.0% *per annum*	0.0% *per annum*
	Westbound	1.0% *per annum*	0.0% *per annum*	0.0% *per annum*	0.0% *per annum*

Corridor volumes along Hurontario Street and Dundas Street at the 2028 horizon year were calibrated to the anticipated growth rates above.

14.2.3 Adjustments for Future Road Network

Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the analysis, including, but not limited to, the following:

- The removal of one through lane in either direction along Hurontario Street for the LRT;
- Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
- Bus only-lanes at Hurontario Street / Dundas Street;
- Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
- Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
- The prohibition of northbound left turns at Hurontario Street / Dundas Street.

As drivers continue to distribute along alternative routes and corridors to avoid congestion and extensive delays, notable shifts in travel patterns in the area are expected given the significant changes to the road network.

14.2.4 Resultant Future Background Traffic Volumes

The future traffic growth is a result of the summation of background development traffic allowances, the calibrated corridor growth trends, and the total traffic volume redistribution as a result of future network changes on the area road network.

Future background traffic volumes, comprising the established baseline existing traffic volumes growth and future traffic growth, are illustrated in **Figure 12**.

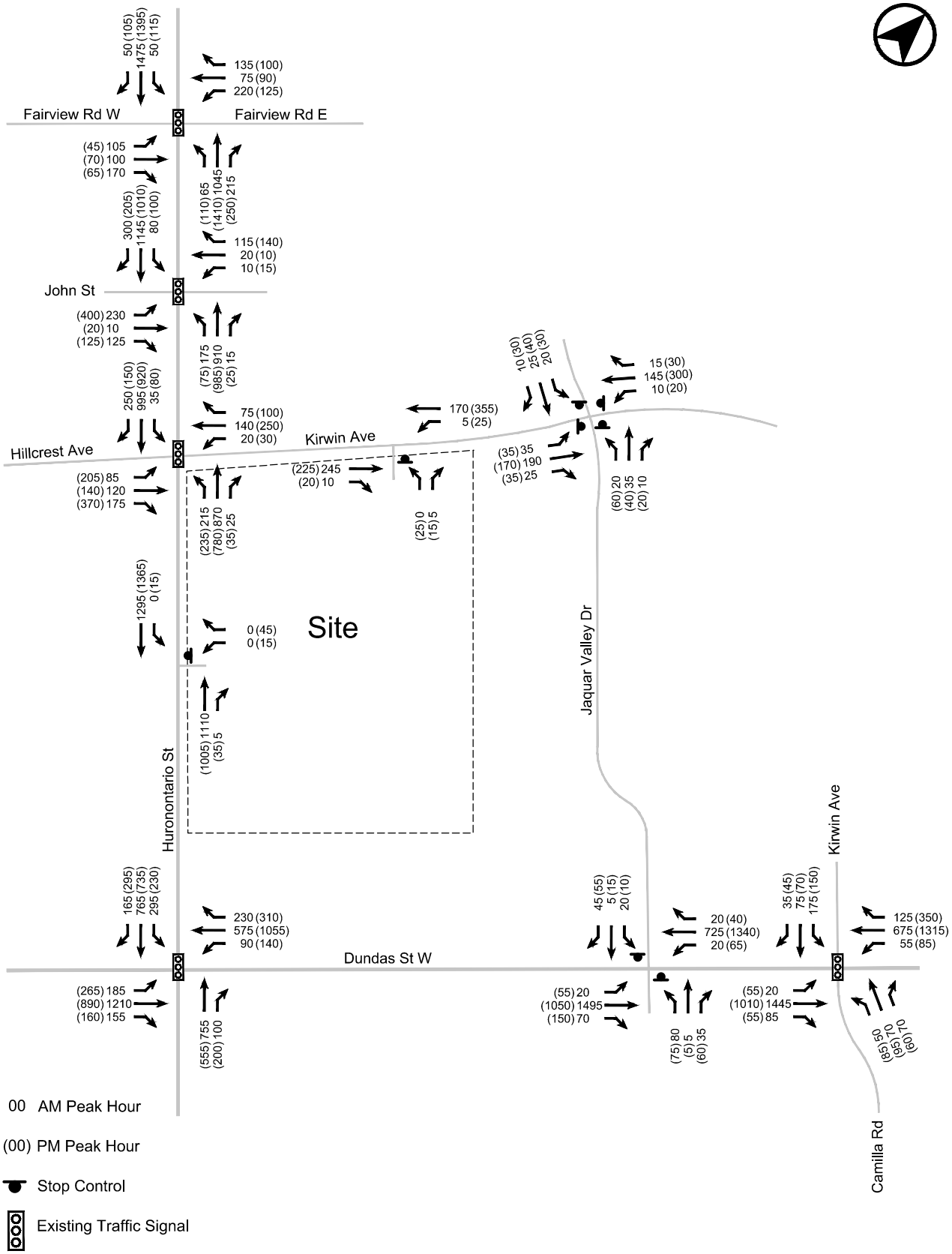

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FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES (2028 HORIZON YEAR)

14.3 Site Traffic Volumes

14.3.1 Existing Site Traffic Volumes

The existing site consists of several retail uses. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 25 and 195 existing site trips during the weekday morning and afternoon peak hours, respectively, as summarized in **Table 19**.

Table 19 Existing Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Total Existing Site Trips (To Be Removed)	**20**	**5**	**25**	**95**	**100**	**195**

Notes:
1. All site trips are rounded to the nearest five (5).

14.3.2 Total Site Traffic Volumes

As previously discussed in **Section 13.0**, the site is expected to generate 400 and 400 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively. These vehicle trips are summarized in **Table 20**.

Table 20 Total Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	35	365	400	255	145	400
Retail	0	0	0	0	0	0
Total	**35**	**365**	**400**	**255**	**145**	**400**

Notes:
1. All site trips are rounded to the nearest five (5).

14.3.3 Net New Site Traffic Volumes

Relative to existing conditions, the site redevelopment will generate an additional (or "net new") 375 and 205 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

Table 21 Net New Site Traffic Volumes

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trips (To Be Removed)	20	5	25	95	100	195
Total Site Trips	35	365	400	255	145	400
Net New Site Trips	**15**	**360**	**375**	**160**	**45**	**205**

Notes:
1. All site trips are rounded to the nearest five (5).

14.3.4 Site Trip Distribution

14.3.4.1 RESIDENTIAL TRIP DISTRIBUTION

Residential vehicle site trips were assigned onto the area road network based upon a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS) for home-based trips in the site environs. The TTS queries are provided in **Appendix G**.

The residential site traffic distribution is summarized in **Table 22**.

Table 22 Residential Site Traffic Distribution

To / From Cardinal Direction	Corridor	Inbound	Outbound
North	Hurontario Street	45%	40%
	Confederation Parkway	15%	15%
South	Hurontario Street	15%	25%
	Confederation Parkway	0%	0%
East	Dundas Street East	15%	10%
West	Hillcrest Avenue	5%	5%
	Dundas Street West	5%	5%
Total		**100%**	**100%**

Notes:
1. The studied 2016 TTS zones include 3723, 3724, 3862, 3867, 3871 and 3872.

14.3.5 Site Traffic Volume Figures

Figure 13 and **Figure 14** illustrate the total and net new site traffic volumes on the study area road network, respectively.

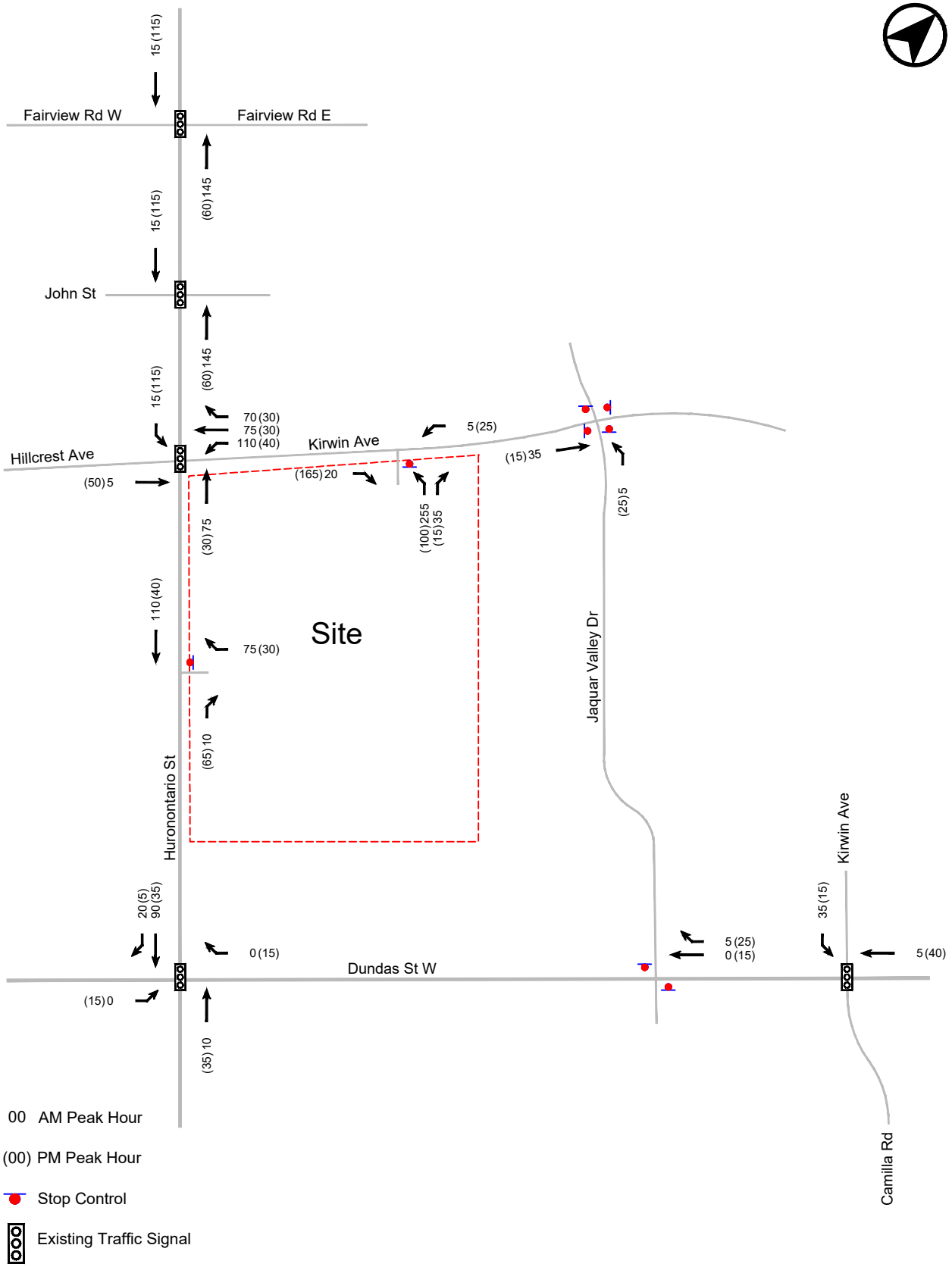


FIGURE 13 RESIDENTIAL SITE TRAFFIC VOLUMES

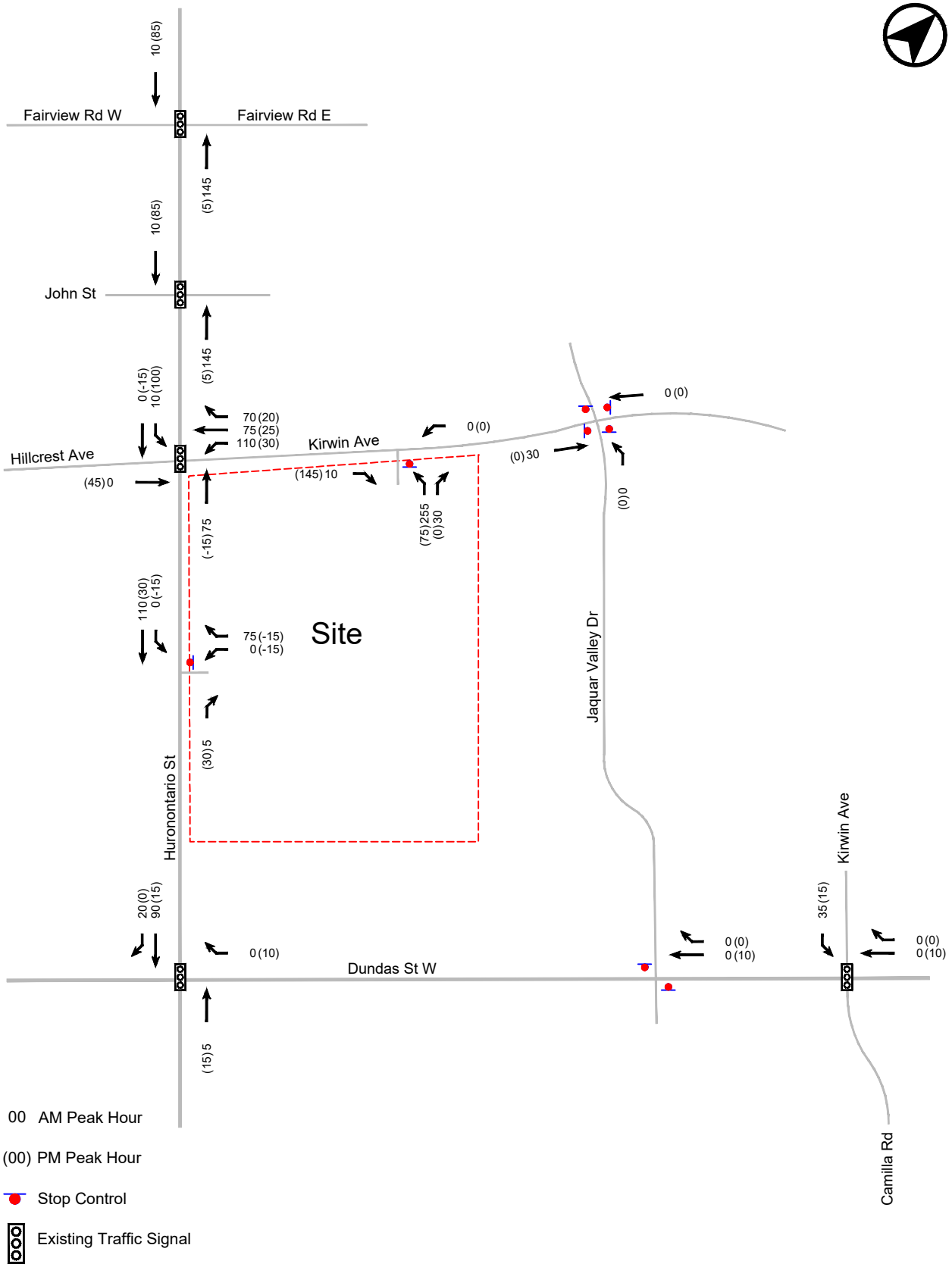


FIGURE 14 NET NEW SITE TRAFFIC VOLUMES

14.4 Future Total Traffic Volumes

Future total traffic volumes represent the summation of future background traffic volumes (**Figure 12**) and net new site traffic volumes (**Figure 14**), and are illustrated in **Figure 15**.

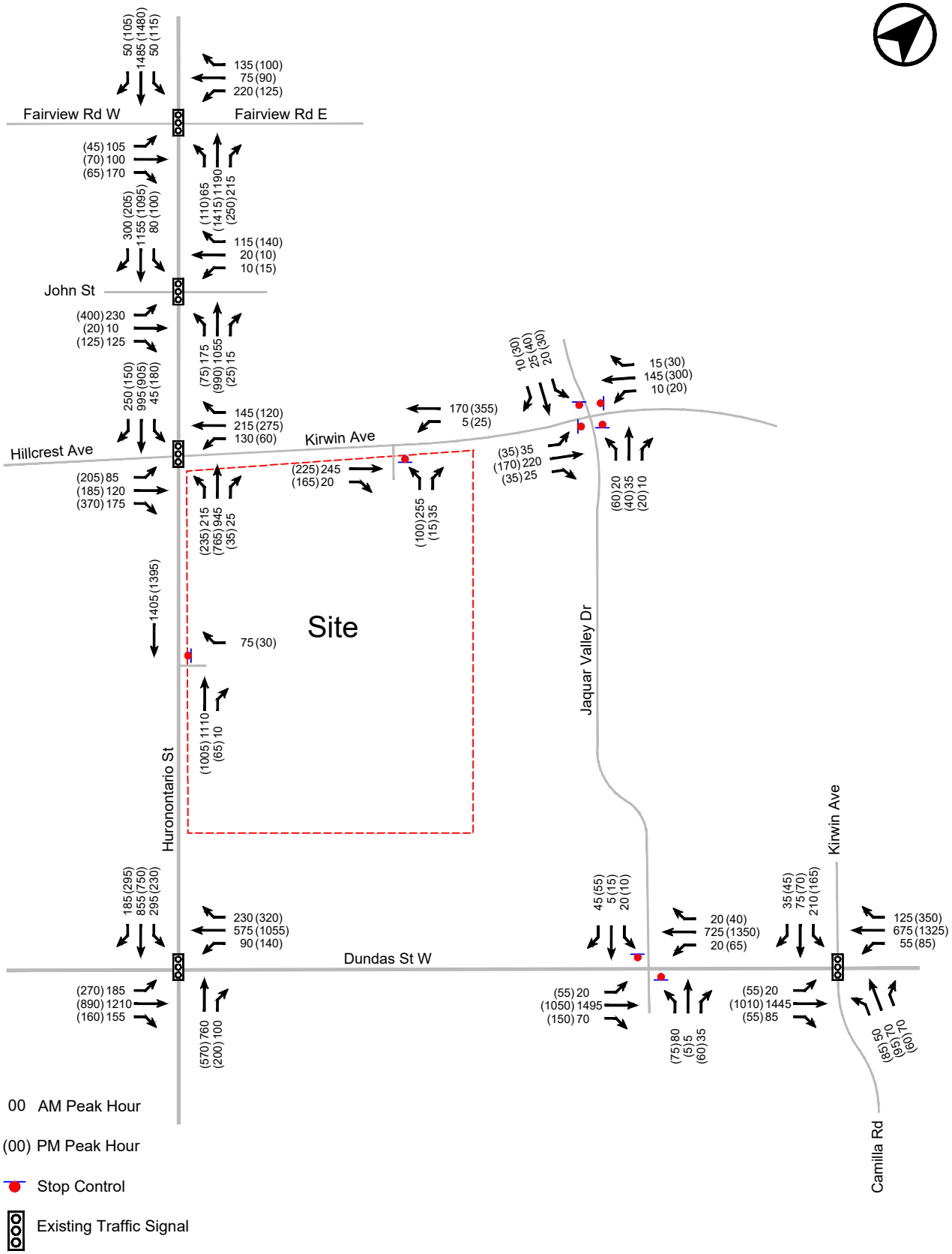


FIGURE 15 FUTURE TOTAL TRAFFIC VOLUMES (2028 HORIZON YEAR)

15.0 TRAFFIC OPERATIONS ANALYSIS

15.1 Analysis Methodology

The intersection capacity analysis was completed using Synchro Version 11.0 and the Highway Capacity Manual (HCM) methodology.

For signalized intersections, the volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for the key movements in the intersection. A v/c of 1.00 indicates that certain governing traffic movements through the intersection are operating at or near maximum capacity. The primary overall level of service (LOS) indicator is delay, both on individual movements and expressed as an average for all vehicles processed. Many busy urban intersections operate at LOS D to E, which reflects average delays in the range of 35 to 80 seconds.

For unsignalized intersections, level of service (LOS) characterizes operational conditions for key movements in terms of delay within the traffic stream. LOS A represents a good level of service with short delays. LOS F represents a poor level of service with long delays. The volume to capacity ratio (v/c) is an indicator of the capacity utilization for key movements at the intersection and resultant residual capacity potential.

The LOS criteria provided by the HCM methodology is summarized as follows:

1. Signalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 20s
    c. LOS C: 20s < Control Delay ≤ 35s
    d. LOS D: 35s < Control Delay ≤ 55s
    e. LOS E: 55s < Control Delay ≤ 80s
    f. LOS F: Control Delay > 80s

2. Unsignalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 15s
    c. LOS C: 15s < Control Delay ≤ 25s
    d. LOS D: 25s < Control Delay ≤ 35s
    e. LOS E: 35s < Control Delay ≤ 50s
    f. LOS F: Control Delay > 50s

15.2 Modelling Input and Calibration Parameters

Road Network Configuration

Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts.

Under future traffic conditions, the Synchro model adopted the network changes previously discussed in **Section 14.2.3** given the Hurontario Street LRT and the Dundas Street BRT. In the future total traffic model, with the redevelopment of the site, access configurations will also be updated based on the proposed plans.

Signal Timing Plans and Transit Signal Priority

The existing signal timing plans at the study area's signalized intersections were provided by the City of Mississauga. Input parameters such as minimum green times, cycle lengths, and pedestrian clearance times were adopted in the Synchro models. The signal timings are attached in **Appendix I**.

Any changes to these plans will be proposed as "signal timing optimization". It is noteworthy that in all future scenarios, all Hurontario Street intersections will require signal timing changes with the construction of the LRT. All northbound and southbound left turn phases were assumed to operate as protected-only phases. At Hurontario Street / Dundas Street, the eastbound and westbound left turn phases were also assumed to operate as protected-only phases given the planned BRT.

Lost Time Adjustment

For all signalized intersections in the study area, a Lost Time Adjustment (LTA) of -1.0 seconds was applied to account for vehicles traversing the intersection during amber or all-red time. This adjustment is also recommended in the City of Toronto's *Guidelines for Using Synchro 11* (dated January 15, 2021).

Protected Left Turn Factor

The protected left turn factor (LTF) in the Synchro model influences the headways between vehicles making a left turn movement on protected left turn green phases. Values closer to 1.00 represent vehicles making left turns with smaller headways.

Under future conditions, the operations of several left turn lanes are approaching capacity. Drivers modify their behaviour in near-capacity conditions and operate with reduced headways. As such, a protected LTF of 1.00 (rather than a default of 0.95) has been adopted for the left turning movements at the Hurontario Street / Dundas Street intersection in the weekday afternoon peak hour.

Peak Hour Factor (PHF)

Under existing conditions, the peak hour factors at all study area intersections are based on the collected traffic count data. Under future background and future total conditions, at the intersection of Hurontario Street / Dundas Street in the weekday afternoon peak hour, a peak hour factor of 0.99 was adopted given the planned transit priority routes traversing the intersection in the east-west and north-south travel directions. As urban intersections approach capacity, vehicle trips will begin to equalize their distribution across the different peak 15-minute periods within the peak hour. This shift would result in an increasingly even distribution of trips over the course of the peak hour as drivers make trips earlier or later to reduce delays. During the data collection process in October of 2021, the volume distribution at the Hurontario Street / Hillcrest Avenue intersection produced a peak hour factor of 0.99 during the weekday afternoon peak hour. A similar factor can therefore be expected at other study area intersections.

Other Data Inputs

Heavy vehicle percentages and pedestrian and bicycle crossing volumes were derived from existing traffic counts. However, all pedestrian crossing volumes at the study area intersections were doubled (or multiplied by a factor of 2) to account for the pandemic restrictions at the time of the counts.

Where field data was not available, default values in the Synchro models were adopted.

15.3 Analysis Scenarios

The following analysis scenarios were reviewed for the weekday morning and afternoon peak hours:

1. 2023 Baseline existing traffic conditions (as illustrated in **Figure 11**);
2. 2028 Future background traffic conditions (as illustrated in **Figure 12**);
3. 2028 Future total traffic conditions (as illustrated in **Figure 15**);

All Synchro worksheets for the scenarios are provided in **Appendix K**.

15.4 Signalized Intersection Analysis

15.4.1 Hurontario Street / Fairview Road East & West

The intersection of Hurontario Street / Fairview Road operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 23** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.88 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.92 and 0.80 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.93 and 0.80 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures, or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 23 Hurontario Street / Fairview Road East & West Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.32 (0.27)	D (E)	0.55 (0.31)	E (E)	0.55 (0.31)	E (E)
EBTR	0.49 (0.35)	D (E)	0.86 (0.35)	F (E)	0.86 (0.35)	F (E)
WBL	0.96 (0.64)	F (E)	0.98 (0.73)	F (E)	0.97 (0.73)	F (E)
WBTR	0.25 (0.46)	D (E)	0.38 (0.53)	D (E)	0.38 (0.53)	D (E)
NBL	0.49 (0.50)	C (B)	0.83 (0.52)	F (E)	0.83 (0.52)	F (E)
NBTR	0.55 (0.56)	D (B)	0.82 (0.89)	D (D)	0.91 (0.89)	D (D)
SBL	0.35 (0.54)	C (C)	0.81 (0.51)	F (E)	0.81 (0.51)	F (E)
SBTR	0.87 (0.57)	D (B)	0.97 (0.77)	D (C)	0.97 (0.81)	D (C)
Overall	**0.88 (0.59)**	**D (B)**	**0.92 (0.80)**	**D (D)**	**0.93 (0.80)**	**E (D)**

15.4.2 Hurontario Street / John Street

The intersection of Hurontario Street / John Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 24** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.54 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.77 and 0.69 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.78 and 0.71 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 24 Hurontario Street / John Street Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.39 (0.79)	D (D)	0.86 (0.86)	E (D)	0.94 (0.92)	F (E)
EBTR	0.04 (0.12)	D (C)	0.11 (0.13)	D (C)	0.11 (0.14)	D (C)
WBL	0.05 (0.08)	E (E)	0.04 (0.08)	D (E)	0.04 (0.08)	D (E)
WBTR	0.22 (0.16)	E (E)	0.12 (0.14)	D (E)	0.13 (0.14)	D (E)
NBL	0.72 (0.31)	E (B)	0.80 (0.54)	F (F)	0.79 (0.54)	F (F)
NBTR	0.41 (0.59)	A (B)	0.53 (0.72)	B (C)	0.59 (0.69)	B (C)
SBL	0.29 (0.49)	A (B)	0.62 (0.65)	F (F)	0.60 (0.65)	F (F)
SBT	0.63 (0.57)	B (C)	0.71 (0.70)	C (C)	0.69 (0.72)	B (C)
SBR	0.44 (0.18)	B (B)	0.45 (0.34)	A (B)	0.44 (0.33)	A (B)
Overall	**0.54 (0.59)**	**B (C)**	**0.77 (0.69)**	**C (D)**	**0.78 (0.71)**	**C (D)**

15.4.3 Hurontario Street / Hillcrest Ave & Kirwin Ave

The intersection of Hurontario Street / Hillcrest Avenue / Kirwin Avenue operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 25** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.51 and 0.54 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.76 and 0.66 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.79 and 0.65 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 25 Hurontario Street / Hillcrest Ave & Kirwin Ave Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.20 (0.47)	C (C)	0.29 (0.54)	D (D)	0.38 (0.57)	D (D)
EBT	0.18 (0.19)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.11 (0.38)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.19 (0.28)	D (C)	0.19 (0.31)	D (C)
WBL	0.06 (0.08)	D (D)	0.08 (0.12)	D (D)	0.48 (0.24)	D (D)
WBT	0.26 (0.45)	D (D)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	0.04 (0.09)	D (D)	-- (--)	-- (--)	-- (--)	-- (--)
WBTR	-- (--)	-- (--)	0.18 (0.31)	D (D)	0.31 (0.35)	D (D)
NBL	0.59 (0.55)	E (E)	0.95 (0.93)	F (F)	0.95 (0.93)	F (F)
NBTR	0.54 (0.55)	B (B)	0.48 (0.56)	B (C)	0.52 (0.61)	B (C)
SBL	0.16 (0.29)	C (B)	0.57 (0.54)	F (F)	0.73 (0.81)	F (F)
SBT	0.77 (0.64)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)
SBR	0.21 (0.08)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)
SBTR	-- (--)	-- (--)	0.95 (0.86)	C (C)	0.95 (0.86)	C (C)
Overall	**0.51 (0.54)**	**C (C)**	**0.72 (0.66)**	**C (D)**	**0.79 (0.65)**	**D (D)**

15.4.4 Hurontario Street / Dundas Street West & Dundas Street East

The intersection of Hurontario Street / Dundas Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 26** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.77 and 0.84 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT, Dundas BRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. All left turn advance phases were modelled with protected-only phase timings.

Under future background traffic conditions, the intersection will approach capacity in both weekday peak hours. The intersection is expected to operate with overall v/c ratios of 0.94 and 0.96 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will approach capacity in both weekday peak hours. The intersection is expected to operate with overall v/c ratios of 0.94 and 0.97 or better during the weekday morning and afternoon peak hours, respectively. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 26 Hurontario Street / Dundas Street West & Dundas Street East Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.51 (0.83)	C (E)	0.84 (0.93)	F (F)	0.84 (0.96)	F (F)
EBT	0.90 (0.56)	E (D)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.15 (0.15)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.97 (0.68)	E (D)	0.97 (0.68)	E (D)
WBL	0.45 (0.43)	E (D)	0.85 (0.64)	F (E)	0.87 (0.64)	F (E)
WBTR	0.60 (0.91)	E (E)	0.75 (0.99)	E (F)	0.75 (0.99)	E (F)
NBL	0.65 (0.83)	D (E)	-- (--)	-- (--)	-- (--)	-- (--)
NBTR	0.63 (0.61)	D (D)	0.90 (0.93)	E (F)	0.90 (0.95)	E (F)
SBL	0.72 (0.77)	E (E)	0.93 (0.99)	F (F)	0.93 (0.99)	F (F)
SBTR	0.67 (0.79)	E (E)	0.59 (0.82)	D (E)	0.66 (0.83)	D (E)
Overall	**0.77 (0.84)**	**E (E)**	**0.94 (0.96)**	**E (E)**	**0.94 (0.97)**	**E (E)**

15.4.5 Kirwin Avenue & Camilla Road / Dundas Street East

The intersection of Kirwin Avenue / Camilla Road / Dundas Street East operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 27** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.65 and 0.55 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under future background conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.86 and 0.76 or better during the weekday morning and afternoon peak hours, respectively.

Under future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.91 and 0.77 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

Table 27 Kirwin Ave & Camilla Rd / Dundas Street East Capacity Results

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.07 (0.21)	A (A)	0.09 (0.67)	B (D)	0.09 (0.76)	B (E)
EBT	0.68 (0.44)	B (A)	-- (--)	-- (--)	-- (--)	-- (--)
EBR	0.09 (0.04)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)
EBTR	-- (--)	-- (--)	0.94 (0.54)	C (B)	0.94 (0.55)	C (B)
WBL	0.50 (0.24)	D (B)	0.58 (0.29)	D (B)	0.58 (0.30)	D (B)
WBT	0.33 (0.48)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	0.09 (0.27)	B (B)	-- (--)	-- (--)	-- (--)	-- (--)
WBTR	-- (--)	-- (--)	0.46 (0.77)	C (C)	0.46 (0.79)	C (C)
NBL	0.16 (0.36)	C (D)	0.17 (0.36)	D (D)	0.19 (0.35)	D (D)
NBTR	0.20 (0.29)	C (D)	0.24 (0.28)	D (D)	0.24 (0.27)	D (D)
SBTL	0.57 (0.65)	D (E)	0.74 (0.65)	D (D)	0.85 (0.66)	E (D)
SBR	0.02 (0.03)	C (D)	0.03 (0.03)	C (D)	0.03 (0.03)	C (D)
Overall	**0.65 (0.55)**	**B (B)**	**0.86 (0.76)**	**C (C)**	**0.91 (0.77)**	**C (C)**

15.5 Unsignalized Intersection Analysis

Under future traffic conditions, all movements operate acceptably in both peak hours at levels-of-service (LOS) E or better, with the exception of the shared northbound movements at the 60 Dundas Street East Access / & Jaguar Valley Drive / Dundas Street East intersection under future conditions. The intersection's individual movements all operate at a v/c ratio below 1.0, which indicates that while vehicles along the minor approaches will experience delays, they will still be able to turn onto the major approach. A LOS of F is not uncommon for a minor street approach along an arterial road in urban conditions. No mitigation measures nor improvements are recommended. **Table 28** summarizes the results of the traffic operations analysis at the unsignalized intersections.

Table 28 Unsignalized Intersection Capacity Results

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Hurontario Street / 3085 Hurontario South Access						
WBLR	A (B)	0.0 (11.3)	-- (--)	-- (--)	-- (--)	-- (--)
WBR	-- (--)	-- (--)	A (--)	0.0 (--)	A (B)	9.8 (10.5)
WBRL	-- (--)	-- (--)	-- (B)	-- (12.7)	-- (--)	-- (--)
SBTL	-- (A)	-- (0.8)	-- (A)	-- (0.7)	-- (--)	-- (--)
3085 Hurontario North Access / Kirwin Avenue						
WBTL	A (A)	0.3 (0.7)	A (A)	0.3 (0.7)	A (A)	0.3 (0.8)
NBLR	B (B)	10.1 (13.7)	A (B)	9.9 (13.8)	C (C)	21.7 (21.0)
Jaguar Valley Dr / Kirwin Avenue						
EBTL	A (B)	9.9 (11.0)	A (B)	9.7 (11.1)	B (B)	10.3 (11.1)
EBR	A (A)	6.5 (7.2)	A (A)	6.5 (7.1)	A (A)	6.5 (7.1)
WBL	A (B)	7.7 (8.1)	A (B)	7.7 (8.1)	A (B)	7.7 (8.1)
WBTR	A (A)	8.4 (14.0)	A (A)	8.6 (14.4)	A (A)	8.7 (14.4)
NBTLR	A (B)	8.7 (10.5)	A (B)	8.7 (10.5)	A (B)	8.8 (10.5)
SBTLR	A (B)	8.7 (10.0)	A (B)	8.7 (10.1)	A (B)	8.8 (10.1)
60 Dundas St E Access & Jaguar Valley Dr / Dundas Street East						
EBL	A (B)	9.0 (12.1)	A (B)	9.2 (12.4)	A (B)	9.2 (12.3)
WBTL	-- (A)	-- (1.0)	A (A)	1.4 (3.2)	A (A)	1.4 (3.2)
NBTLR	A (B)	0.0 (14.7)	F (F)	83.1 (99.7)	F (F)	83.1 (88.7)
SBTLR	B (C)	11.2 (21.9)	C (F)	15.8 (50.2)	C (E)	15.8 (49.8)

16.0 TRANSIT TRAVEL ASSESSMENT

16.1 Area Transit Services

The site location provides a significant level of transit accessibility including services operated by MiWay and Metrolinx (GO Transit). The area transit network provides residents and visitors access to the Mississauga City Centre Transit Terminal and connections to key destinations in the Greater Toronto Area such as Toronto, Kitchener, Milton, and Brampton. Current transit mode share by area residents is in the order of 23 percent, which is expected to increase given the significant transit improvements in the proximate area.

Future transit routes available to residents and visitors of the proposed site development will include:

- MiWay Bus Route 1 Dundas / 101 Dundas Express;
- MiWay Bus Route 4 Sherway Gardens;
- MiWay Bus Route 28 Confederation;
- MiWay Bus Route 38 Creditview;
- MiWay Bus Route 53 Kennedy;
- GO Bus Route 21 Milton;
- GO Train Route *MI* Milton; and
- Hurontario Light Rail Transit (LRT)[1].

16.2 Transit Site Trip Assignment

16.2.1 Sensitivity Transit Mode Splits

Transit trips for the proposed development were projected based on the methodologies outlined in **Section 13.0**, and are summarized in **Table 29**.

Table 29 Transit Site Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	25	255	280	180	100	280
Retail	5	5	10	10	10	20
Total Transit Persons	**30**	**260**	**290**	**190**	**115**	**305**

Note
1. All site trips are rounded to the nearest five (5).

The vehicular trip generation forecasting methodology previously assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 7%, while the transit mode splits were increased by the same proportion. This ensures a likely conservative analysis of the study area intersections in the Synchro models.

However, for the purposes of the transit analysis, a sensitivity analysis with a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

[1] Assumed to replace the existing MiWay Bus Routes 2 Hurontario and 103 Hurontario Express.

16.2.2 Transit Site Trip Generation

The sensitivity transit site trip generation is summarized in **Table 30**. With the 20% mode shift, the total site anticipates 410 and 415 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

Table 30 *Sensitivity* Transit Site Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	35	365	400	255	145	400
Retail	5	5	10	5	10	15
Total Transit Persons	**40**	**370**	**410**	**260**	**155**	**415**

Notes:
1. All site trips are rounded to the nearest five (5).

16.2.3 Transit Site Trip Distribution

The distribution of transit site trips onto the surrounding area transit network is based on transit distribution data made available in the 2016 Transportation Tomorrow Survey (TTS) for each proposed land use. Note that the Hurontario LRT route was assumed to replace the 2 Hurontario and 103 Hurontario Express MiWay bus routes. Transit distribution to / from the site for the inbound and outbound directions is summarized in **Table 31**. The TTS data is presented in **Appendix G**.

Table 31 Transit Site Trip Distribution

General Route Travel Direction	Transit Route	Residential		Retail / Community		Office	
		In	Out	In	Out	In	Out
Northbound	28 Confederation	1%	4%		4%		10%
	38 Creditview	1%	3%				5%
	53 Kennedy		8%		25%		20%
	Hurontario LRT	15%	33%	2%	29%	5%	47%
Southbound	28 Confederation	9%	1%			18%	
	38 Creditview	2%		1%		4%	
	53 Kennedy	5%		32%		12%	
	Hurontario LRT	34%	17%	40%	3%	46%	
Eastbound	1 Dundas / 101 Dundas Express	3%	8%	18%			6%
	4 Sherway Gardens	1%		1%			
	21 Milton					2%	
	MI Milton		22%		4%	5%	6%
Westbound	1 Dundas / 101 Dundas Express	8%	3%	4%	27%	4%	
	4 Sherway Gardens				6%		
	21 Milton		1%				
	MI Milton	21%		2%	2%	4%	6%
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Notes:
1. All percentages are rounded to the nearest whole percentage value.

The resultant transit site trips onto each transit route are subsequently derived and summarized in **Table 32**.

Table 32 Transit Route Assignment

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	15	15	3	6	9
	38 Creditview	0	11	11	3	4	7
	53 Kennedy	0	30	30	0	15	15
	Hurontario LRT	6	122	128	37	51	88
Southbound	28 Confederation	3	4	7	23	1	24
	38 Creditview	1	0	1	5	0	5
	53 Kennedy	4	0	4	15	0	15
	Hurontario LRT	14	63	77	88	25	113
Eastbound	1 Dundas / 101 Dundas Express	2	29	31	9	12	21
	4 Sherway Gardens	0	0	0	3	0	3
	21 Milton	0	0	0	0	0	0
	MI Milton	0	80	80	0	32	32
Westbound	1 Dundas / 101 Dundas Express	3	12	15	20	7	27
	4 Sherway Gardens	0	0	0	0	1	1
	21 Milton	0	4	4	0	1	1
	MI Milton	7	0	7	54	0	54
Total		**30**	**40**	**370**	**410**	**260**	**155**

16.3 Transit Capacity Review

Existing transit service frequencies for transit routes passing through the Cooksville GO station are summarized in **Table 33** below.

Table 33 Transit Service Frequencies

Service Owner	Route Number	Approximate Headways[1]	Number of Vehicles Per Peak Hour
MiWay	28 Confederation	15 minutes	4 vehicles per hour
	38 Creditview	30 minutes	2 vehicles per hour
	53 Kennedy	15 minutes	4 vehicles per hour
	4 Sherway Gardens	30 minutes	2 vehicles per hour
	1 Dundas	15 minutes	4 vehicles per hour
	101 Dundas Express	15 minutes	4 vehicles per hour
Metrolinx	Hurontario LRT	Assumed 10 minutes	6 vehicles per hour
	21 Milton (GO Bus)	30 minutes	2 vehicles per hour
	MI Milton (GO Train)	30 minutes	2 vehicles per hour

Notes:
1. All frequencies are based on the available headways outlined in **Section 5.2**

Based on these frequencies, the site-related transit trips per vehicle were calculated for the peak hours and summarized in **Table 34**.

Table 34 Transit Site Trips Per Vehicle

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	4	4	1	2	3
	38 Creditview	0	6	6	2	2	4
	53 Kennedy	0	8	8	0	4	4
	Hurontario LRT	1	21	22	7	9	16
Southbound	28 Confederation	1	1	2	6	1	7
	38 Creditview	1	0	1	3	0	3
	53 Kennedy	1	0	1	4	0	4
	Hurontario LRT	3	11	14	15	5	20
Eastbound	1 Dundas / 101 Dundas Express	1	4	5	2	2	4
	4 Sherway Gardens	0	0	0	2	0	2
	21 Milton (GO Bus)	0	0	0	0	0	0
	MI Milton (GO Train)	0	40	40	0	16	16
Westbound	1 Dundas / 101 Dundas Express	1	2	3	3	1	4
	4 Sherway Gardens	0	0	0	0	1	1
	21 Milton (GO Bus)	0	2	2	0	1	1
	MI Milton (GO Train)	4	0	4	27	0	27

16.4 Accommodation of Transit Trips

The resultant transit site trips per vehicle are then compared to typical capacities of each transit type and summarized in **Table 35**.

Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be appropriately accommodated within existing and projected capacities.

Table 35 Capacity Utilization of Transit Site Trips

General Route Travel Direction	Transit Route	Capacity	Maximum Trips Per Vehicle		Max. Percentage of Capacity	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Northbound	28 Confederation	50	4	2	8%	4%
	38 Creditview	50	6	2	12%	4%
	53 Kennedy	50	8	4	16%	8%
	Hurontario LRT	336 (2)	21	9	6%	3%
Southbound	28 Confederation	50	1	6	2%	12%
	38 Creditview	50	1	3	2%	6%
	53 Kennedy	50	1	4	2%	8%
	Hurontario LRT	336	11	15	3%	4%
Eastbound	1 Dundas / 101 Dundas Express	50	4	2	8%	4%
	4 Sherway Gardens	50	0	2	0%	4%
	21 Milton (GO Bus)	81 (3)	0	0	0%	0%
	MI Milton (GO Train)	1,620 (4)	40	16	2%	1%
Westbound	1 Dundas / 101 Dundas Express	50	2	3	4%	6%
	4 Sherway Gardens	50	0	1	0%	2%
	21 Milton (GO Bus)	81	2	1	2%	1%
	MI Milton (GO Train)	1,620	4	27	0%	2%

Notes:

1. Capacity assumed based on Toronto Transit Commission buses: https://www.ttc.ca/riding-the-ttc/Real-Time-Bus-Occupancy-Info#:~:text=Note%3A%20Standard%20buses%20hold%20approximately,while%20articulated%20buses%20hold%2077.
2. Capacity assumed from Metrolinx website: https://web.archive.org/web/20180701111611/http://www.metrolinx.com/en/projectsandprograms/lrv/lrv.aspx
3. Capacity assumed from Government of Ontario webpage, with no standing: https://news.ontario.ca/en/release/41128/ontario-unveils-new-accessible-double-decker-go-buses
4. Capacity assumed from GO Transit information package (10 bi-level coaches, each with 162 seats and no standing): https://transittoronto.ca/archives/maps/GoTransit/GO-quick-facts-2013-06.pdf

17.0 AS-OF-RIGHT TRIP GENERATION COMPARISON

To satisfy the City's request, it is important to assess the cumulative overall impact on the site based on the difference between the currently permitted zoning/densities (i.e., as-of-right development) and proposed zoning/densities (i.e. proposed development).

As per City of Mississauga Zoning By-law 0225-2007, the site falls under the Commercial zone (Zone C4) and is subject to a maximum height / density of three storeys, plus 16 metres (sloped roof) or 12.5 metres (flat roof). For the simplicity of this comparison assessment, a maximum height of three storeys is assumed.

Based upon a review of the site's developable area (e.g., deducted building setbacks and applicable buffers), it covers approximately 14,623 m^2 with a maximum FSI of 2.45. As such, this results in a maximum permissible building GFA of approximately 35,826 m^2.

To quantify this difference, the ITE *Trip Generation Manual* (11th Edition) LUC 710 – General Office rates (i.e., assumed land use that is currently permitted) were applied to the as-of-right permitted GFA to determine the number of vehicle trips associated with as-of-right development for the site. The resulting trips, based on the maximum permitted GFA dedicated to office uses, are summarized in **Table 36**.

Table 36 Vehicle Trip Generation Comparison

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
As of Right Trips[1]	470	65	535	85	425	510
Proposed Development Trips	35	365	400	255	145	400
Difference	**-435**	**300**	**-135**	**170**	**-280**	**-110**

Notes:
1. Fitted curve equation used.
2. Trips rounded to the nearest 5 vehicles.

The trip comparison indicates that the proposed development would generate 135 and 110 less trips in the weekday morning and afternoon peak hours, respectively, than the maximum permitted as-of-right zoning density.

Given the directional nature of residential uses as opposed to employment uses, the decreases in trips between the two plans versus the as-of-right development are largest in the inbound direction for the morning peak hour and in the outbound direction for the afternoon peak hour.

The net decrease in two-way traffic volumes between development proposal densities and as-of-right densities indicates that the development proposal is expected to operate under improved conditions in comparison to the as-of-right development scenario. As such, the traffic impact observed for the proposed site trips are considered suitable from a zoning perspective.

18.0 COMMUNITY IMPACTS

A key consideration in this new transportation report includes the generation of traffic resulting from the proposed development. While it is anticipated that the site will generate additional vehicular activity, impacts on the community are expected to be limited and localized on the local and arterial road network as discussed in the preceding sections, recognizing the future impacts of the Hurontario LRT. Furthermore, the new roads through the site provide more routes of travel for residents to / from the new retail destinations on-site and beyond.

The surrounding road network is designed to handle future traffic levels with the completion of the LRT and have sufficient capacity to accommodate the projected increase with the various improvements proposed as concluded in the capacity analysis included in this report. **Table 37** provides a summary of net-new two-way site traffic volumes added to key road sections within the study area during peak hours.

Table 37 Net-New Two-Way Site Traffic Volume Summary

Road Name	Road Classification	Net-New Two-Way Volumes
Hurontario Street	Arterial	160 (90) s
Dundas Street	Arterial	35 (25)
Hillcrest Avenue / Kirwin Avenue	Major Collector	260 (225)
Jaguar Valley Drive, New Municipal and Private Streets	Local	0 (0)

Notes:
1. xx (xx) = weekday morning peak hour (weekday afternoon peak hour).

On January 10, 2022, a virtual public meeting for the site was held by the Planning and Development Committee to discuss the proposed development based on the initial application submission dated July 2021. The following key transportation-related comments from councillors and residents were raised:

- Support for intensification in transit-oriented areas (LRT and GO) of the City;
- Concern for cycling and pedestrian access, circulation, and safety to / from site and to transit as per local policies and plans; and
- Concern for reduced visitor parking to the updated Zoning By-law standard.

In summary, the immediate residential areas surrounding the development would experience a modest increase in traffic flow generated by the proposed development. In addition, as part of this resubmission, the revised proposal aims to address community comments received by refining the design of the site and thoroughly reviewing the appropriateness of the vehicle, cycling, and pedestrian services, amenities, and provisions. As such, an updated TDM Plan (**Section 6.0**) and evolving policy and transportation context review (**Section 4.0** and **Section 5.0**) have been provided.

19.0 SUMMARY AND CONCLUSIONS

The following provides a summary overview of the study findings of our assessment of the transportation related aspects of the proposed development.

Introduction & Proposed Development

1. BA Group is retained by Equity Three Holdings Inc. to provide transportation advisory services in support of a proposed mixed-use development for a revised ZBA application re-submission.

2. The proposed development comprises 1,691 residential units within four buildings, 1,222 m^2 of retail GFA. The subject property currently has a surface parking lot and commercial uses.

Transportation Context

3. The site is located southeast of the existing Cooksville GO Station and has a strong level of transit, pedestrian, and cycling service.

4. Transportation improvements planned in the site include a new east-west municipal road and north-south private road for the required access and circulation and new pick-up / drop-off facilities.

5. Notable transit-specific improvements, such as the new Hurontario LRT, will be built and operational by fall 2024, which will improve the overall transit service and accessibility to / from the site. The Dundas Street BRT, currently in planning, will also put another higher order transit service station within walking distance of the site.

Transportation Demand Management Plan

6. A comprehensive TDM plan will be implemented to support the use of transit and active transportation while reducing the number of single-occupant vehicle trips during the peak hours.

7. Specific TDM strategies proposed include, but are not limited to, a significant fleet of car-share vehicles, the provision of shared micro-mobility devices (e-scooters, e-bikes), provision of transit cards, shared mobility service memberships for new residents, distribution of promotional transit service materials, and the provision of on-site bicycle parking with a repair station.

Vehicle Parking Considerations

8. Recognizing that Bill 185 received Royal Assent on June 6, 2024 and is now in-force and in effect, it is understood that any minimum vehicle parking requirements (except for bicycle parking) within municipal Zoning By-laws would no longer be in effect, and therefore, would no longer be applicable to lands located within any identified PMTSAs or MTSAs. Given that the site is located within the Dundas MTSA (as approved by the Region of Peel and Province of Ontario), there are effectively no minimum vehicle parking requirements that apply to the proposed development for all uses.

9. For reference, application of the vehicle parking standards outlined in Mississauga Zoning By-law 0225-2007 (Precinct 1) would require a minimum provision of 1,690 spaces, including 1,352 resident spaces and 338 shared non-resident spaces.

10. The architectural plans illustrate a total supply of 802 parking spaces, including 43 car share spaces, 170 visitor / retail spaces (0.10 spaces / unit) and 589 resident spaces (0.35 spaces / unit). Applying an equivalency of 4-8 resident parking spaces per car-share vehicle provided, this results in an effective resident parking supply of 761-933 vehicles (0.45-0.55 spaces / unit).

11. The proposed vehicle parking supply is appropriate for the site with consideration to the following:

    - Royal Assent of Provincial Bill 185 (i.e., supporting no minimums for all uses);
    - City staff-approval for reduced residential parking requirements along the Hazel McCallion Line, i.e., supporting 0.5 spaces per unit which falls within the effective resident parking supply range;
    - Evolving provincial, regional, and local policies in support for reduced parking / automobile use and increased transit and active transportation use; and
    - Comprehensive TDM strategy in support for reduced single occupancy vehicle trips and enhanced multi-modal non-auto daily travel.

Bicycle Parking Considerations

12. Application of bicycle parking standards outlined in Mississauga Zoning By-law 0225-2007 requires a minimum provision of 1,105 bicycle parking spaces (1,017 Class A and 88 Class B).

13. The proposed development includes 1,126 spaces (1,029 Class A spaces and 97 Class B spaces), which satisfies the supply requirement. It is proposed to adopt a bicycle parking space width of 0.45 metres.

Loading Considerations

14. Application of the City's Zoning By-law results in a requirement of six (6) loading spaces for the new residential and retail uses of the buildings.

15. Six (6) loading spaces are proposed in total, which meets the servicing needs of the site.

Pick-up / Drop-off Considerations

16. Pick-up / drop-off facilities are provided through a loop in front of Tower 1, two spaces in a lay-by in front of Tower 2, two spaces in a lay-by in front of Tower 3, and two spaces in a lay-by in front of Tower 4.

17. The pick-up / drop-off facilities accommodate approximately 10 vehicles and are distributed across the site, which is expected to accommodate the proposed units and retail GFA on-site.

Multimodal Travel Demand Forecasting

18. The site is expected to generate 1,005 and 1,040 two-way person trips during the weekday morning and afternoon peak hours, respectively.

Baseline Existing Traffic Volumes

19. On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts for the study area intersections in October of 2021 and November 2022.

20. Given that the traffic counts were conducted during the COVID-19 pandemic, additional counts prior to the pandemic were also obtained dated 2019 and 2020. The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the obtained pre-pandemic counts, the Cooksville GO Station was under construction and not fully operational.

Background Traffic Growth

21. Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

22. Under the five-year horizon of the year 2028, the total development programme for the 16 background developments includes approximately 11,245 residential units and 14,033 m^2 non-residential GFA.

23. The City of Mississauga provided growth rates along Hurontario Street and Dundas Street. Corridor volumes along Hurontario Street and Dundas Street at the 2028 horizon year were calibrated to the provided growth rates.

24. Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the traffic models for analysis purposes.

25. Drivers are expected to redistribute along alternative routes and corridors to minimize delays given the significant changes to the road network such as the removal of a travel lane in each direction on Hurontario Street to accommodate the future LRT.

Site Traffic Volumes

26. The existing site consists of several retail uses. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 25 and 195 existing site trips during the weekday morning and afternoon peak hours, respectively.

27. The site is expected to generate 375 and 205 net new two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

Traffic Operations Analysis

28. Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts and the Cooksville GO's road layout master plan.

29. Under future traffic conditions, the Synchro models adopted network changes that are planned alongside the Hurontario Street LRT and the Dundas Street BRT. These network changes include:

    - The **removal** of one through lane in either travel direction along Hurontario Street for the LRT;
    - Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
    - Bus only-lanes at Hurontario Street / Dundas Street;
    - Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
    - Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
    - The prohibition of northbound left turns at Hurontario Street / Dundas Street.

30. All signalized intersections in the study area are expected to operate under capacity and accommodate site-related vehicular traffic. The intersection of Hurontario Street / Dundas Street is expected to approach capacity in both weekday peak hours. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored. No mitigation measures nor improvements are recommended aside from signal timing optimization at the following intersections:

    - Hurontario Street / Fairview Road East & West
    - Hurontario Street / John Street
    - Hurontario Street / Hillcrest Avenue / Kirwin Avenue
    - Confederation Parkway / Hillcrest Avenue
    - Hurontario Street / Dundas Street East & West

31. All movements at unsignalized intersections in the study area are expected to operate acceptably in both peak hours at levels-of-service (LOS) E or better except for the shared northbound movements at the 60 Dundas Street East Access / & Jaguar Valley Drive / Dundas Street East intersection under future conditions. The intersection's individual movements all operate at a v/c ratio below 1.0, which indicates that while vehicles along the minor approaches will experience delays, they will still be able to turn onto the major approach. A LOS of F is not uncommon for a minor street approach along an arterial road in urban conditions.

Transit Travel Assessment

32. The vehicular trip generation forecasting methodology assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 7%, while the transit mode splits were increased by the same proportion. This reflects a conservative traffic analysis of the study area intersections in the Synchro models. However, for the purposes of the transit analysis, a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

33. With the 20% mode shift, the total site anticipates 410 and 415 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

34. Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be accommodated within existing and projected capacities.

As-of-right Trip Generation Comparison

35. The cumulative overall impact on the site was assessed based on the difference between the currently permitted zoning/densities (i.e., as-of-right development) and proposed zoning/densities (i.e., proposed development).

36. The ITE Trip Generation Manual (11th Edition) LUC 710 – General Office rates (i.e., assumed land use that is currently permitted) were applied to the as-of-right maximum permitted GFA of of approximately 35,894 m2 to quantify the difference in trip generation to the proposed development.

37. The comparison in trips indicates that the proposed development would generate 135 and 110 less trips in the weekday morning and afternoon peak hours, respectively, than the maximum permitted as-of-right zoning density. As such, it is evident that the proposed site trips are considered suitable from a zoning perspective.

Overall

38. The proposed transportation-related elements of the development that accommodate traffic, bicycle parking, and loading activity are appropriate.

Appendix A:
Certification Form

Appendix A

Certification Form

Individuals submitting reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Mississauga's Official Plan, Transportation Master Plan, and Transportation Impact Study Guidelines.

By submitting the attached report (and any associated documents) and signing this document, I acknowledge that:

- I have reviewed and have a sound understanding of the objectives, needs, and requirements of the City of Mississauga's Official Plan, Transportation Master Plan, and the Transportation Impact Study Guidelines as they apply to this submission;
- I have sound knowledge of industry standard practices pertaining to the preparation of development-related transportation study reports;
- I have substantial experience (more than five years) in completing development-related transportation studies and strong background knowledge of the transportation planning and engineering principles underpinning these studies; and
- I am registered as a Professional Engineer (P.Eng.), Licensed Engineering Technologist (LET), Certified Engineering Technologist (C.E.T.), or Registered Professional Planner (RPP) in good standing in the Province of Ontario with specific training in transportation planning and engineering.

Dated at City of Mississauga (City) this 20 day of September, 2024.

Name: Steven Kwan, P.Eng.

Professional Title: Senior Associate, BA Group

Signature: 

Office Contact Information (Please Print)

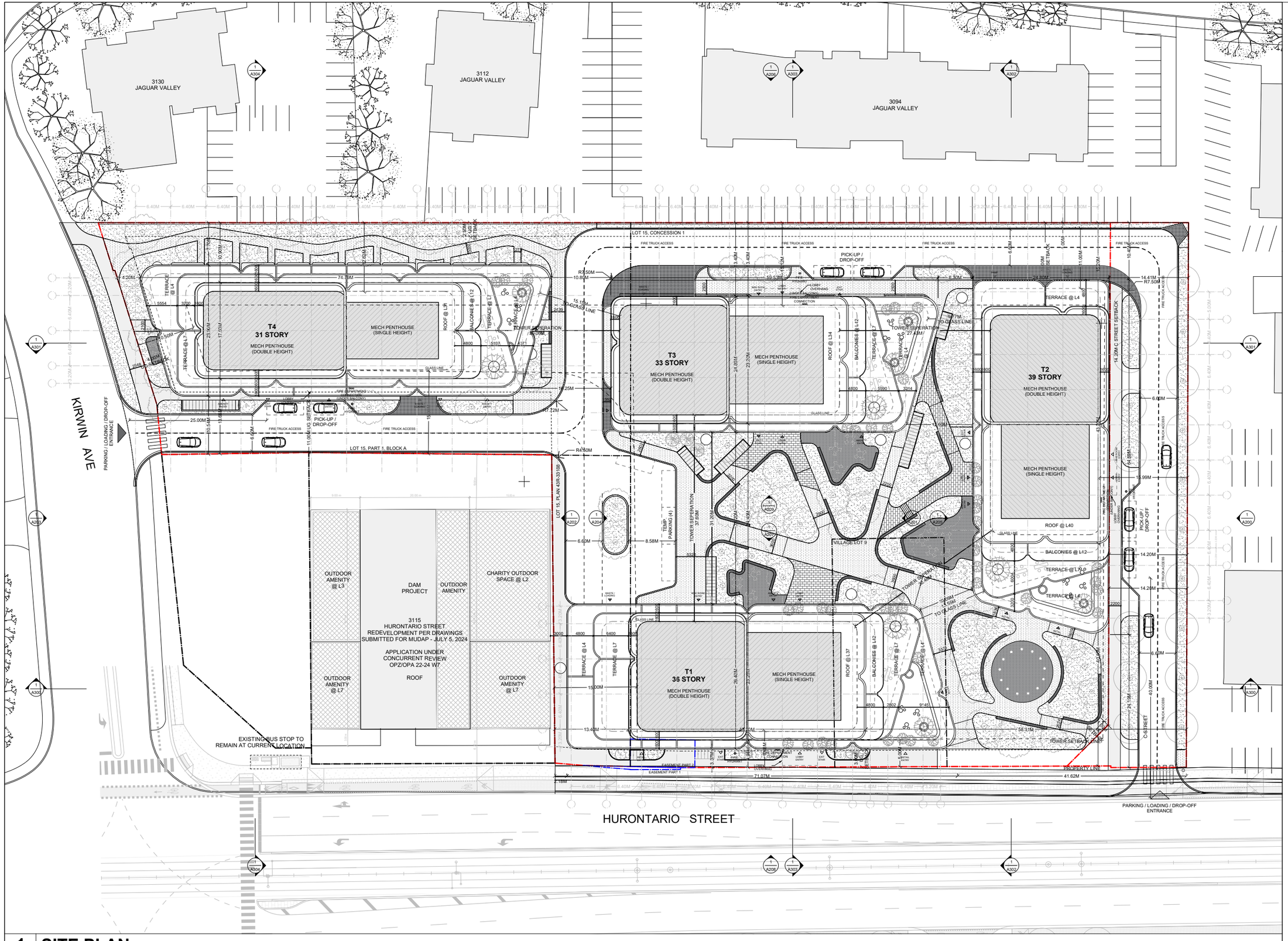
Address: 1000-95 St. Clair Avenue W

City/Postal Code: Toronto, ON M4V 1N6

Telephone/Extension: (416) 961-7110 ext:126

E-mail Address: kwan@bagroup.com

Appendix B:
Reduced Scale Architectural Plans



1 SITE PLAN
1:300

LEGEND

- ACCESS
- SITE BOUNDARY
- EASEMENT BOUNDARY
- LOT BOUNDARY

N

THE PART(S) ENUMERATED HEREUNDER REFERS TO LAND IN WHICH ALL RIGHT, TITLE AND INTEREST ASSOCIATED WITH THE HURONTARIO LRT PROJECT IS EXPROPRIATED BY METROLINX, RESERVING A RIGHT OF WAY IN FAVOUR OF THE OWNER OF THE REMAINING LANDS UNTIL SUCH TIME AS THE LANDS HAVE BEEN DEDICATED FOR PUBLIC HIGHWAY PURPOSES.

PART	LOT	CONCESSION	PIN	NAME OF MOST RECENT TRANSFEREE	AREA
1	PART OF 15	1 NORTH OF DUNDAS STREET	PART OF 13157-0181(LT)	EQUITY THREE HOLDINGS INC.	6 SQ M

THE PART(S) ENUMERATED HEREUNDER REFERS TO LAND IN WHICH A TEMPORARY LIMITED INTEREST FOR THE PURPOSES OF A FREE, UNINTERRUPTED AND UNOBSTRUCTED TEMPORARY EASEMENT IN GROSS OR RIGHTS IN THE NATURE OF A TEMPORARY EASEMENT IN GROSS, ON AN EXCLUSIVE BASIS FOR A TERM OF SIXTY (60) DAYS COMMENCING ON NO LESS THAN THREE (3) MONTHS WRITTEN NOTICE, BUT EXPIRING IN ANY EVENT ON DECEMBER 31, 2023 ASSOCIATED WITH THE HURONTARIO LRT PROJECT IS EXPROPRIATED BY METROLINX.

PART	LOT	CONCESSION	PIN	NAME OF MOST RECENT TRANSFEREE	AREA
2	PART OF 15	1 NORTH OF DUNDAS STREET	PART OF 13157-0181(LT)	EQUITY THREE HOLDINGS INC.	59 SQ M

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
3300 BLOOR STREET WEST, SUITE 1800
TORONTO, ON M8X 2X2
T 905 907 8888
MATTAMY HOMES CANADA

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T +1 646 843 9770

ARCHITECT OF RECORD
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CONSULTANTS
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421 RONCESVALLES AVE
TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7
SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

SITE PLAN

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PROJECT NUMBER	850010
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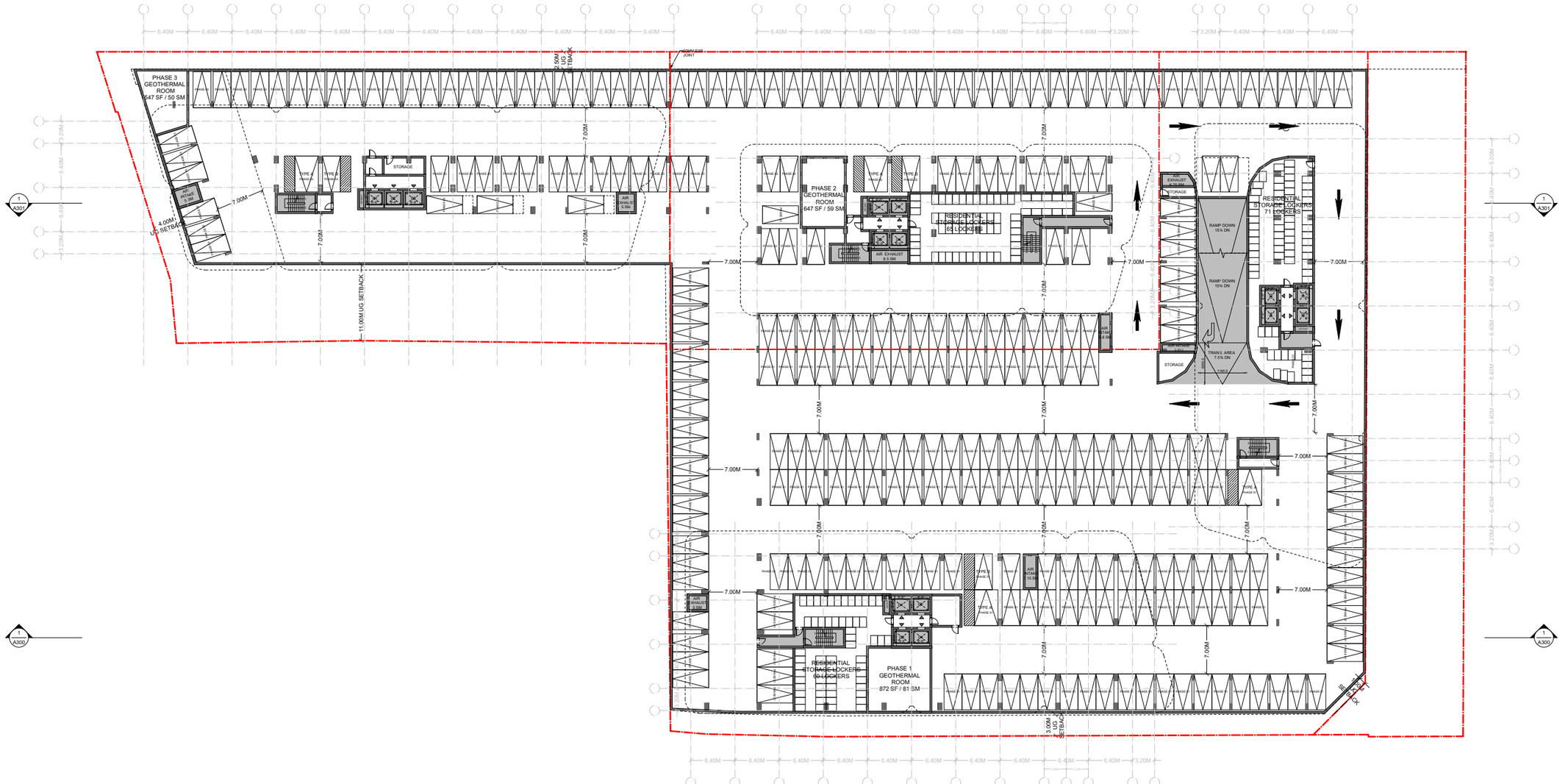
DRAWING NO.	**A012**
DATE	2024.09.18
REVIEWED BY	DKI



1 PARKING LEVEL 3 FLOOR PLAN

1:300

PARKING

POTENTIAL CAR SHARE STALLS

TYPICAL CAR PARKING SPACE

TYPE A CAR PARKING SPACE

TYPE B CAR PARKING SPACE

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
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TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7
SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

PARKING LEVEL 3 FLOOR PLAN

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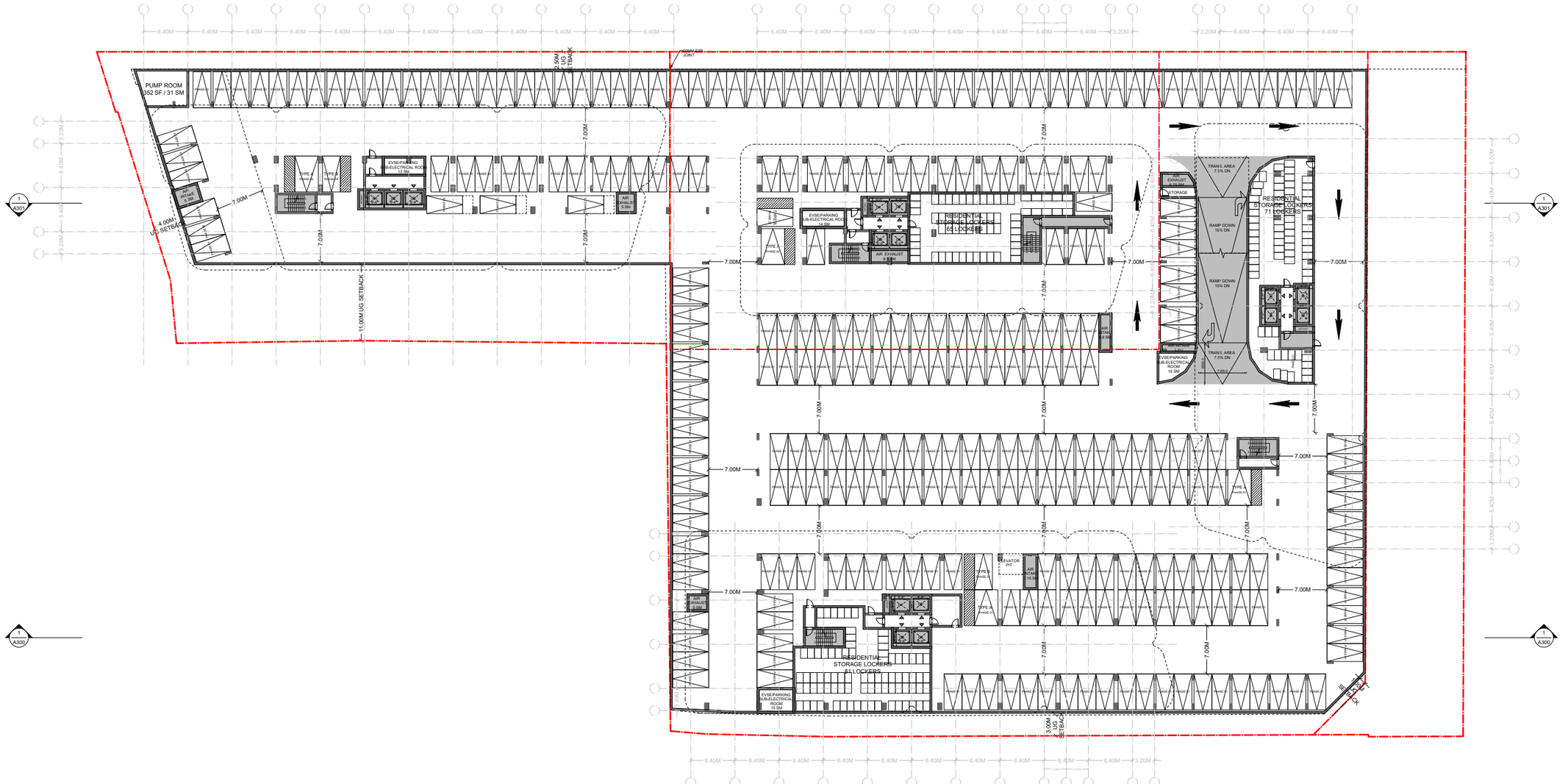
DRAWING NO.	**A100**
DATE	2024.09.18
REVIEWED BY	DKI



1 PARKING LEVEL 2 FLOOR PLAN

1:300

PARKING

POTENTIAL CAR SHARE STALLS

TYPICAL CAR PARKING SPACE

TYPE A CAR PARKING SPACE

TYPE B CAR PARKING SPACE

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
3300 BLOOR STREET WEST, SUITE 1800
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TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7
SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

PARKING LEVEL 2 FLOOR PLAN

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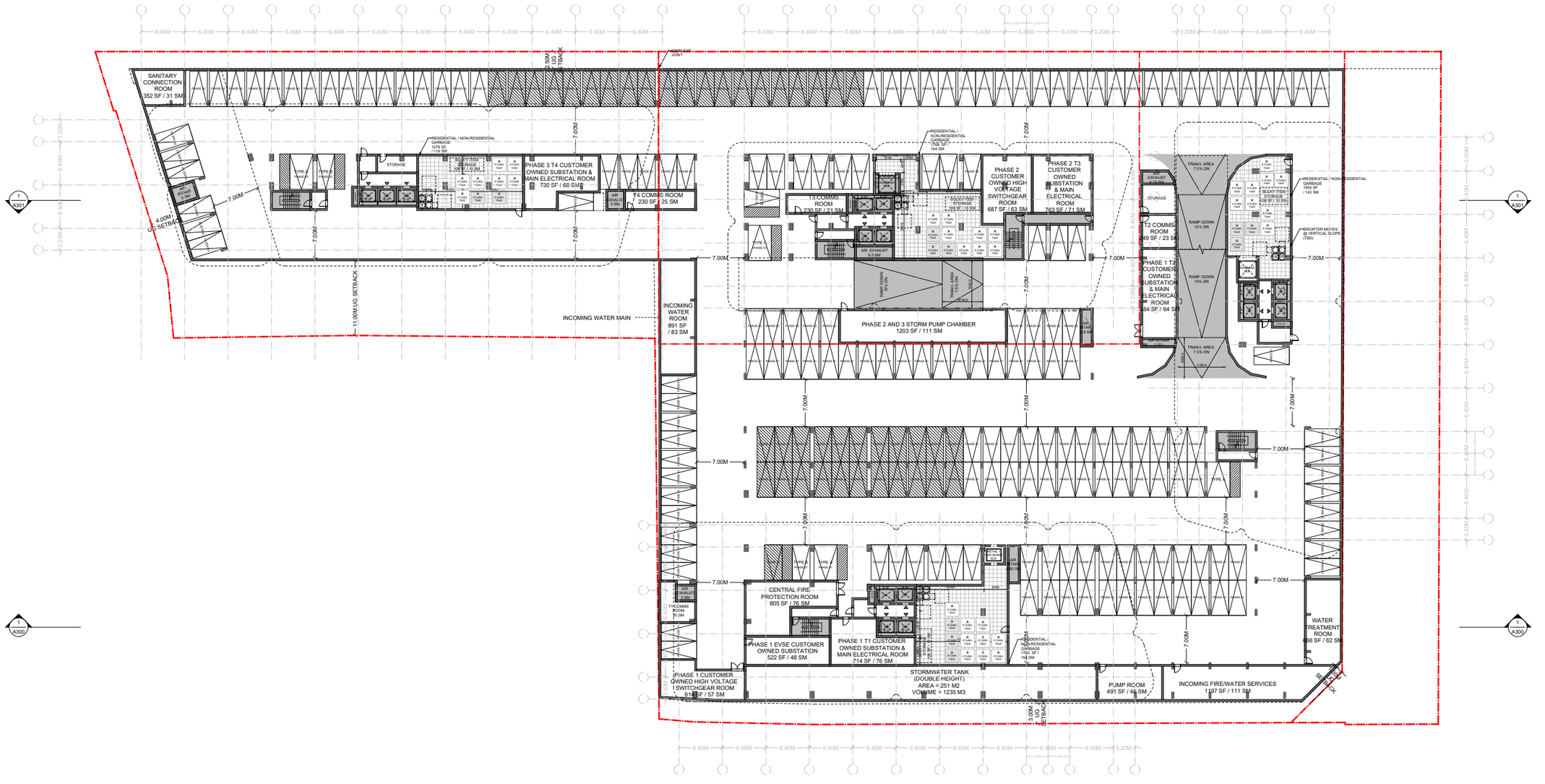
DRAWING NO.	**A101**
DATE	2024.09.18
REVIEWED BY	DKI



1 PARKING LEVEL 1 FLOOR PLAN

1:300

PARKING

POTENTIAL CAR SHARE STALLS

N

TYPICAL CAR PARKING SPACE

TYPE A CAR PARKING SPACE

TYPE B CAR PARKING SPACE

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER

EQUITY THREE HOLDINGS INC.
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TORONTO, ON M6R 2N1

JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7

SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5

SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5

SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6

URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2

WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5

FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5

BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6

GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0

GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6

PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5

HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

PARKING LEVEL 1 FLOOR PLAN

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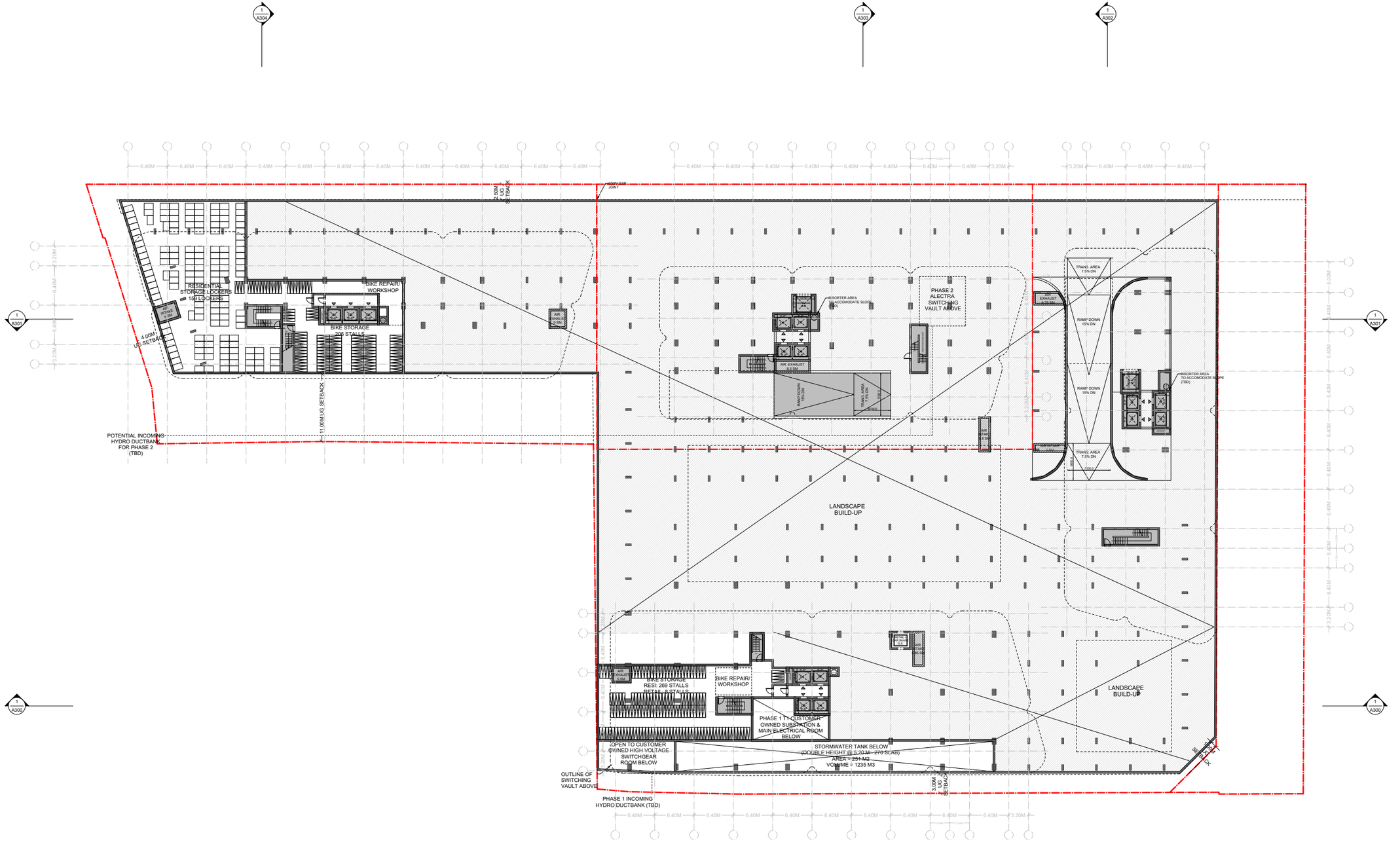
DRAWING NO.	**A102**
DATE	2024.09.18
REVIEWED BY	DKI



1 PARKING LEVEL 1 MEZZANINE FLOOR PLAN

1:300

PARKING

POTENTIAL CAR SHARE STALLS

N

5200 2600 TYPICAL CAR PARKING SPACE

2600 TYPE A TYPE A CAR PARKING SPACE

2600 TYPE B TYPE B CAR PARKING SPACE

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
3300 BLOOR STREET WEST, SUITE 1800
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TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7
SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

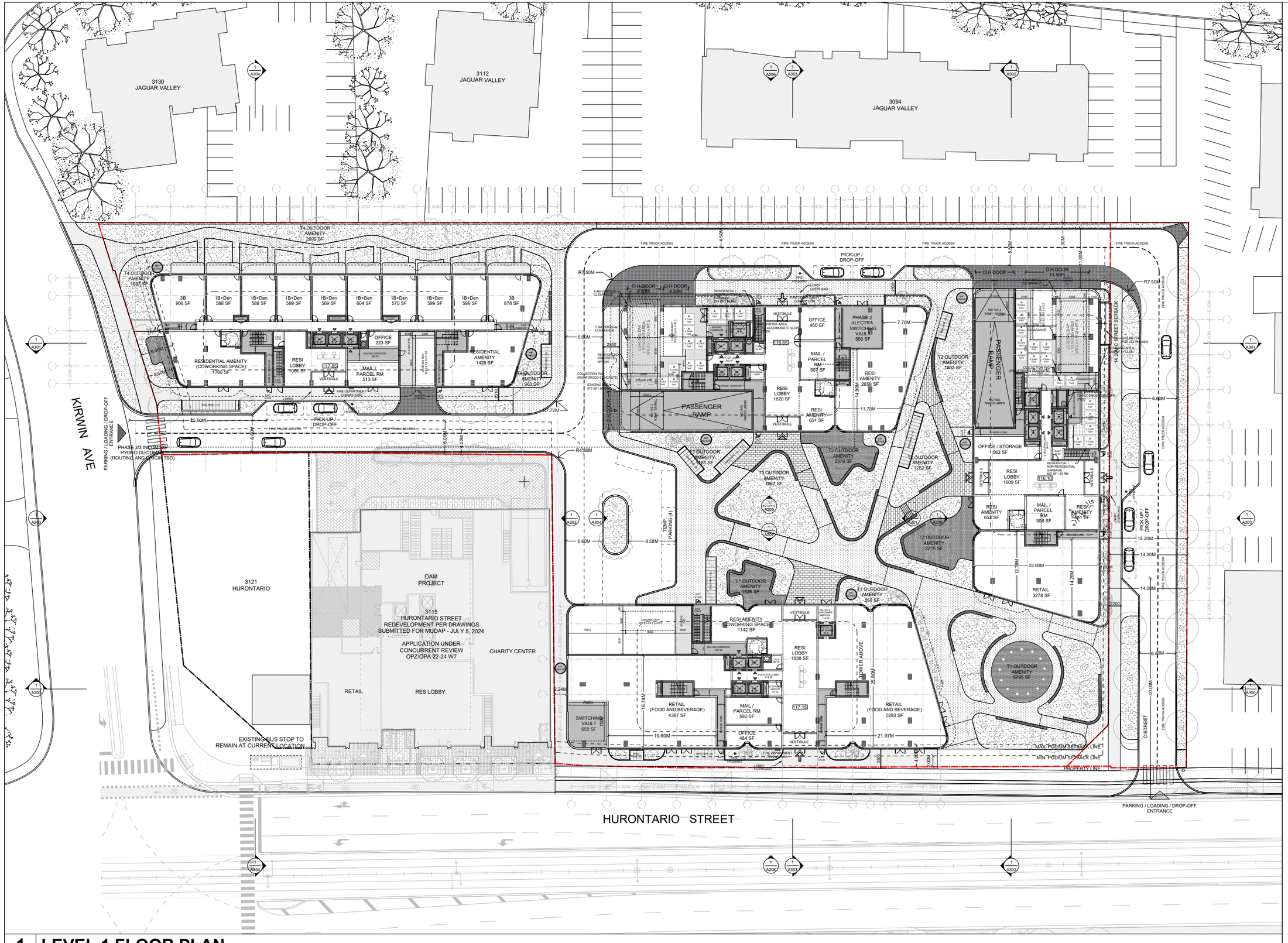
3085 HURONTARIO ST

3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

PARKING MEZZ FLOOR PLAN

PROJECT NUMBER	850010
SCALE	1:300
SHEET SIZE	ARCH D
DRAWING NO.	**A103**
DATE	2024.09.18
REVIEWED BY	DKI



LEGEND

- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- ACCESS
- SITE BOUNDARY

N

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
3300 BLOOR STREET WEST, SUITE 1800
TORONTO, ON M8X 2X2
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MATTAMY HOMES CANADA

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TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
3 CONCORDE GATE, 4TH FLOOR
TORONTO, ON M3C 3N7
SMITH + ANDERSEN
1100 – 100 SHEPPARD AVE. EAST
TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
60 ST. CLAIR AVENUE EAST, SUITE 806
TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N5
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

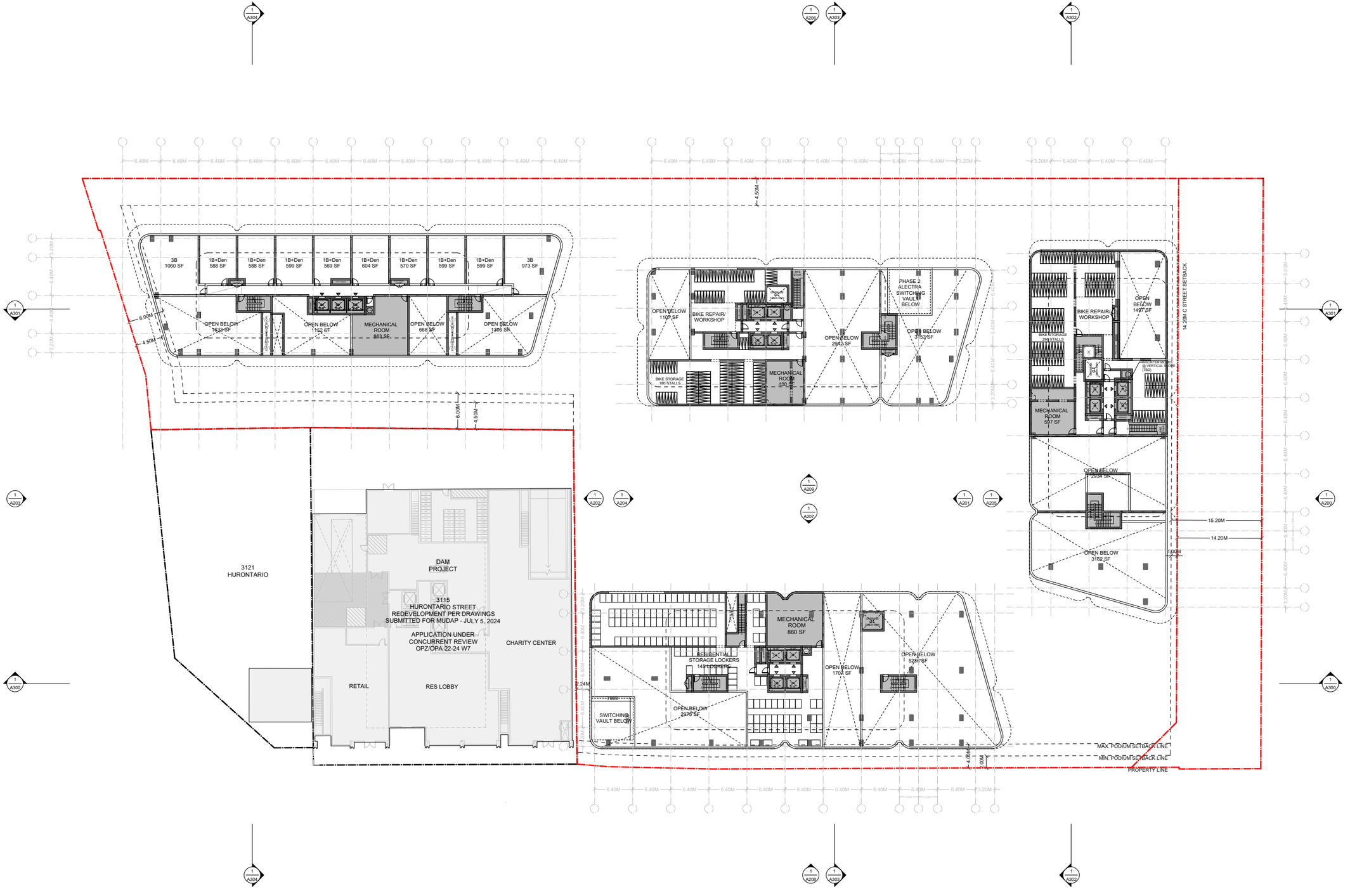
3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

LEVEL 1
FLOOR PLAN

PROJECT NUMBER	850010
SCALE	1:300
SHEET SIZE	ARCH D
DRAWING NO.	**A104**
DATE	2024.09.18
REVIEWED BY	DKI

1 LEVEL 1 FLOOR PLAN
1:300



1 LEVEL 1 MEZZANINE FLOOR PLAN

1:300

LEGEND

- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- ACCESS
- SITE BOUNDARY

N

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING RESUBMISSION	2024.09.18

OWNER
EQUITY THREE HOLDINGS INC.
3300 BLOOR STREET WEST, SUITE 1800
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MATTAMY HOMES CANADA

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TORONTO, ON M6R 2N1
JABLONSKY AST AND PARTNERS
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TORONTO, ON M3C 3N7
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TORONTO, ON M2N 6N5
SOBERMAN ENGINEERING
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TORONTO, ON M4T 1N5
SPANIER GROUP
786 ST CLAIR AVE W SUITE B
TORONTO, ON M6C 1B6
URBANTECH
2030 BRISTOL CIRCLE, SUITE 105
OAKVILLE, ON L6H 0H2
WALMSLEY ENVIRONMENTAL
103-30 OLD MILL ROAD
ETOBICOKE, ON M8X 0A5
FOOTPRINT
100 SHEPPARD AVE E, SUITE 1100
TORONTO, ON M2N 6N6
BA CONSULTING GROUP
95 ST. CLAIR AVE. W, SUITE 1000
TORONTO, ON M4V 1N6
GRADIENT WIND ENGINEERING
127 WALGREEN ROAD
OTTAWA, ON K0A 1L0
GLEN SCHNARR & ASSOCIATES
10 KINGSBRIDGE GARDEN CIRCLE, SUITE 700
MISSISSAUGA, ON L5R 3K6
PRIMARY ENGINEERING
EAST TOWER, 77 CITY CENTRE DR, SUITE 501
MISSISSAUGA, ON L5B 1M5
HGC ENGINEERING
2000 ARGENTIA ROAD, PLAZA 1, SUITE 203
MISSISSAUGA, ON L5N 1P7

3085 HURONTARIO ST

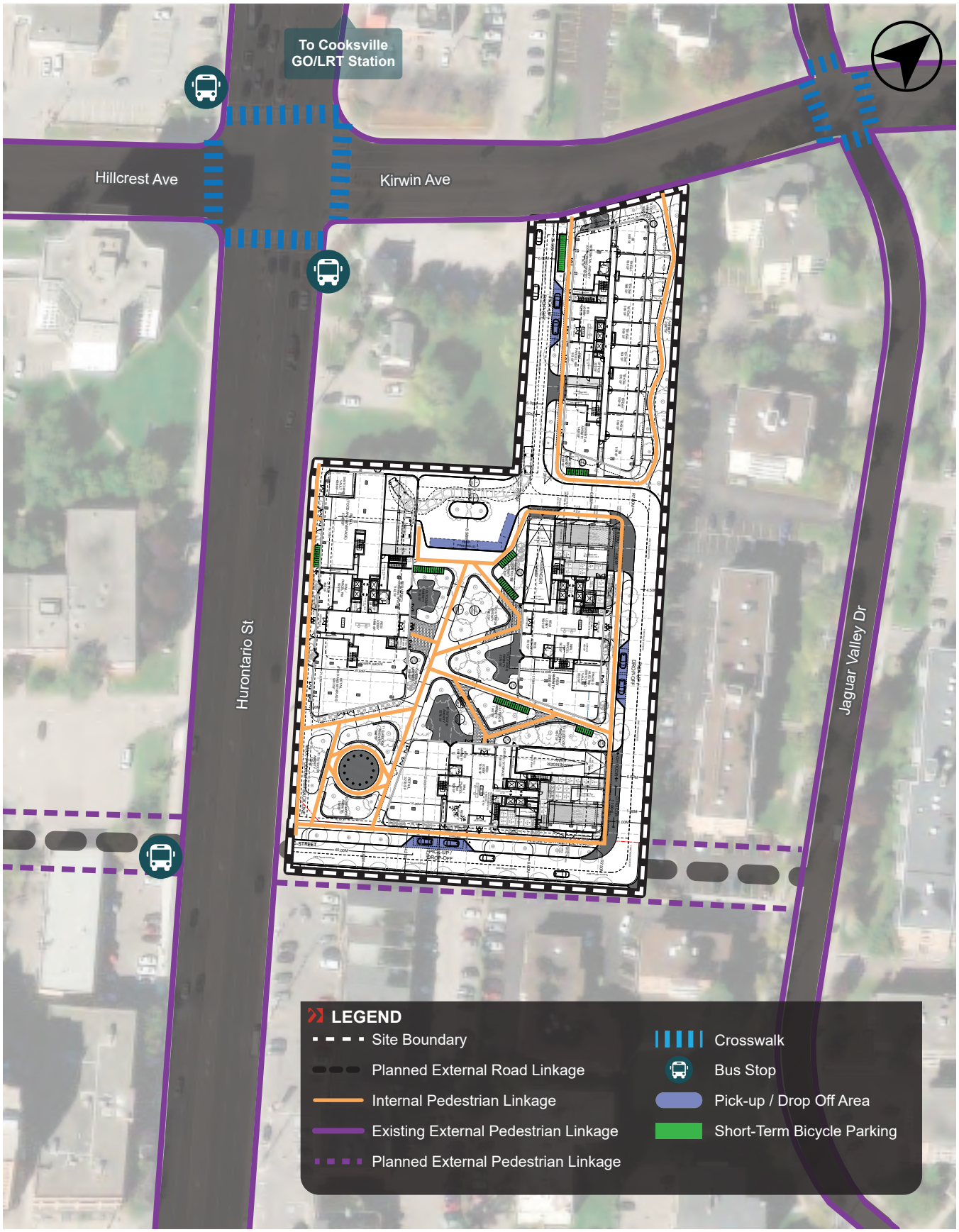
3085 HURONTARIO ST. MISSISSAUGA
ON L5A 2G9

DRAWING TITLE

LEVEL 1 MEZZ FLOOR PLAN

PROJECT NUMBER	850010
SCALE	1:300
SHEET SIZE	ARCH D
DRAWING NO.	**A105**
DATE	2024.09.18
REVIEWED BY	DKI

Appendix C:
Pedestrian Circulation Plan & TDM Checklist



P:\6374\69\Graphics\Adobe\IDs\6374-69.indd

Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE A PEDESTRIAN CIRCULATION PLAN

Appendix E

Transportation Demand Management and Pedestrian Circulation Checklist

This checklist is designed to evaluate the incorporation of Transportation Demand Management (TDM) measures, including pedestrian circulation techniques, into development proposals. The template is modelled on the prototype Class 2: Medium Density/Moderate Congestion (TDM Moderate) checklist contained in TDM Supportive Guidelines for Development Approvals (ACT Canada, 2008).

The applicant must complete and return this checklist with their Transportation Demand Management Plan (TDMP) and/or Pedestrian Circulation Plan (PCP).

Application Summary

Development Application No:	Date:
Applicant:	Staff:
SCORE AND RATING:	TDM SUPPORTIVE?
72%	Yes X No

Scorecard

Use the scorecard below to determine the TDM rating and supportiveness of the development proposal based on the final score calculated on page E-5. If the proposal does not satisfy the minimum threshold, review and enhance the TDM measures.

Final Score	Rating	TDM Supportive?
91% - 100%	***** (5 Star)	YES
81% - 90%	**** (4 Star)	
71% - 80%	*** (3 Star)	
61% - 70%	** (2 Star)	NO (Review and Enhance TDM Measures)
50% - 60%	* (1 Star)	
Less than 50%	(None)	

CATEGORY A – Pedestrian Circulation					
In creating an environment that facilitates and supports pedestrian activity, the public realm needs to be accessible, safe, and comfortable to encourage movement on the street and in the surrounding area(s).					
	Features	Yes	No	N/A	Comments
A1	Development located within 800 m walking distance of residential (if employment) or employment (if residential) uses	☒			
A2	Development located within 400 m walking distance of retail, restaurant, or other pedestrian-oriented uses or similar services provided on-site	☒			
A3	At least one functional building entrance oriented towards public space (i.e., street, park, square)	☒			
A4	At least one functional building entrance located close to on-site or adjacent street transit stop	☒			
A5	Nearest functional building entrance located within 50 m of (and connected to) public street with sidewalk	☒			
A6	Accessible on-site pedestrian routes provided and connected to surrounding network and transit	☒			
A7	Continuous sidewalks (1.5 m min. width) provided along all on-site roads and both sides of adjacent public streets	☒			
A8	No conflict points between pedestrians and other users (i.e., vehicles, cyclists)		☒		Parking ramp and driveways on site plan.
A9	Adequate and properly designed pedestrian crossings provided on-site	☒			
A10	Off-site road works designed to maximize pedestrian safety and minimize pedestrian crossing distances (e.g., no right turn channelization)		☒		
A11	Amenities provided along pedestrian routes (i.e., benches, street furniture)	☒			
A11	Shelters and benches provided at transit stops			☒	
A12	Wayfinding provided to guide pedestrians	☒			Details to be provided at site plan stage.
A13	Lighting provided along pedestrian routes	☒			
A14	Weather protection provided along pedestrian routes		☒		

A15	Vehicle parking areas located away from street and pedestrian routes	☒			Majority of parking is located underground.
A16	Protected pedestrian routes provided through vehicle parking lots and linked to building(s)	☒			Consolidated parking facility below-grade with direct connections to buildings.

CATEGORY A – Pedestrian CATEGORY

In creating an environment that facilitates and supports pedestrian activity, the public realm needs to be accessible, safe, and comfortable to encourage movement on the street and in the surrounding area(s).

	Features	Yes	No	N/A	Comments
A17	Passenger pick-up and drop-off areas located to side or rear of buildings, downstream from major building entrance points, but no more than 30 m away		☒		Layby pick-up / drop-off areas are provided in front of majority of Building lobby entrances.
A18	Loading areas located away from street and pedestrian routes	☒			
	Sub-Total	14	4	1	

CATEGORY B – Cycling Orientation

In creating an environment that facilitates and supports cycling activity, the public realm needs to be accessible, safe, and comfortable to encourage movement on the street and in the surrounding area(s).

	Features	Yes	No	N/A	Comments
B1	On-site cycling routes provided and connected to surrounding network		☒		
B2	Class A (long-term) and Class B (short-term) bicycle parking spaces provided per City of Mississauga Zoning By-law (reproduced at end of this checklist for reference)	☒			
B3	Bicycle repair station provided at-grade or within underground structure close to long-term bicycle parking	☒			
B4	Wayfinding provided to guide cyclists	☒			Details to be provided at site plan stage.
B5	Other amenities provided for cyclists (e.g., showers, change rooms)		☒		
	Sub-Total	3	2	0	

CATEGORY C – Transit Service					
The availability and proximity of convenient public transit service with direct pedestrian linkages to the building expands the range of viable travel options for employees, visitors, and residents.					
	Features	Yes	No	N/A	Comments
C1	Development located within 800 m walking distance of a rapid transit station (existing or planned) or within 400 m of two or more public bus routes with minimum 15-minute headway service during peak commuter periods and every 30 minutes throughout the remainder of the day	☒			
C2	Information about public transit routes, schedules, and fares provided in accessible and visible location on-site and in adjacent bus stops	☒			
C3	Sufficient capacity available to accommodate transit riders generated by development	☒			
	Sub-Total	3	0	0	

CATEGORY D – Motor Vehicle Parking					
The location and design of motor vehicle parking facilities can affect the character and cost of a development. Avoiding the oversupply of parking can also help reduce single occupant vehicle travel.					
	Features	Yes	No	N/A	Comments
D1	No more than the minimum number of parking spaces required by the Zoning By-law provided	☒			
D2	Priority parking equivalent to 10% of employee spaces provided for carpooling/vanpooling			☒	
D3	Priority parking equivalent to 3% of full-time building occupants provided for auto share and hybrid/alternative fuel vehicles	☒			30% of parking spaces are intended to be Electric Vehicle Ready
D4	Priority parking equivalent to 1% of the parking stalls provided for mopeds, motorcycles, and minicars		☒		
D5	Parking shared for different uses on-site and/or adjoining properties	☒			
D6	50% of parking located underground or in structured parking	☒			100% parking located underground
	Sub-Total	4	1	1	

CATEGORY E – Incentives					
Building owners and tenants can offer occupants Transportation Demand Management incentives that help reduce single occupant vehicle travel.					
	Features	Yes	No	N/A	Comments
E1	TDM Plan prepared that targets a 10% reduction in peak hour trips using forecast trip generation with status quo travel characteristics	☒			
E2	Building owner/tenant will provide a ride matching service for car/vanpooling		☒		
E3	Building owner/tenant will provide emergency ride home options		☒		
E4	Building owner/tenant will provide subsidized transit passes for all occupants for a period of at least two years		☒		Details to be provided at site plan.
E5	Building owner/tenant will charge for parking as an unbundled cost to occupants	☒			
E6	Building owner/tenant will reduce cost for users of car/van pool, bicycle, moped/motorcycle/minicar spaces	☒			First-time unit owners will receive credit towards purchase of a bicycle for those who do not purchase a parking space
E7	Building owner/tenant will become a member of a local TMA and appoint a TDM Coordinator to oversee and coordinate promotional opportunities and events on site		☒		
	Sub-Total	3	4	0	

SCORING SUMMARY

Count the number of applicable features for each category (items not assigned "N/A") and enter under the column "Applicable" in the table below.

Assign 1 point to each "Yes" answer, except for Category A (Pedestrian Circulation) where each "Yes" answer is worth ½ a point and Category C (Transit Service) where each "Yes" answer is worth 2 points. Award 0 points for a "No" answer. Tally the points for each category under the column "Points" in the table below.

Calculate "Final Score" as a percentage by dividing total "Points" by the total "Applicable" and enter in the table below and in the "SCORE AND RATING" field on page E-1.

Category	Possible	Applicable	Points	Comments
A – Pedestrian Circulation	9.5 (19/2)	9 (18/2)	7 (14/2)	
B – Cyclist Orientation	5	5	3	
C – Transit Service	6 (3x2)	6 (3x2)	6 (3x2)	
D – Motor Vehicle Parking	6	5	4	
E – Incentives	7	7	3	
TOTAL	33.5	32	23	
Score % (Points/Applicable)			72%	

REQUIRED NUMBER OF BICYCLE PARKING SPACES (Excerpt from City of Mississauga City of Mississauga Zoning By-law Table 3.1.6.5.1- Required Number of Bicycle Parking Spaces for Residential Uses) Type of Use	Bicycle Parking Requirement (Spaces)	
	Bicycle Parking Class A (Long Term)	Bicycle Parking Class B (Short Term)
Apartment and stacked townhouse without exclusive garages	0.6 spaces per unit	The greater of 0.05 spaces per unit or 6 spaces
Apartment and stacked townhouse without exclusive garages (within CCI to CC4 and CCO zones)	0.6 spaces per unit	The greater of 0.1 spaces per unit or 6 spaces
Long-Term Care Building	0.2 spaces per IOO m2 GFA - residential	0.2 spaces per IOO m2 GFA - residential
residentialTerm Care Building (within CCI to CC4 and CCO zones)	0.3 spaces per IOO m2 GFA - zones)	0.3 spaces per IOO m2 GFA - zones)
Retirement Building	0.3 spaces per unit	The greater of 0.03 spaces per unit or 6 spaces
Retirement Building (within CCI to CC4 and CCO zones)	0.4 spaces per unit	The greater of 0.05 spaces per unit or 6 spaces

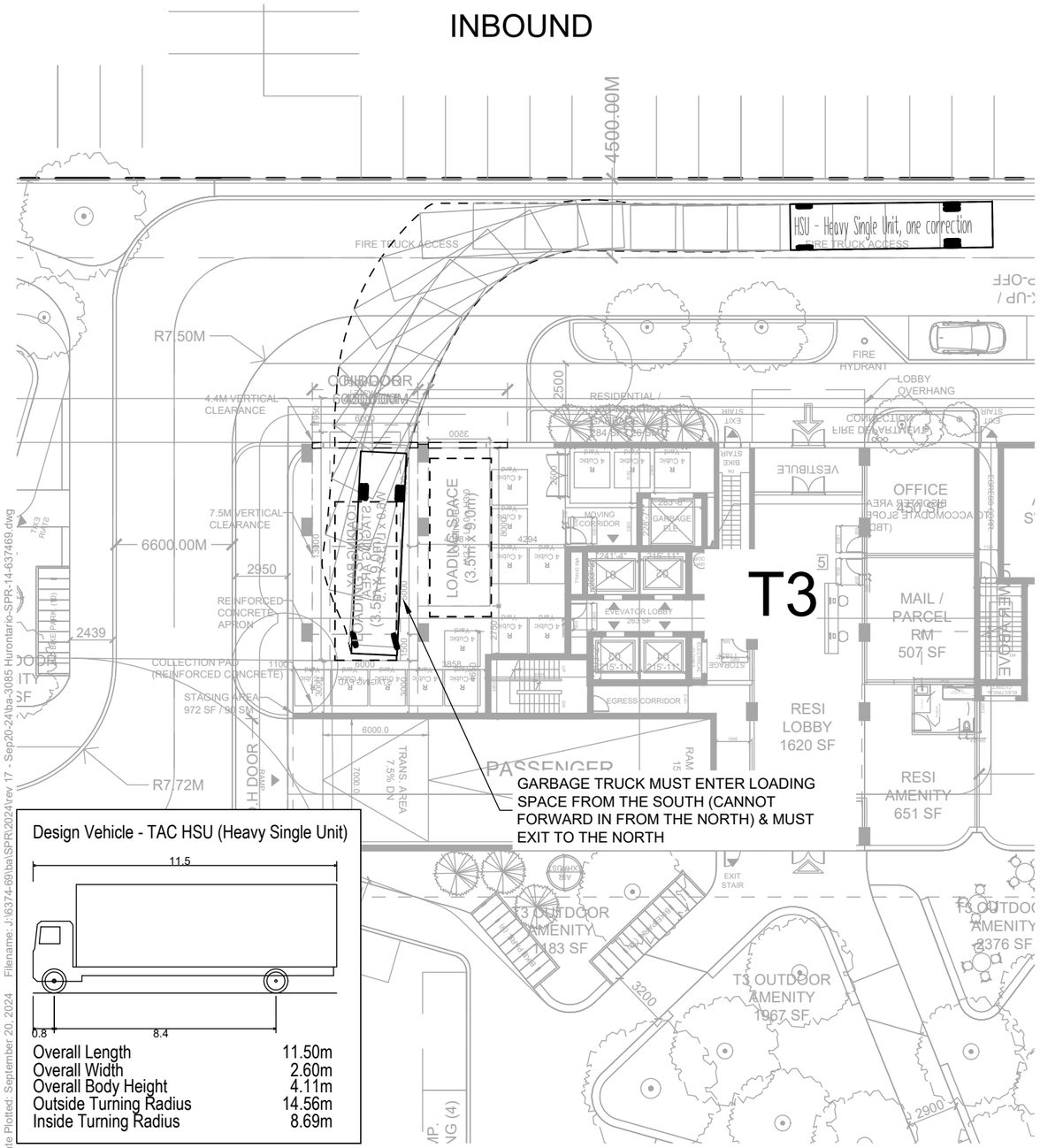
(Excerpt from City of Mississauga City of Mississauga Zoning By-law Table 3.1.6,6 - Required Number of Bicycle Parking Spaces for Non-Residential Uses)

Type of Use	Bicycle Parking Requirement (Spaces)	
	Bicycle Parking Class A (Long Term)	Bicycle Parking Class B (Short Term)
Active Recreational Use, Community Centre, Hospital, Library, Place of Religious Assembly, and Recreational Establishment	0.1 spaces per 100m^2 GFA-non-residential	0.1 spaces per 100m^2 GFA-non-residential
Active Recreational Use, Community Centre, Hospital, Library, Place of Religious Assembly, and Recreational Establishment (within CCI to CC4 and CCO zones)	0.3 spaces per 100m^2 GFA-non-residential	0.3 spaces per 100m^2 GFA-non-residential
College, University	1.0 spaces per 100 m^2 GFA non-residential	1.2 spaces per 100 m^2 GFA non-residential
College, University (within CCI to CC4 and CCO zones)	1.0 spaces per 100 m^2 GFA non-residential	1.2 spaces per 100 m^2 GFA non-residential
Contractor's Yard, Essential Emergency Service, Power Generating Facility, Self Storage Facility, Utilities (Electric Transformer and Distribution Facility, Sewage Treatment Plant, Utility Building, Water Treatment Facility) and Waste Transfer Station	n/a	2.0 spaces
Education and Training Facility, Financial Institution, Manufacturing Facility, Science and Technology Facility, Warehouse/Distribution Facility, and Wholesaling Facility	0.1 spaces per 100 m^2 GFA non-residential	2.0 spaces

Education and Training Facility, Financial Institution, Manufacturing Facility, Science and Technology Facility, Warehouse/Distribution Facility, and Wholesaling Facility (within CCI to CC4 and CCO zones)	0.15 spaces per 100 m^2 GFA non-residential	0.15 spaces per 100 m^2 GFA non-residential
Entertainment Establishment, Restaurant, Convenience Restaurant, Take-out Restaurant non-residential Retail Centre, Retail Store, and Service Establishment	0.15 spaces per 100 m^2 GFA non-residential	0.2 spaces per 100 m^2 GFA non-residential
Entertainment Establishment, Restaurant, Convenience Restaurant, Take-out Restaurant non-residential Retail Centre, Retail Store, and Service Establishment (within CCI to CC4 and CCO zones)	0.15 spaces per 100 m^2 GFA non-residential	0.2 spaces per 100 m^2 GFA nonresidential
Medical Office and Medical Office - Restricted	0.1 spaces per 100 m^2 GFA non-residential	0.1 spaces per 100 m^2 GFA non-residential
Medical Office and Medical Office - Restricted (within CCI to CC4 and CCO zones)	0.15 spaces per 100 m^2 GFA non-residential	0.2 spaces per 100 m^2 GFA non-residential
Office	0.1 spaces per 100 m^2 GFA non-residential	0.1 spaces per 100 m^2 GFA non-residential
Office (within CCI to CC4 and CCO zones)	0.15 spaces per 100 m^2 GFA non-residential	0.2 spaces per 100 m^2 GFA non-residential
Public School and Private School	0.1 spaces per 100 m^2 GFA non-residential	0.4 spaces per 100 m^2 GFA non-residential
Public School/Private School (within CCI to CC4 and CCO zones)	0.1 spaces per 100 m^2 GFA non-residential	0.4 spaces per 100 m^2 GFA non-residential
All other non-residential uses	0.05 spaces per 100 m^2 GFA non-residential	0.1 spaces per 100 m^2 GFA non-residential
All other non-residential uses (within CCI to CC4 and CCO zones)	0.05 spaces per 100 m^2 GFA non-residential	0.1 spaces per 100 m^2 GFA non-residential

Appendix D:
Vehicle Manoeuvring Diagrams

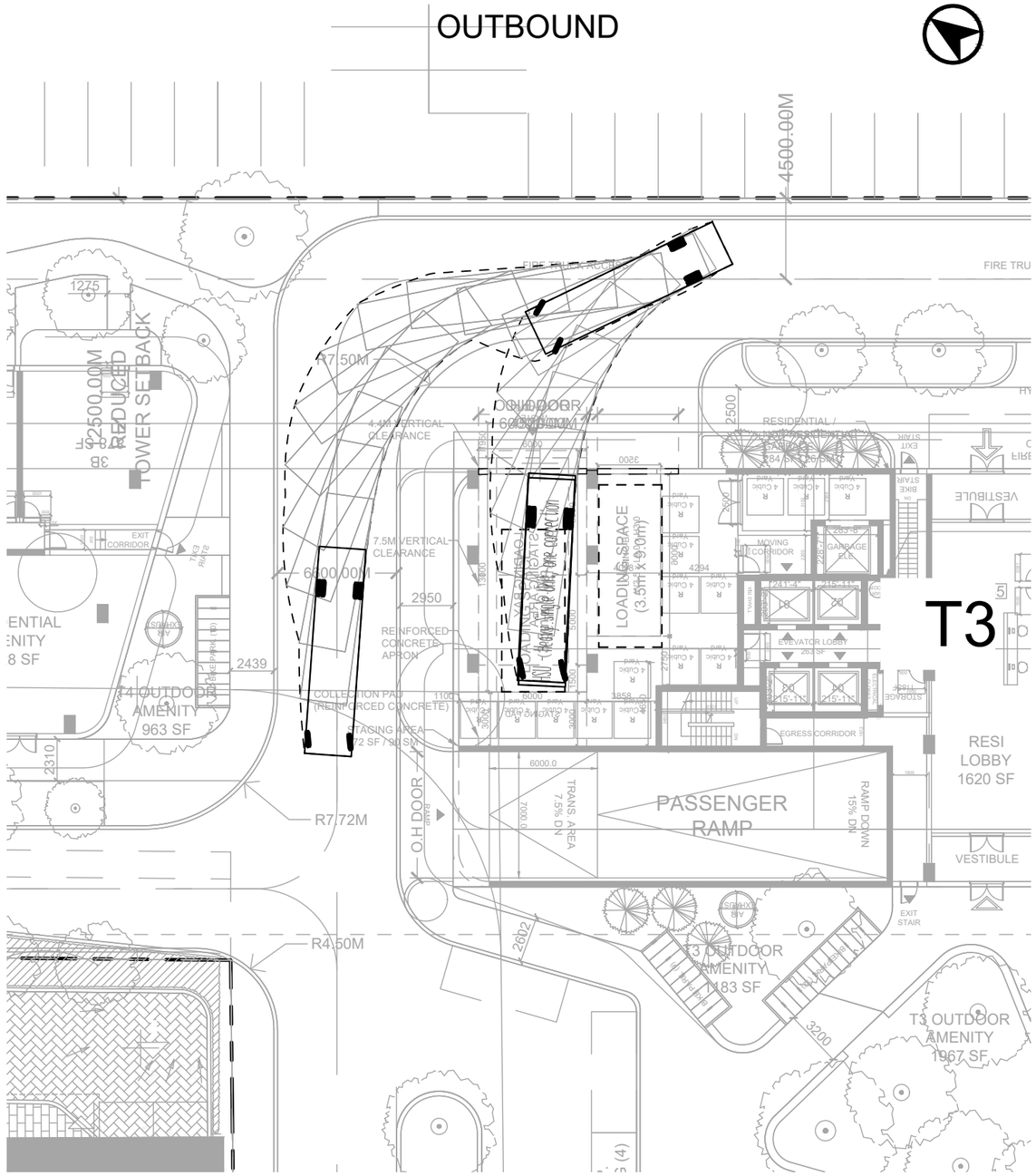
INBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

OUTBOUND



3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM - TOWER 3

WASTE COLLECTION VEHICLE - FRONT END GARBAGE TRUCK

BA Group

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

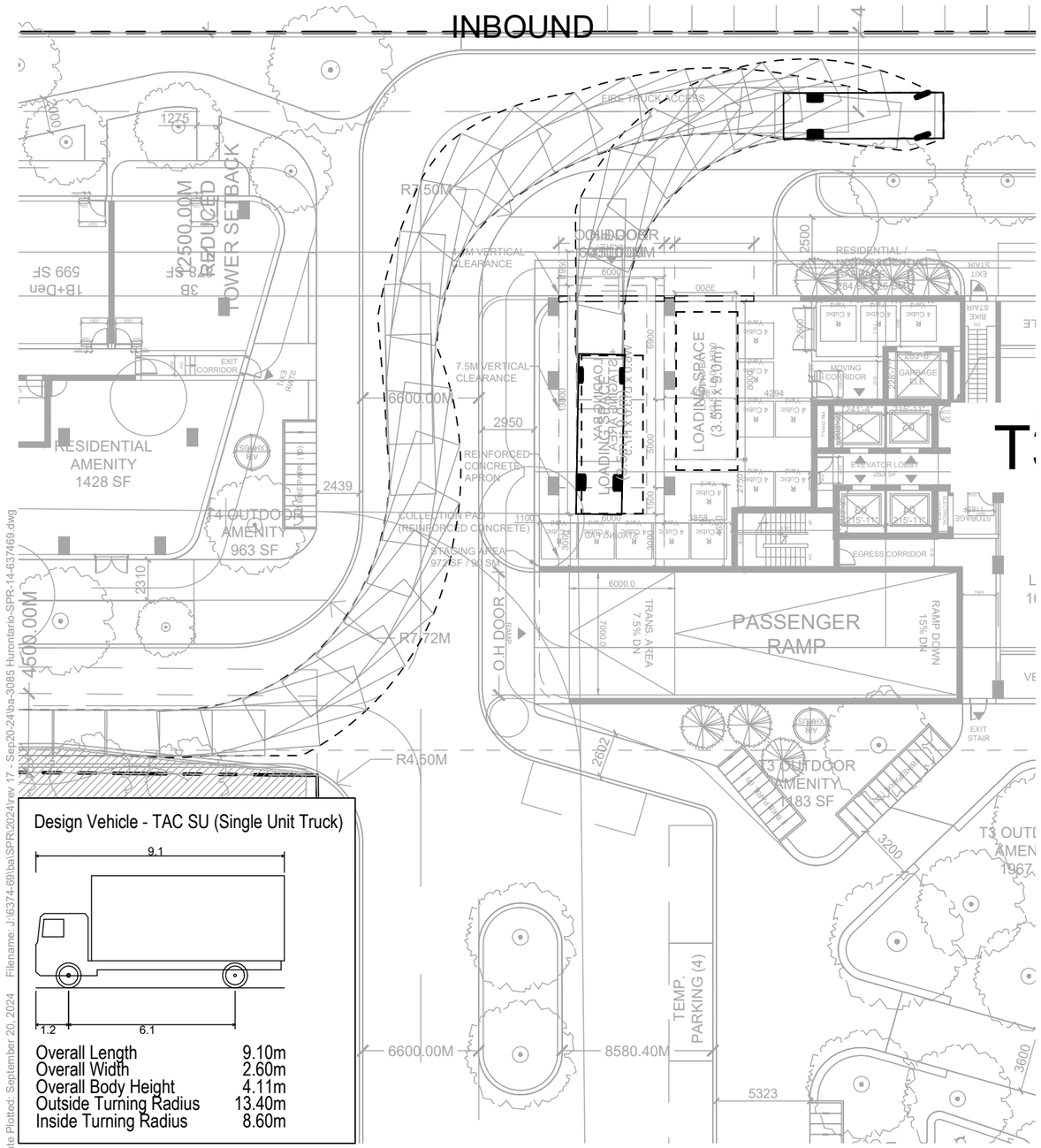
Scale 1:300 (0 – 5 – 10m)

Drawing No. VMD-01

Date Plotted: September 20, 2024 Filename: J:\6374-69\bat\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

INBOUND

OUTBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17_ Sep20-24\ba-3085 Hurontario-SPR-1

BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM - TOWER 3

TAC SINGLE UNIT TRUCK

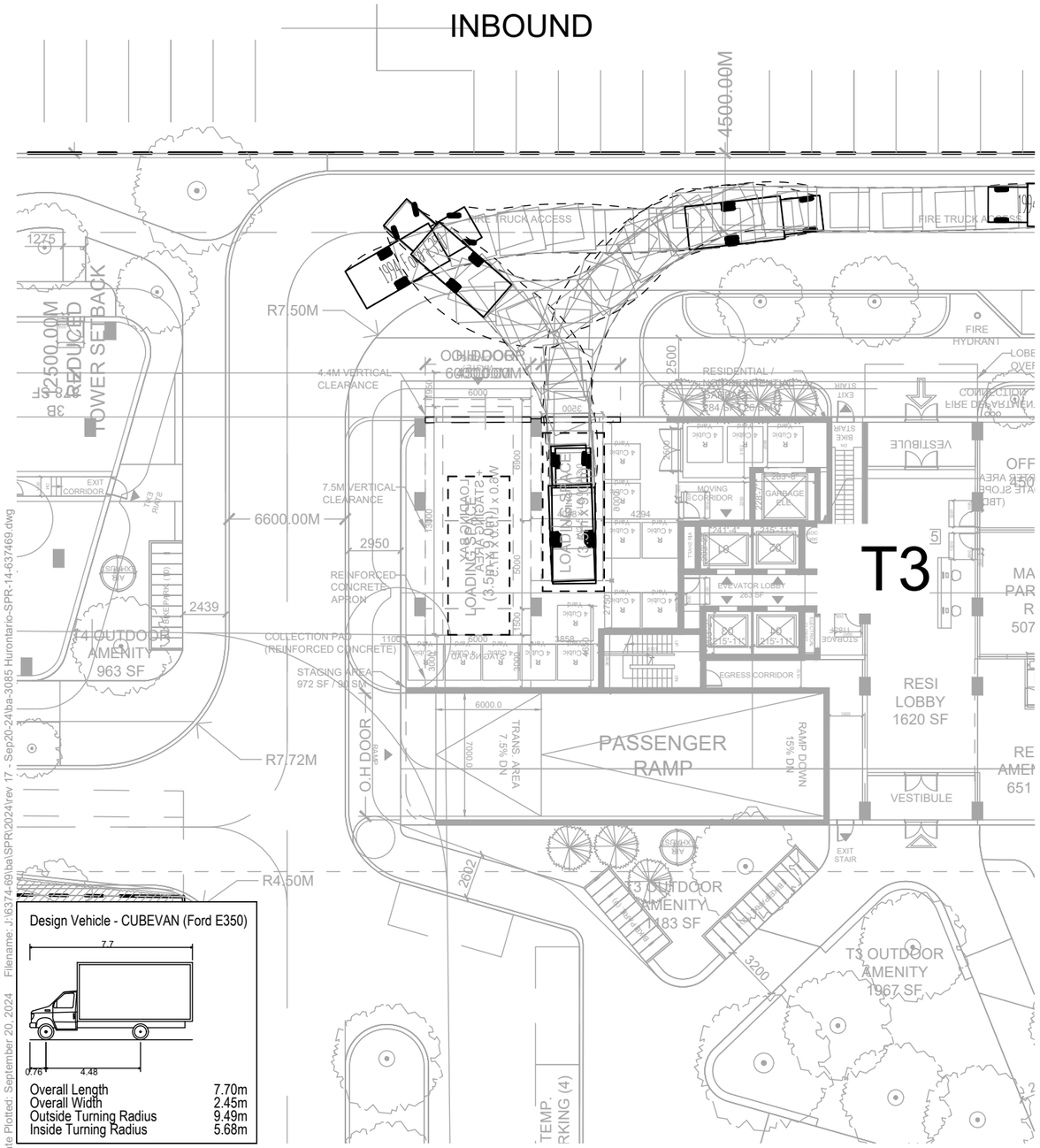
Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:300 (0, 5, 10m)

Drawing No. VMD-02

INBOUND

OUTBOUND



Design Vehicle - CUBEVAN (Ford E350)

Overall Length	7.70m
Overall Width	2.45m
Outside Turning Radius	9.49m
Inside Turning Radius	5.68m

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM

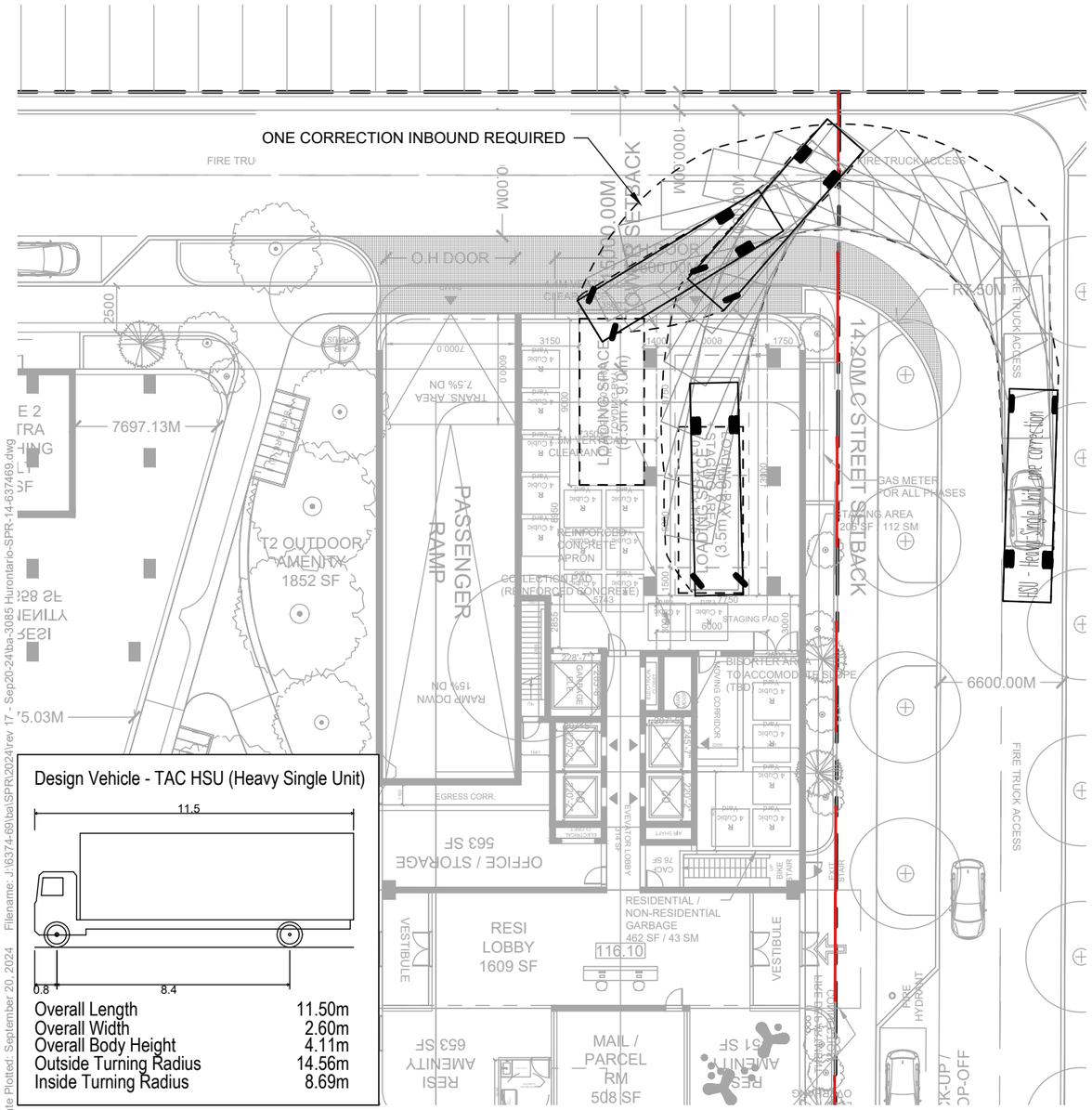
T3 LOADING SPACE - CUBE VAN (FORD E350)

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

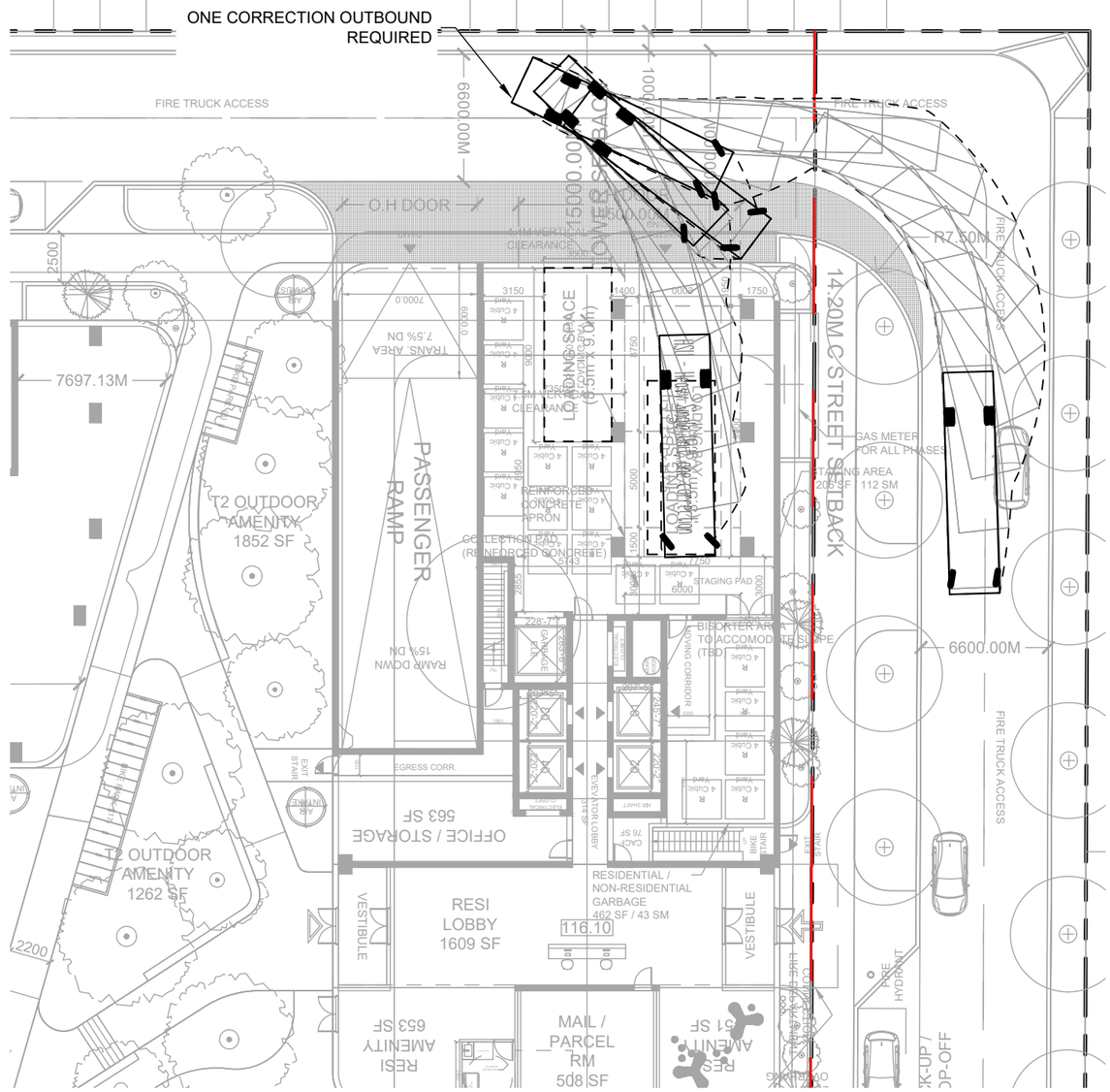
Scale 1:300 — 0 5 10m

Drawing No. VMD-03

INBOUND



OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM - TOWER 2

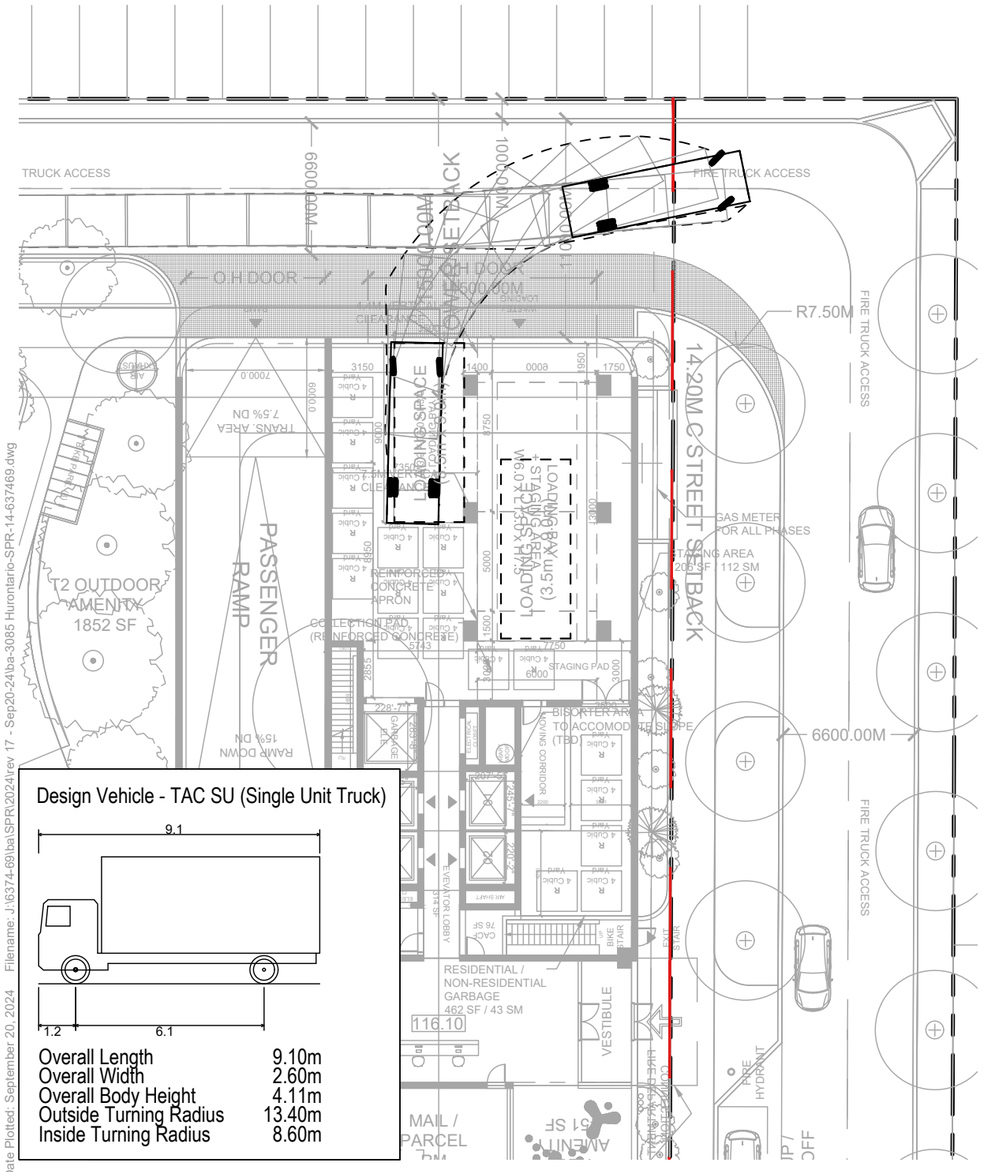
WASTE COLLECTION VEHICLE - FRONT END GARBAGE TRUCK

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:300 (0 5 10m)

Drawing No. VMD-04

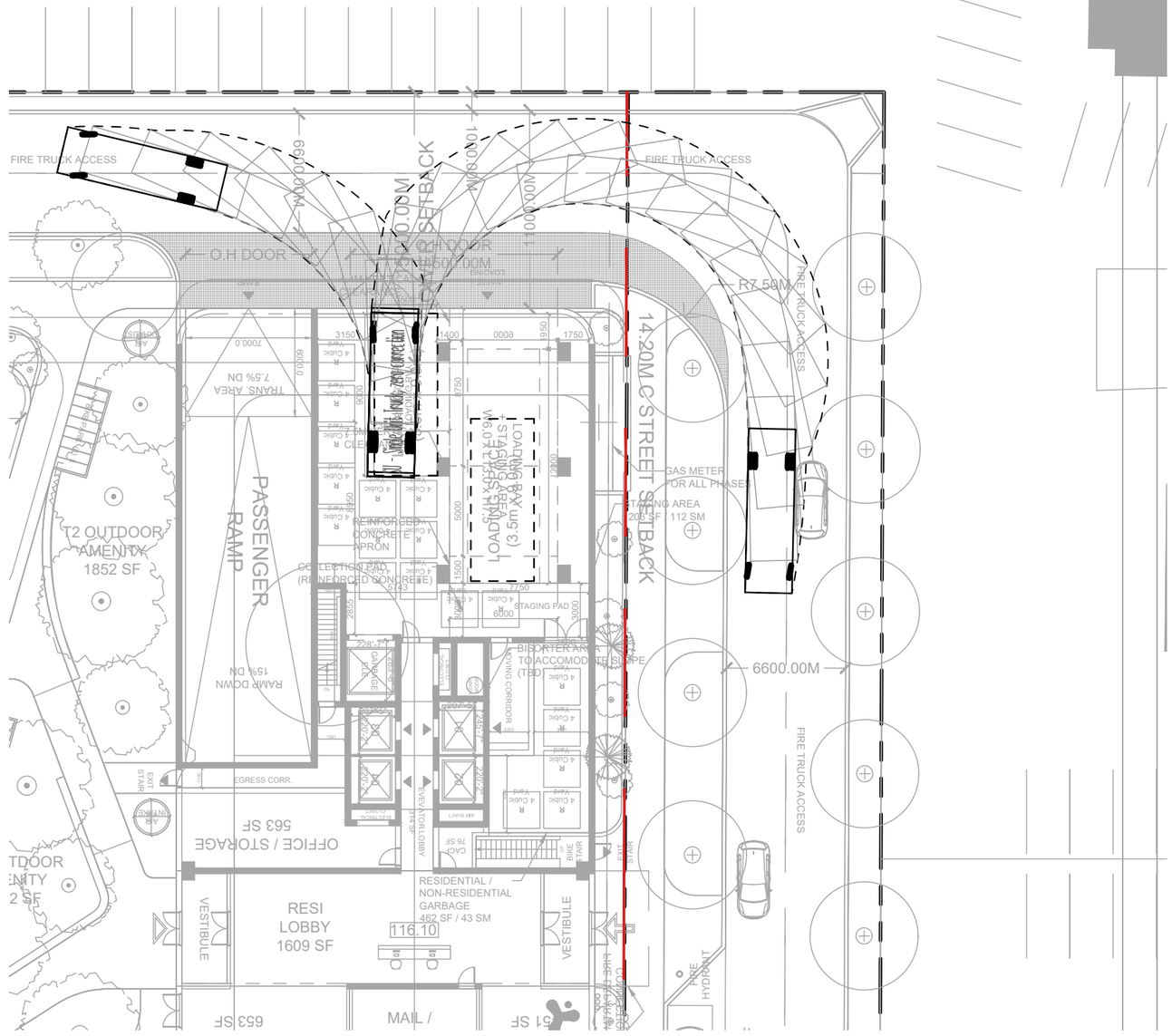
INBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

OUTBOUND



BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM - TOWER 2

TAC SINGLE UNIT TRUCK

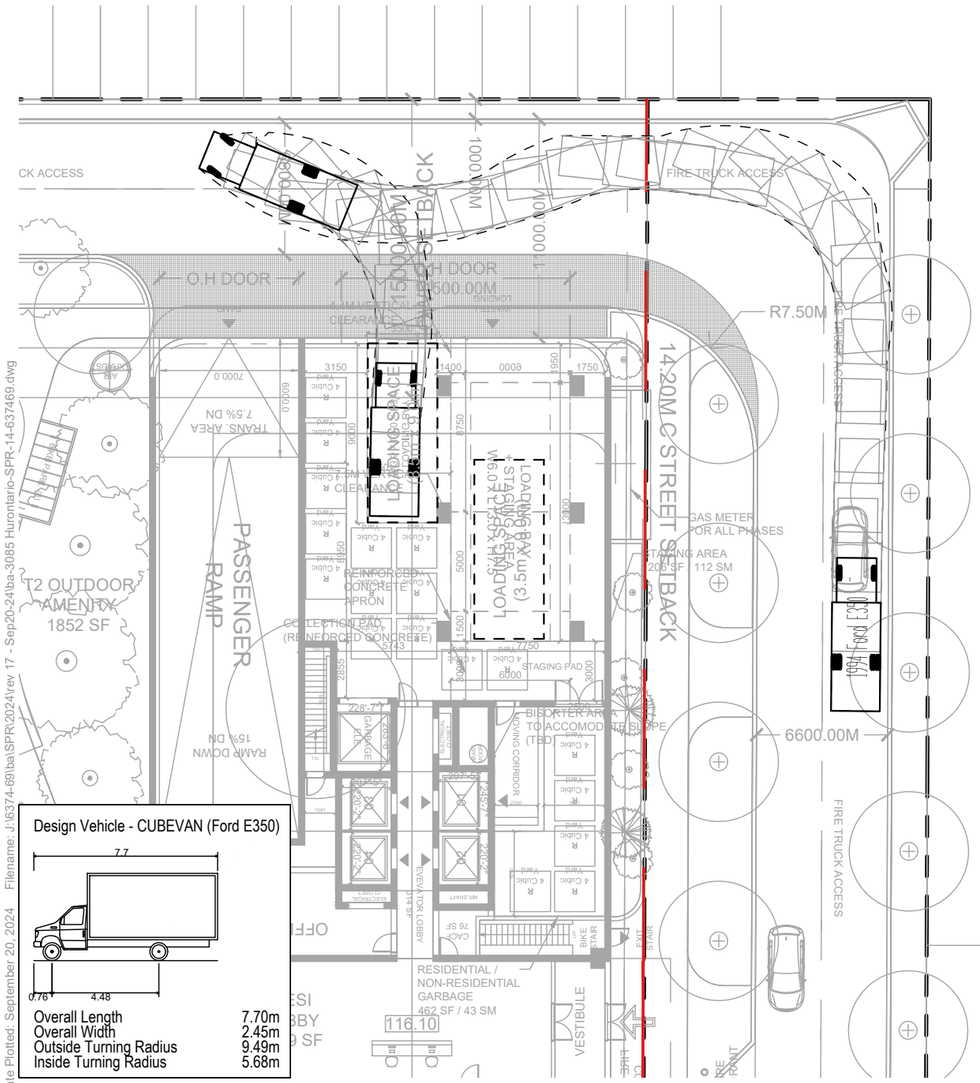
Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:300 (0, 5, 10m)

Drawing No. VMD-05

INBOUND

OUTBOUND



Design Vehicle - CUBEVAN (Ford E350)

Overall Length	7.70m
Overall Width	2.45m
Outside Turning Radius	9.49m
Inside Turning Radius	5.68m

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM

T2 LOADING SPACE - CUBE VAN (FORD E350)

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

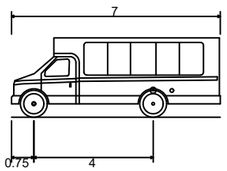
Scale 1:300 (0, 5, 10m)

Drawing No. VMD-06

TRANSHELP VEHICLE

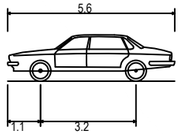
TAC P CAR

Design Vehicle - MISSISSAUGA TRANSHELP
(1995 Ford E350)



Overall Length	7.00m
Overall Width	2.45m
Overall Body Height	2.66m
Outside Turning Radius	8.67m
Inside Turning Radius	5.03m

Design Vehicle - TAC P CAR



Overall Length	5.60m
Overall Width	2.00m
Overall Body Height	1.56m
Outside Turning Radius	6.91m
Inside Turning Radius	3.40m

BA Group

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM
PICK-UP / DROP-OFF AREA
MISSISSAUGA TRANS HELP VEHICLE

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

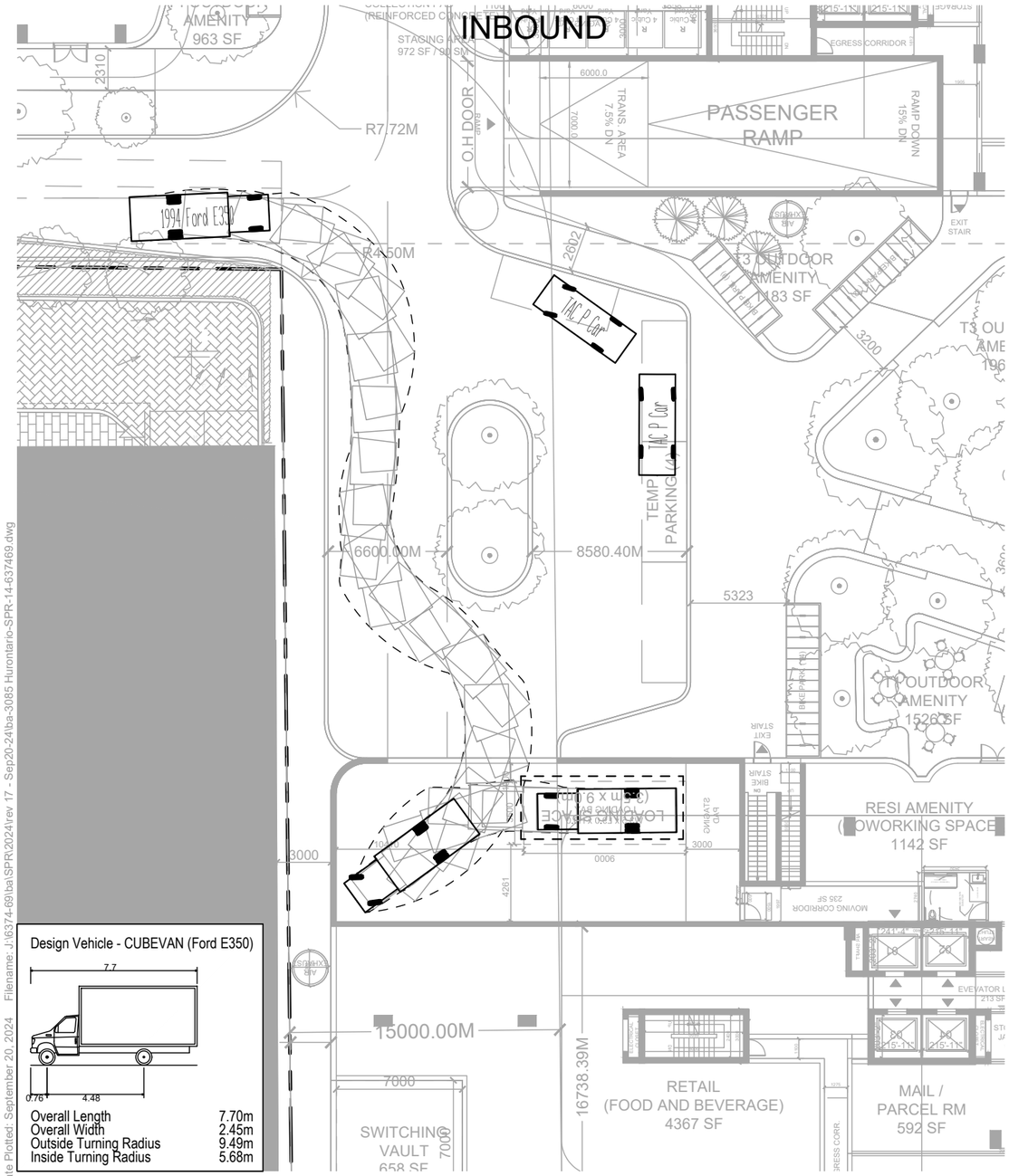
Scale 1:300 (0, 5, 10m)

Drawing No. VMD-07

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

INBOUND

OUTBOUND



Design Vehicle - CUBEVAN (Ford E350)

Overall Length	7.70m
Overall Width	2.45m
Outside Turning Radius	9.49m
Inside Turning Radius	5.68m

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3080 HURONTARIO ROAD

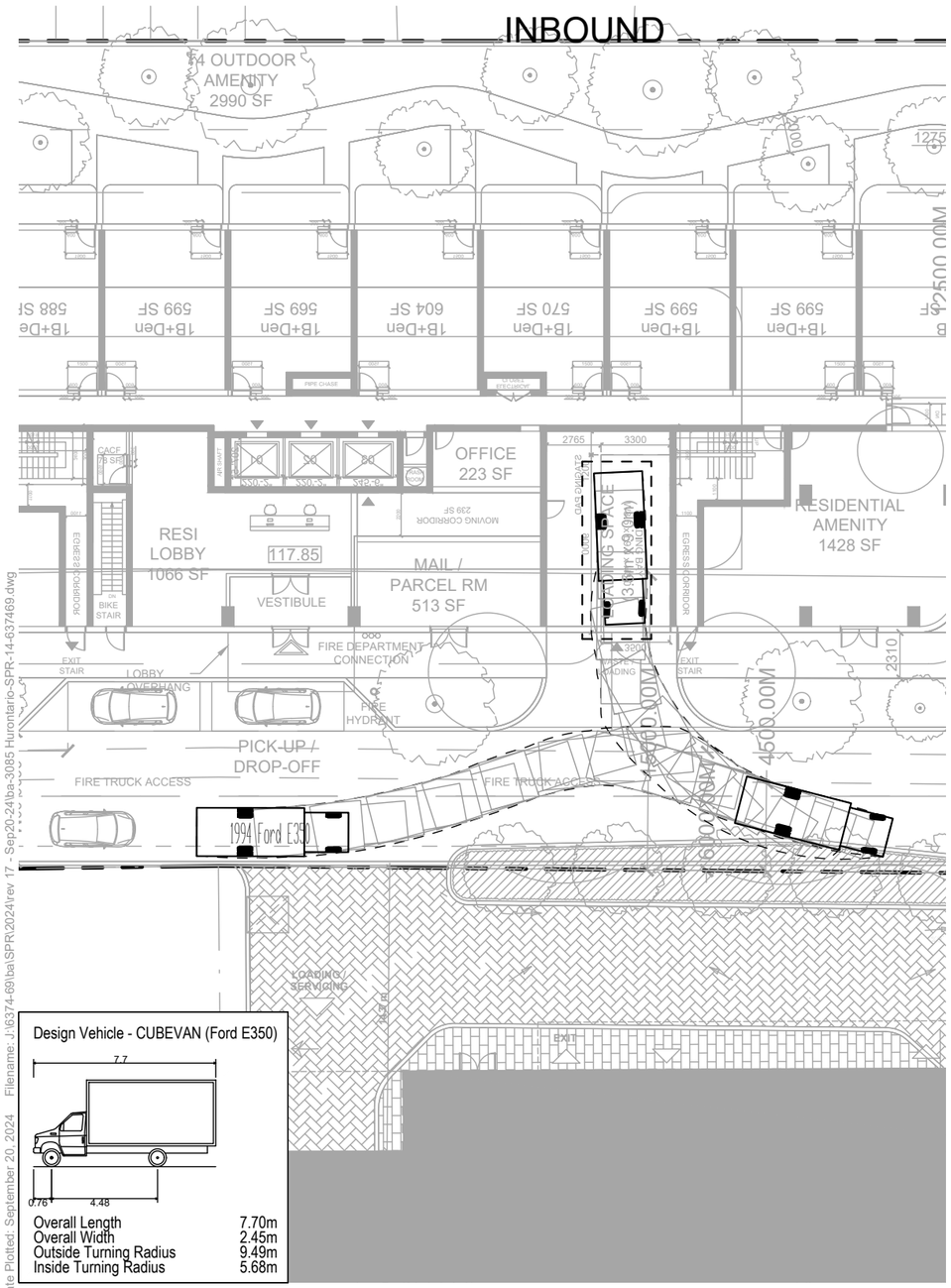
VEHICLE MANOEUVRING DIAGRAM

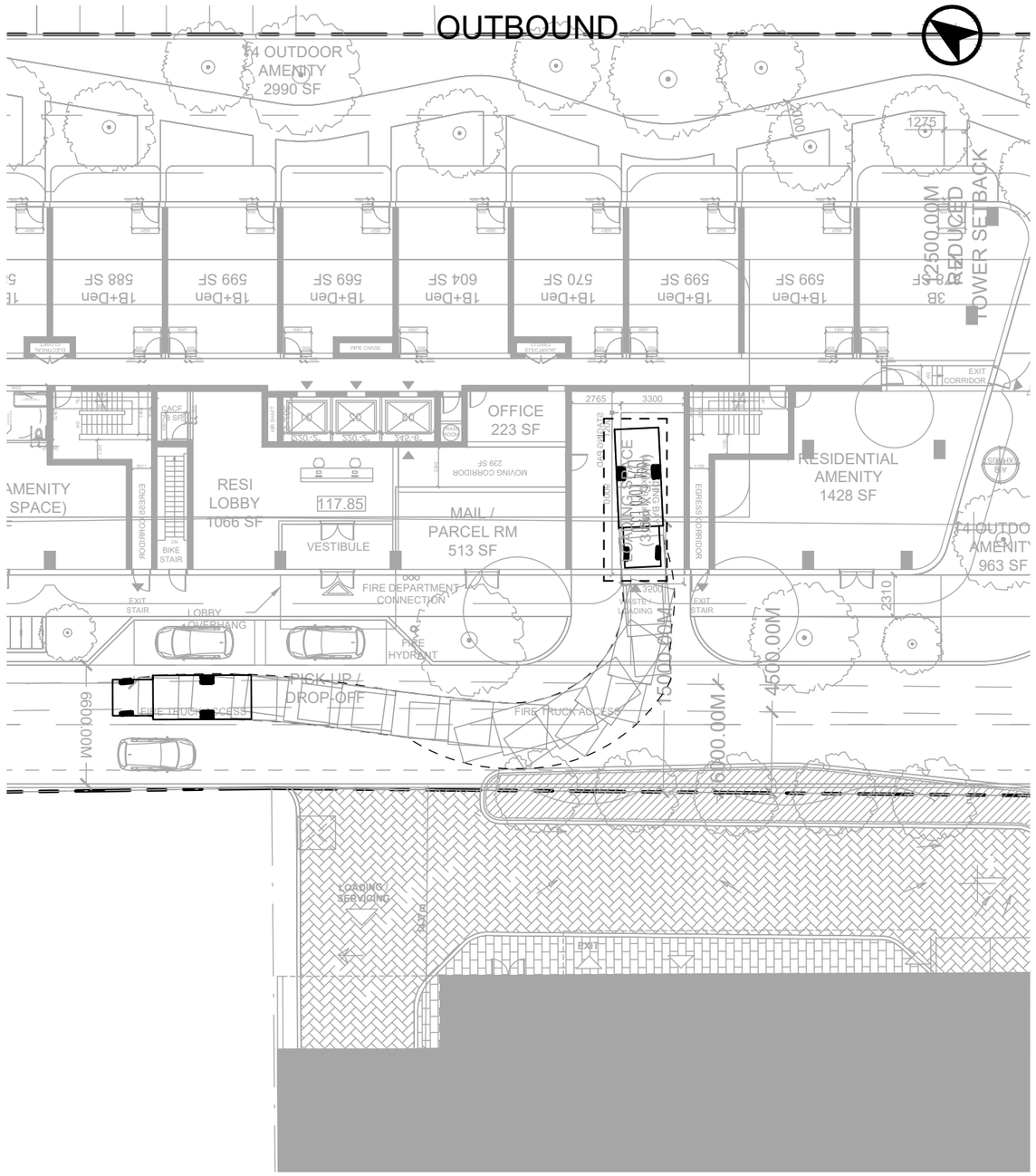
T1 LOADING SPACE - CUBE VAN (FORD E350)

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:300 (0 5 10m)

Drawing No. VMD-08





Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

3080 HURONTARIO ROAD

VEHICLE MANOEUVRING DIAGRAM

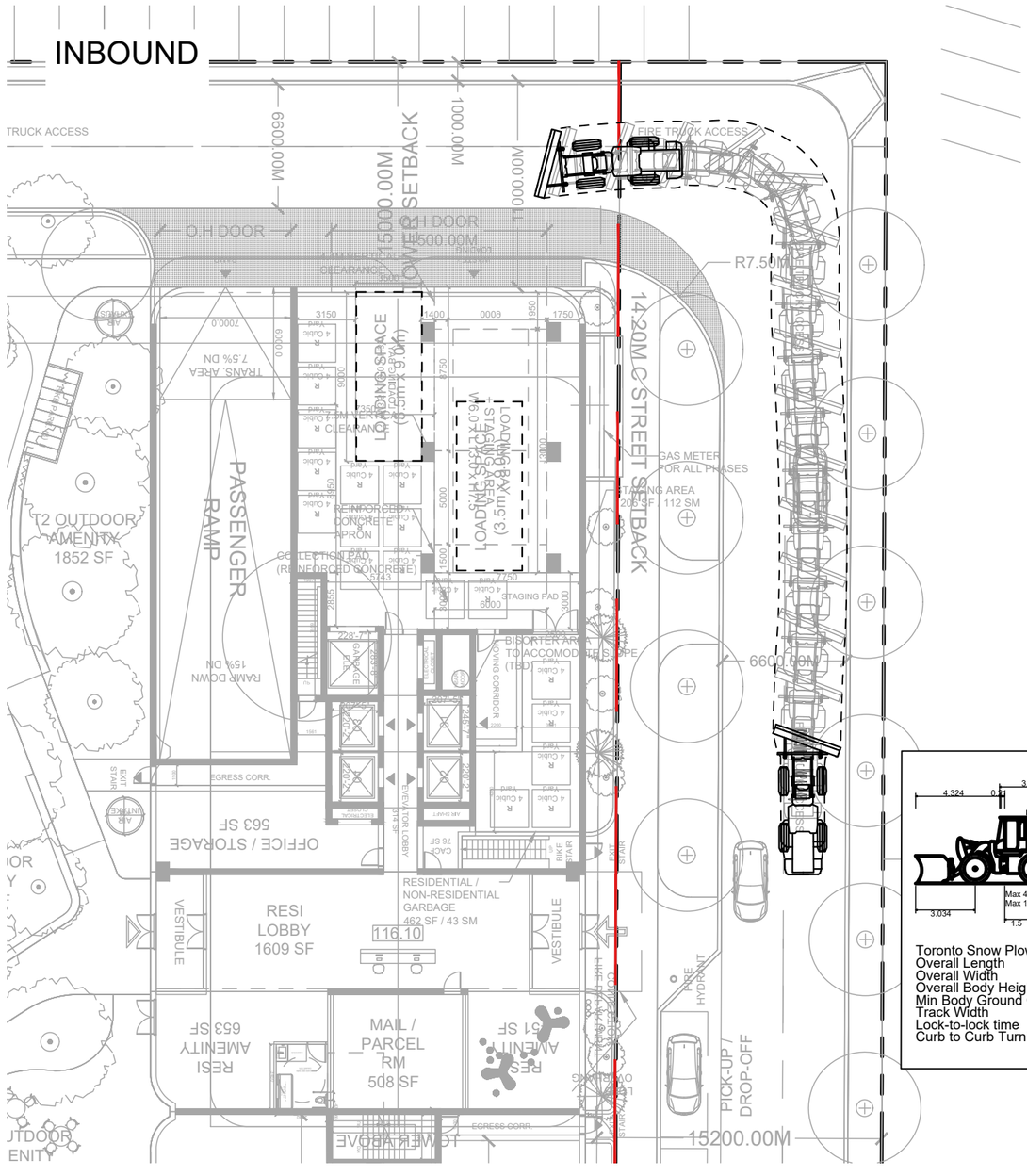
T4 LOADING SPACE - CUBE VAN (FORD E350)

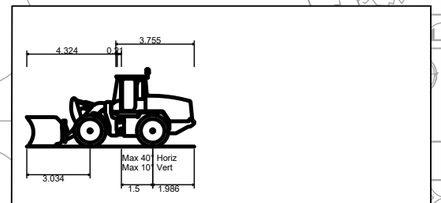
Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:300 (0, 5, 10m)

Drawing No. VMD-09

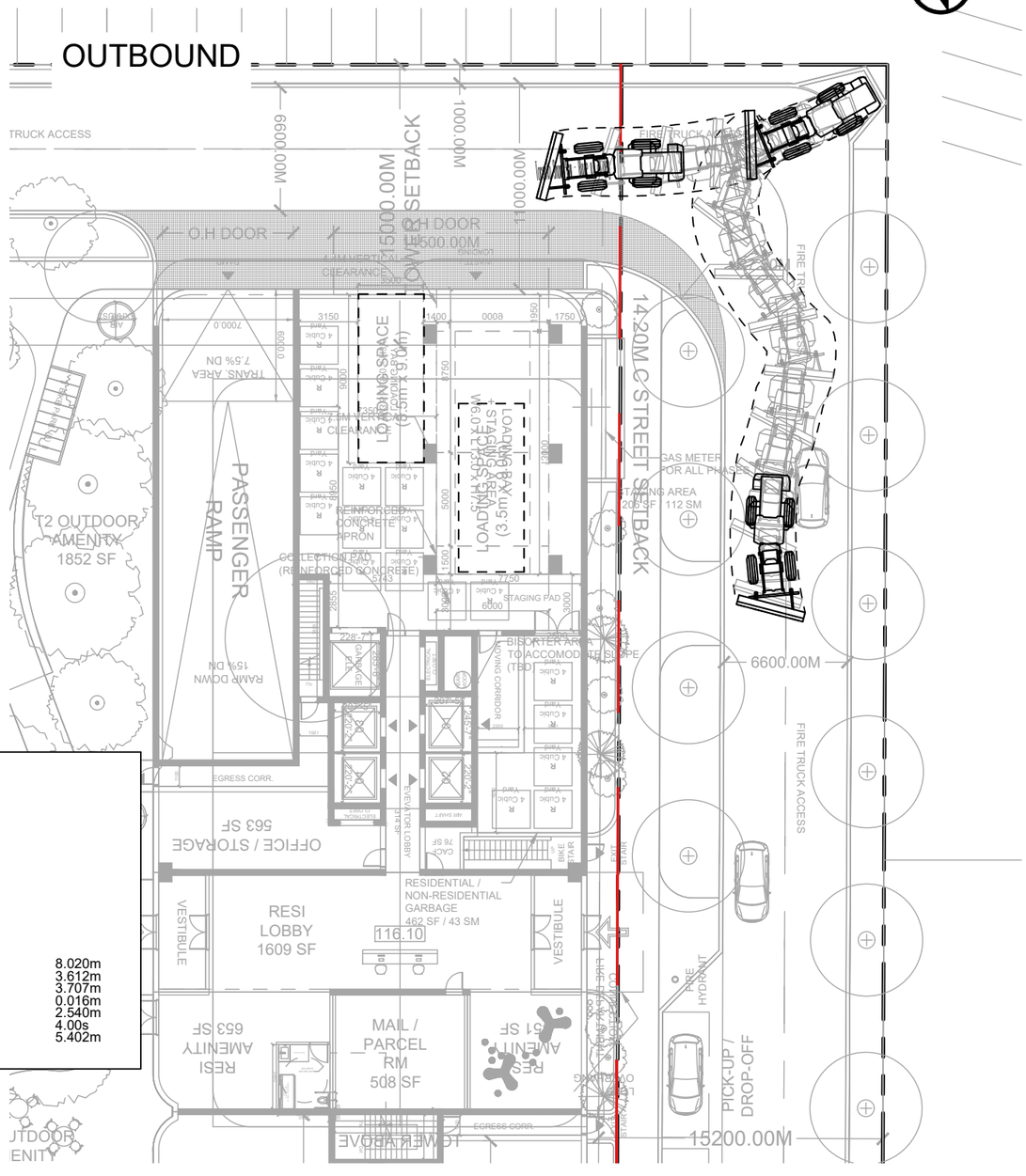
INBOUND





Toronto Snow Plow - Blade at 20 deg	
Overall Length	8.020m
Overall Width	3.612m
Overall Body Height	3.707m
Min Body Ground Clearance	0.016m
Track Width	2.540m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.402m

OUTBOUND



VEHICLE MANOEUVRING DIAGRAM

TURN-AROUND

SNOW PLOUGH

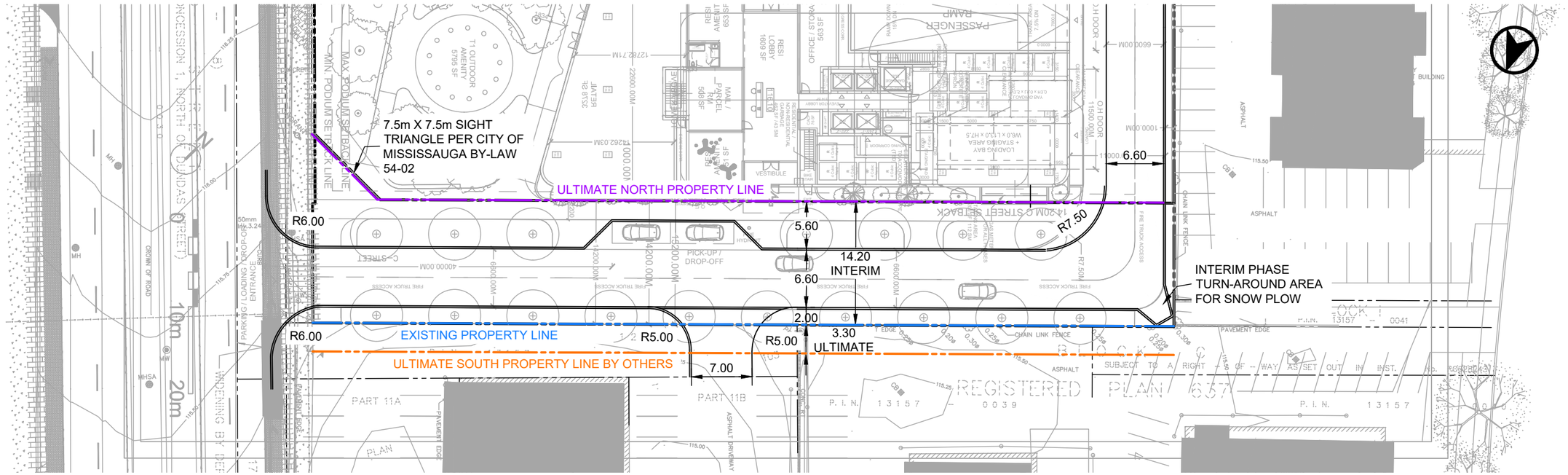
Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

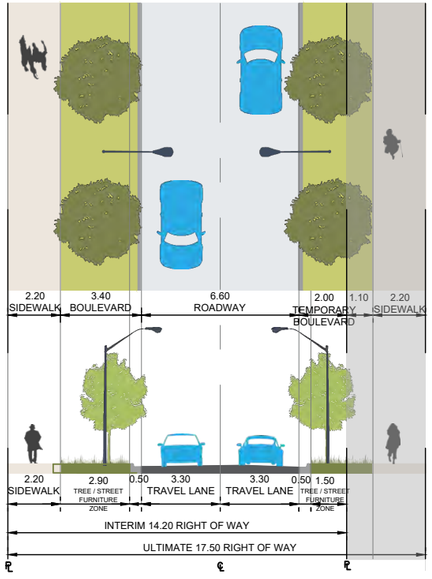
Scale 1:300 (0 – 5 – 10m)

Drawing No. VMD-10

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

Appendix E:
Functional Road Plan





Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\Road Plan\20241\1. September 20, 2024\BA-3085 Hurontario St-FD-R04-637469.dwg

BA Group

3085 HURONTARIO STREET

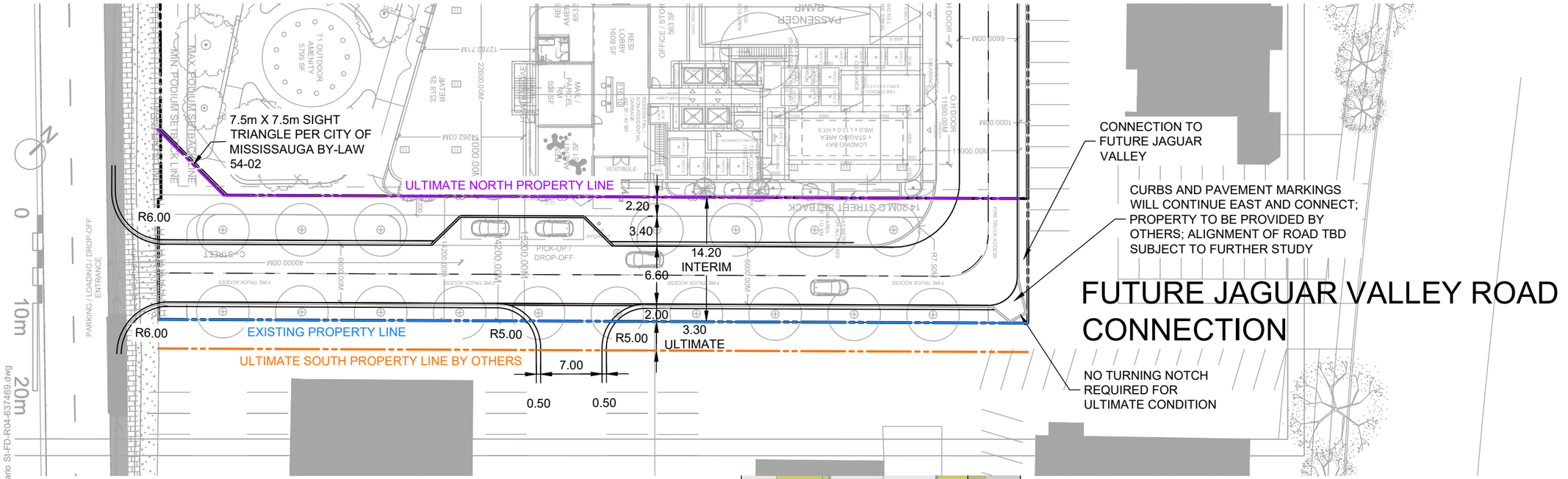
PROPOSED E-W STREET DESIGN

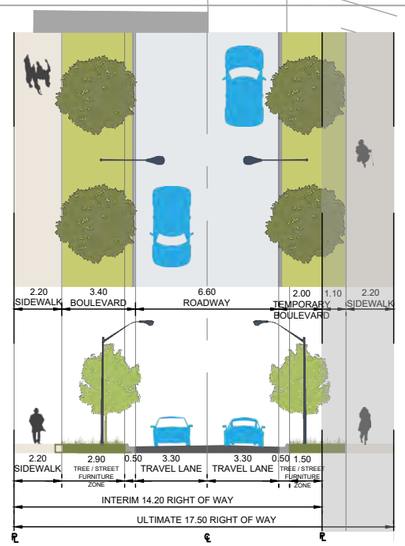
INTERIM 14.2m ROW

Project:	3085 HURONTARIO ST
Project No.	6374-69
Date:	September 20, 2024
Revised:	

Scale 1:500 — 0 5 10 15 20m

Drawing No. FD-01-INT





BA Group

3085 HURONTARIO STREET

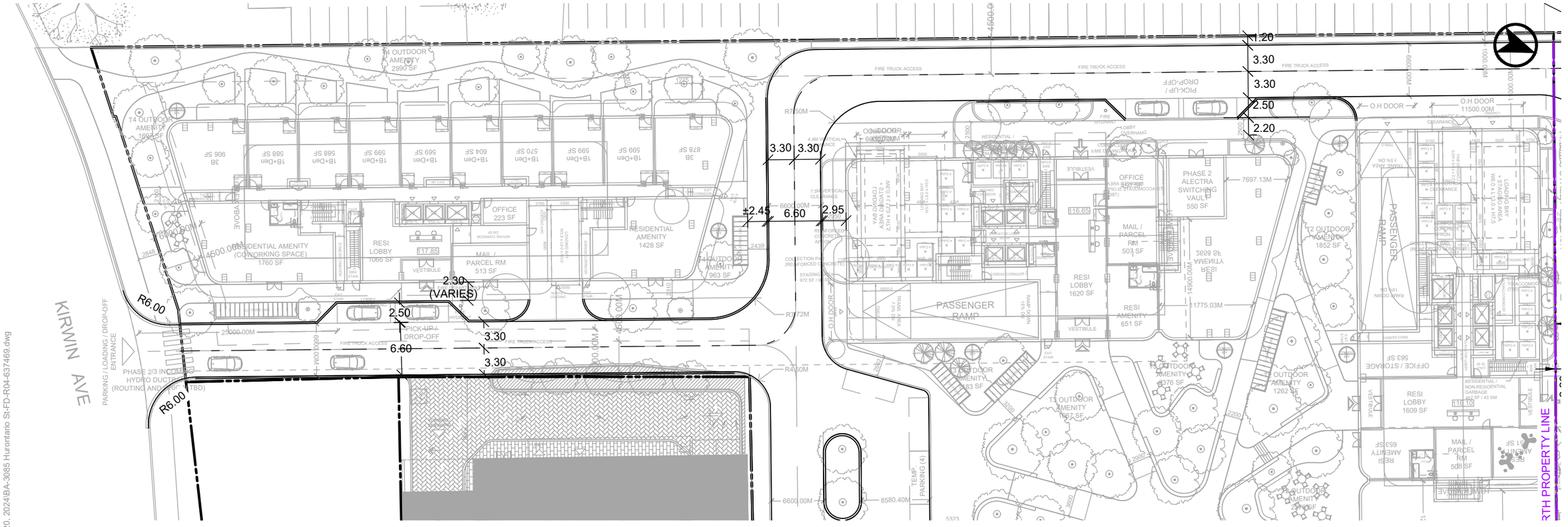
PROPOSED E-W STREET DESIGN

ULTIMATE 17.5m ROW

Project:	3085 HURONTARIO ST
Project No.	6374-69
Date:	September 20, 2024
Revised:	

Scale 1:500 (0 5 10 15 20m)

Drawing No. FD-01-ULT



Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\Road Plan\20241\ September 20, 2024IBA-3085 Hurontario St-FD-R04-637469.dwg

BA Group

3085 HURONTARIO STREET

PROPOSED PRIVATE N-S STREET DESIGN

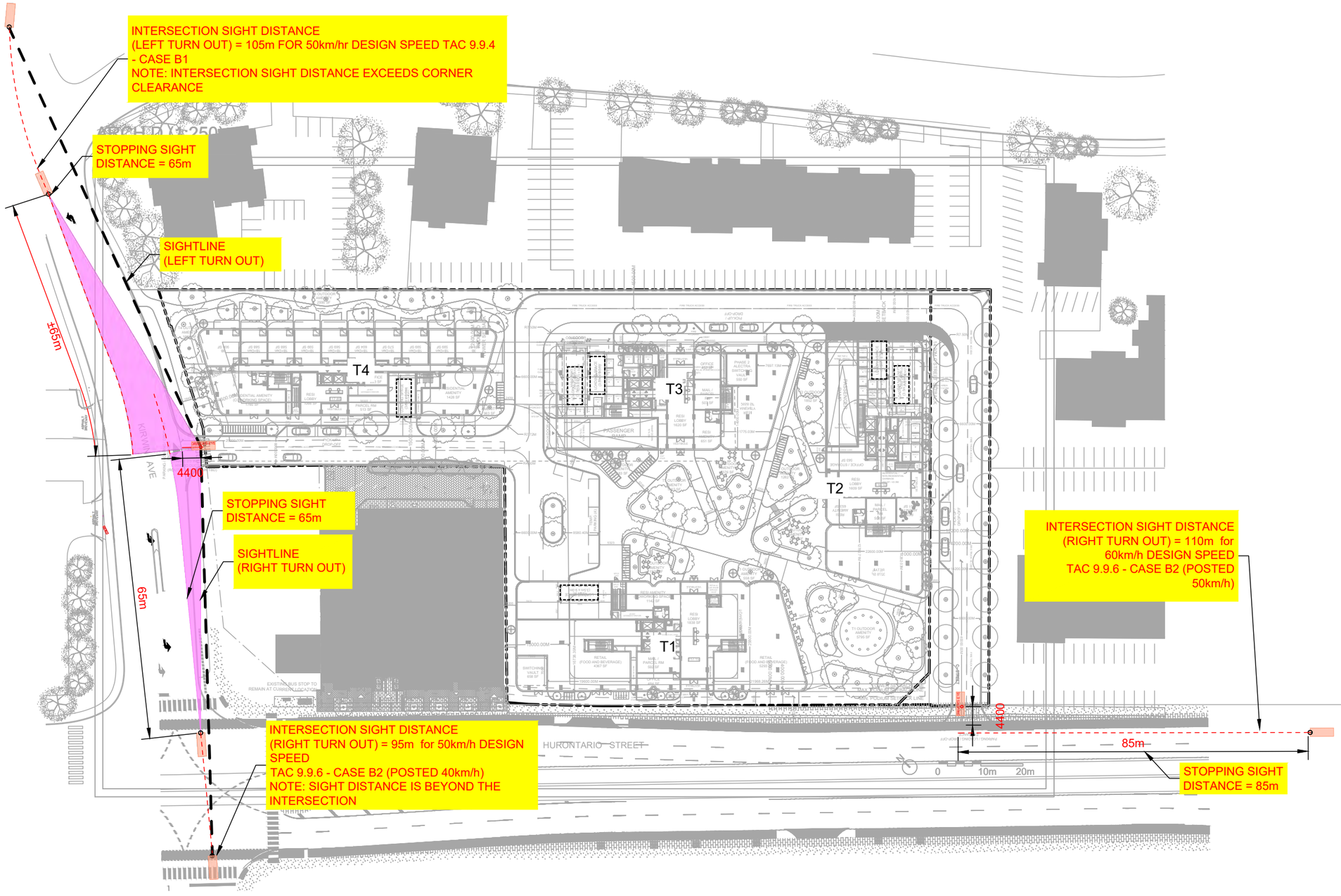
6.60m PAVEMENT WIDTH

Project:	3085 HURONTARIO ST
Project No.	6374-69
Date:	September 20, 2024
Revised:	

Scale 1:500 (0 5 10 15 20m)

Drawing No. FD-02

Appendix F:
Site Access Plan



GF

Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3085 HURONTARIO ROAD

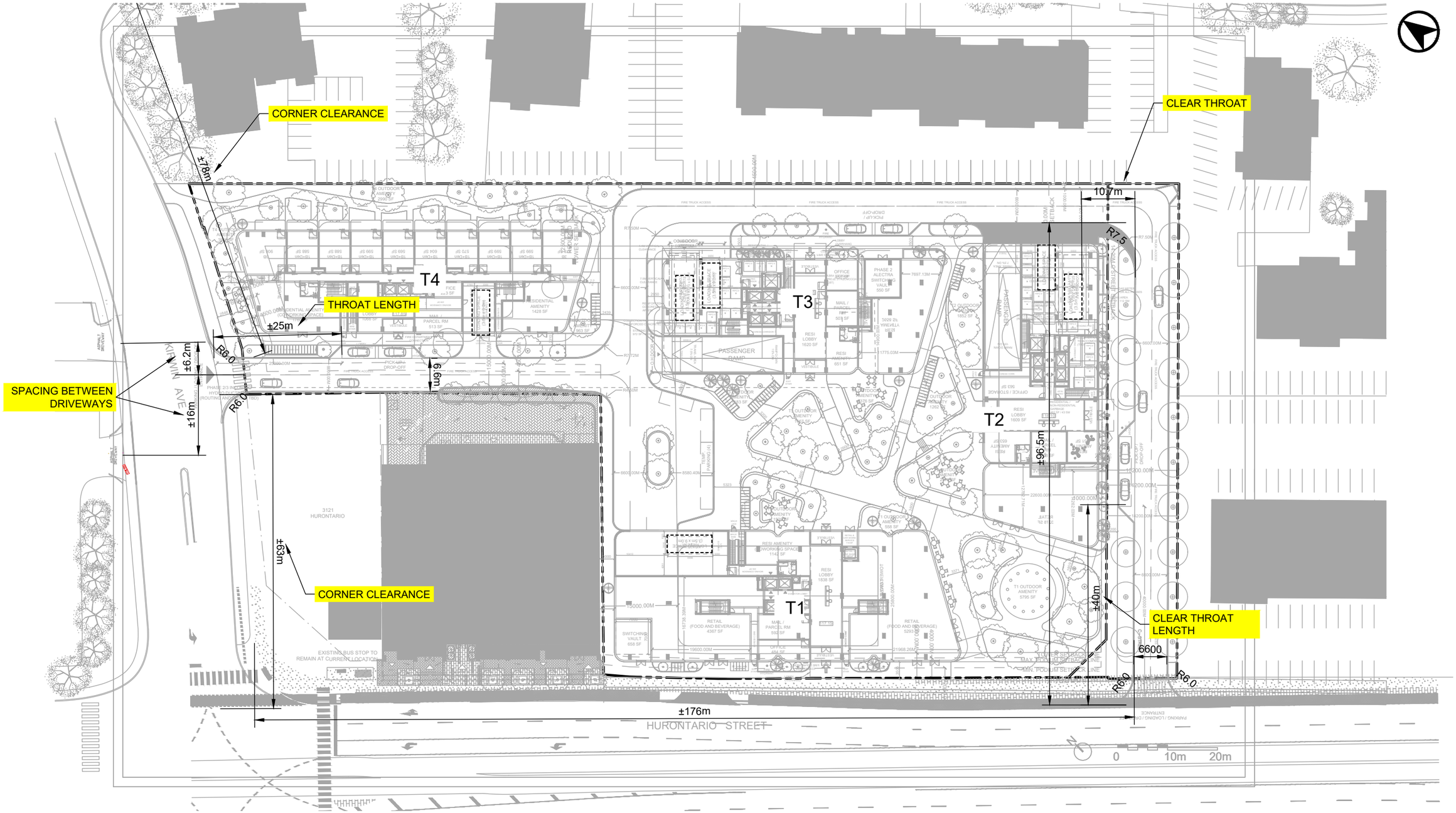
DRIVEWAY REVIEW

INTERSECTION SIGHT DISTANCE

Project:	3085 Hurontario
Project No.	6374-69
Date:	September 1, 2023
Revised:	September 20, 2024

Scale 1:1,000 (0, 10, 20, 30, 40, 50m)

Drawing No. ISD-1



Date Plotted: September 20, 2024 Filename: J:\6374-69\ba\SPR\2024\rev 17 - Sep20-24\ba-3085 Hurontario-SPR-14-637469.dwg

BA Group

3085 HURONTARIO ROAD

SITE ACCESS REVIEW

CORNER CLEARANCE, DRIVEWAY THROAT LENGTH

Project:	3085 Hurontario
Project No.	6374-69
Date:	October 21, 2022
Revised:	September 20, 2024

Scale 1:750 (0, 15, 30m)

Drawing No. SA-1

Appendix G:
TTS Query Sheets

AM	**RESIDENTIAL VEHICLE TRIP DISTRIBUTION**
Outbound	**Traffic Volume Allocation**
2023-09-01	

Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	80	2%			80%		20%			100.00%
PD 3 of Toronto	60	2%	50%		40%		10%			100.00%
PD 5 of Toronto	12	0%	50%		40%		10%			100.00%
PD 7 of Toronto	13	0%			90%		10%			100.00%
PD 8 of Toronto	28	1%	40%		40%		20%			100.00%
PD 9 of Toronto	93	3%	50%		40%		10%			100.00%
PD 10 of Toronto	44	1%	50%		40%		10%			100.00%
PD 11 of Toronto	8	0%	50%		40%		10%			100.00%
PD 16 of Toronto	24	1%	50%		30%		20%			100.00%
Markham	55	2%	50%		30%		20%			100.00%
Vaughan	39	1%	80%		20%					100.00%
Brampton	132	4%	100%							100.00%
Oakville	163	5%			80%				20%	100.00%
Burlington	97	3%			100%					100.00%
Stoney Creek	12	0%			100%					100.00%
Barrie	16	0%	50%		20%		30%			100.00%
Brantford	24	1%			100%					100.00%
3606	54	2%	10%	90%						100.00%
3608	45	1%	10%	90%						100.00%
3609	65	2%	100%							100.00%
3612	33	1%		100%						100.00%
3613	13	0%		100%						100.00%
3614	19	1%			40%	30%			30%	100.00%
3618	56	2%	50%	50%						100.00%
3621	25	1%	90%				10%			100.00%
3626	28	1%	100%							100.00%
3632	45	1%			100%					100.00%
3634	45	1%	30%	30%					40%	100.00%
3635	16	0%	30%	30%					40%	100.00%
3639	18	1%			40%	30%			30%	100.00%
3643	48	1%			50%		50%			100.00%
3648	58	2%			100%					100.00%
3649	146	4%			50%		50%			100.00%
3656	65	2%			20%				80%	100.00%
3657	15	0%			50%	50%				100.00%
3659	11	0%			50%		50%			100.00%
3660	40	1%			30%		70%			100.00%
3662	46	1%	30%	30%					40%	100.00%
3671	344	10%		30%				70%		100.00%
3673	94	3%	50%				50%			100.00%
3677	39	1%	50%	50%						100.00%
3686	12	0%	50%	50%						100.00%
3693	156	5%	100%							100.00%
3700	13	0%	100%							100.00%
3701	25	1%	100%							100.00%
3702	59	2%	100%							100.00%
3703	20	1%	100%							100.00%
3704	25	1%	100%							100.00%
3705	8	0%	100%							100.00%
3710	74	2%	100%							100.00%
3721	68	2%	100%							100.00%
3724	22	1%	100%							100.00%
3820	17	1%	100%							100.00%
3822	11	0%	100%							100.00%
3834	22	1%	50%	50%						100.00%
3847	12	0%	50%	50%						100.00%
3850	85	3%	50%	50%						100.00%
3851	55	2%	50%	50%						100.00%
3853	132	4%	50%	50%						100.00%
3859	35	1%	50%				50%			100.00%
3863	54	2%	100%							100.00%
3864	52	2%	50%	50%						100.00%
3867	33	1%	50%	50%						100.00%
3870	10	0%							100%	100.00%
3874	11	0%					100%			100.00%
	3279	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	1.95%	0.00%	0.49%	0.00%	0.00%	2.4%
0.91%	0.00%	0.73%	0.00%	0.18%	0.00%	0.00%	1.8%
0.18%	0.00%	0.15%	0.00%	0.04%	0.00%	0.00%	0.4%
0.00%	0.00%	0.36%	0.00%	0.04%	0.00%	0.00%	0.4%
0.34%	0.00%	0.34%	0.00%	0.17%	0.00%	0.00%	0.9%
1.42%	0.00%	1.13%	0.00%	0.28%	0.00%	0.00%	2.8%
0.67%	0.00%	0.54%	0.00%	0.13%	0.00%	0.00%	1.3%
0.12%	0.00%	0.10%	0.00%	0.02%	0.00%	0.00%	0.2%
0.37%	0.00%	0.22%	0.00%	0.15%	0.00%	0.00%	0.7%
0.84%	0.00%	0.50%	0.00%	0.34%	0.00%	0.00%	1.7%
0.95%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	1.2%
4.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.0%
0.00%	0.00%	3.98%	0.00%	0.00%	0.00%	0.99%	5.0%
0.00%	0.00%	2.96%	0.00%	0.00%	0.00%	0.00%	3.0%
0.00%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	0.4%
0.24%	0.00%	0.10%	0.00%	0.15%	0.00%	0.00%	0.5%
0.00%	0.00%	0.73%	0.00%	0.00%	0.00%	0.00%	0.7%
0.16%	1.48%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.14%	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%	1.4%
1.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.0%
0.00%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.23%	0.17%	0.00%	0.00%	0.17%	0.6%
0.85%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
0.69%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.8%
0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	1.37%	0.00%	0.00%	0.00%	0.00%	1.4%
0.41%	0.41%	0.00%	0.00%	0.00%	0.00%	0.55%	1.4%
0.15%	0.15%	0.00%	0.00%	0.00%	0.00%	0.20%	0.5%
0.00%	0.00%	0.22%	0.16%	0.00%	0.00%	0.16%	0.5%
0.00%	0.00%	0.73%	0.00%	0.73%	0.00%	0.00%	1.5%
0.00%	0.00%	1.77%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.00%	2.23%	0.00%	2.23%	0.00%	0.00%	4.5%
0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	1.59%	2.0%
0.00%	0.00%	0.23%	0.23%	0.00%	0.00%	0.00%	0.5%
0.00%	0.00%	0.17%	0.00%	0.17%	0.00%	0.00%	0.3%
0.00%	0.00%	0.37%	0.00%	0.85%	0.00%	0.00%	1.2%
0.42%	0.42%	0.00%	0.00%	0.00%	0.00%	0.56%	1.4%
0.00%	3.15%	0.00%	0.00%	0.00%	7.34%	0.00%	10.5%
1.43%	0.00%	0.00%	0.00%	1.43%	0.00%	0.00%	2.9%
0.59%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	1.2%
0.18%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
4.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.8%
0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
1.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
2.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.3%
2.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.1%
0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.34%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.18%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
1.30%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6%
0.84%	0.84%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
2.01%	2.01%	0.00%	0.00%	0.00%	0.00%	0.00%	4.0%
0.53%	0.00%	0.00%	0.00%	0.53%	0.00%	0.00%	1.1%
1.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.79%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.50%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.3%
0.00%	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.3%
41.3%	**15.8%**	**22.1%**	**0.6%**	**8.3%**	**7.3%**	**4.5%**	**100.0%**

40.00%	**15.00%**	**25.00%**	**0.00%**	**10.00%**	**5.00%**	**5.00%**	100%

PM	RESIDENTIAL VEHICLE TRIP DISTRIBUTION
Inbound	Traffic Volume Allocation
2023-09-01	

Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	32	1%			80%		20%			100.00%
PD 5 of Toronto	28	1%	50%		40%		10%			100.00%
PD 8 of Toronto	135	4%	40%		40%		20%			100.00%
PD 9 of Toronto	44	1%	50%		40%		10%			100.00%
PD 10 of Toronto	68	2%	50%		40%		10%			100.00%
PD 11 of Toronto	21	1%	50%		40%		10%			100.00%
PD 16 of Toronto	36	1%	50%		30%		20%			100.00%
Vaughan	27	1%	80%		20%					100.00%
Brampton	126	4%	100%							100.00%
Milton	57	2%	100%							100.00%
Oakville	48	2%			80%				20%	100.00%
Burlington	12	0%			100%					100.00%
Stoney Creek	12	0%			100%					100.00%
3608	67	2%	10%	90%						100.00%
3609	18	1%	100%							100.00%
3610	22	1%	50%				50%			100.00%
3611	25	1%	100%							100.00%
3612	33	1%		100%						100.00%
3614	19	1%			40%	30%			30%	100.00%
3618	36	1%	50%	50%						100.00%
3621	45	1%	90%				10%			100.00%
3626	28	1%	100%							100.00%
3632	7	0%			100%					100.00%
3634	64	2%	30%	30%					40%	100.00%
3635	16	1%	30%	30%					40%	100.00%
3639	18	1%			40%	30%			30%	100.00%
3641	12	0%			100%					100.00%
3643	48	2%			50%		50%			100.00%
3648	38	1%			100%					100.00%
3649	47	2%			50%		50%			100.00%
3653	21	1%			100%					100.00%
3655	22	1%			50%				50%	100.00%
3656	46	1%			20%				80%	100.00%
3659	11	0%			50%		50%			100.00%
3660	40	1%			30%		70%			100.00%
3662	46	1%	30%	30%					40%	100.00%
3665	48	2%						100%		100.00%
3670	12	0%					100%			100.00%
3671	173	6%		30%				70%		100.00%
3673	94	3%	50%				50%			100.00%
3677	39	1%	50%	50%						100.00%
3680	10	0%	100%							100.00%
3685	14	0%	50%	50%						100.00%
3692	34	1%	100%							100.00%
3693	94	3%	100%							100.00%
3696	20	1%	100%							100.00%
3700	13	0%	100%							100.00%
3701	50	2%	100%							100.00%
3702	67	2%	100%							100.00%
3709	47	2%	60%		40%					100.00%
3710	32	1%	100%							100.00%
3721	68	2%	100%							100.00%
3816	47	2%	100%							100.00%
3822	11	0%	100%							100.00%
3834	22	1%	100%							100.00%
3843	10	0%		100%						100.00%
3847	81	3%	50%	50%						100.00%
3850	106	3%	50%	50%						100.00%
3851	84	3%	50%	50%						100.00%
3853	82	3%	50%	50%						100.00%
3858	64	2%	50%				50%			100.00%
3859	35	1%	50%				50%			100.00%
3861	45	1%					100%			100.00%
3863	85	3%	100%							100.00%
3864	35	1%	50%	50%						100.00%
3867	33	1%	50%	50%						100.00%
3868	20	1%	10%	10%	5%	5%		20%	50%	100.00%
3874	126	4%					100%			100.00%
3877	16	1%			100%					100.00%
	3092	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	0.83%	0.00%	0.21%	0.00%	0.00%	1.0%
0.45%	0.00%	0.36%	0.00%	0.09%	0.00%	0.00%	0.9%
1.75%	0.00%	1.75%	0.00%	0.87%	0.00%	0.00%	4.4%
0.71%	0.00%	0.57%	0.00%	0.14%	0.00%	0.00%	1.4%
1.10%	0.00%	0.88%	0.00%	0.22%	0.00%	0.00%	2.2%
0.34%	0.00%	0.27%	0.00%	0.07%	0.00%	0.00%	0.7%
0.58%	0.00%	0.35%	0.00%	0.23%	0.00%	0.00%	1.2%
0.70%	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.9%
4.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.1%
1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.00%	1.24%	0.00%	0.00%	0.00%	0.31%	1.6%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.22%	1.95%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.36%	0.00%	0.00%	0.00%	0.36%	0.00%	0.00%	0.7%
0.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
0.00%	1.07%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.00%	0.25%	0.18%	0.00%	0.00%	0.18%	0.6%
0.58%	0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	1.2%
1.31%	0.00%	0.00%	0.00%	0.15%	0.00%	0.00%	1.5%
0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.2%
0.62%	0.62%	0.00%	0.00%	0.00%	0.00%	0.83%	2.1%
0.16%	0.16%	0.00%	0.00%	0.00%	0.00%	0.21%	0.5%
0.00%	0.00%	0.23%	0.17%	0.00%	0.00%	0.17%	0.6%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.78%	0.00%	0.78%	0.00%	0.00%	1.6%
0.00%	0.00%	1.23%	0.00%	0.00%	0.00%	0.00%	1.2%
0.00%	0.00%	0.76%	0.00%	0.76%	0.00%	0.00%	1.5%
0.00%	0.00%	0.68%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.36%	0.7%
0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	1.19%	1.5%
0.00%	0.00%	0.18%	0.00%	0.18%	0.00%	0.00%	0.4%
0.00%	0.00%	0.39%	0.00%	0.91%	0.00%	0.00%	1.3%
0.45%	0.45%	0.00%	0.00%	0.00%	0.00%	0.60%	1.5%
0.00%	0.00%	0.00%	0.00%	0.00%	1.55%	0.00%	1.6%
0.00%	0.00%	0.00%	0.00%	0.39%	0.00%	0.00%	0.4%
0.00%	1.68%	0.00%	0.00%	0.00%	3.92%	0.00%	5.6%
1.52%	0.00%	0.00%	0.00%	1.52%	0.00%	0.00%	3.0%
0.63%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%	1.3%
0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.23%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
3.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.0%
0.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
0.91%	0.00%	0.61%	0.00%	0.00%	0.00%	0.00%	1.5%
1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
1.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
1.31%	1.31%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6%
1.71%	1.71%	0.00%	0.00%	0.00%	0.00%	0.00%	3.4%
1.36%	1.36%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
1.33%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
1.03%	0.00%	0.00%	0.00%	1.03%	0.00%	0.00%	2.1%
0.57%	0.00%	0.00%	0.00%	0.57%	0.00%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	1.46%	0.00%	0.00%	1.5%
2.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
0.57%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.53%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.06%	0.06%	0.03%	0.03%	0.00%	0.13%	0.32%	0.6%
0.00%	0.00%	0.00%	0.00%	4.08%	0.00%	0.00%	4.1%
0.00%	0.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.5%
47.2%	**14.6%**	**14.1%**	**0.4%**	**14.0%**	**5.6%**	**4.2%**	**100.0%**

45.00%	**15.00%**	**15.00%**	**0.00%**	**15.00%**	**5.00%**	**5.00%**	100%

Appendix H:
Traffic Movement Counts

Turning Movement Count (3 . HURONTARIO ST & HILLCREST AVE / KIRWIN AVE)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	7	131	2	0	4	140	17	10	2	0	4	29	2	106	6	0	1	114	10	10	11	0	2	31	314	
07:15:00	9	135	4	0	6	148	4	8	4	0	5	16	2	127	6	0	0	135	16	15	14	0	5	45	344	
07:30:00	15	113	6	0	2	134	17	12	2	0	1	31	1	159	6	1	1	167	22	18	20	0	4	60	392	
07:45:00	16	183	5	0	7	204	14	10	6	0	5	30	5	147	16	0	13	168	22	19	25	0	3	66	468	1518
08:00:00	22	185	5	0	3	212	11	27	5	0	19	43	4	159	13	0	26	176	31	29	23	0	21	83	514	1718
08:15:00	18	171	4	0	4	193	16	22	6	0	17	44	5	177	8	0	23	190	25	38	21	0	25	84	511	1885
08:30:00	10	182	9	0	1	201	9	17	4	0	4	30	7	165	10	0	5	182	14	29	28	0	7	71	484	1977
08:45:00	10	172	12	0	2	194	23	20	6	0	5	49	8	169	11	0	5	188	25	26	10	0	7	61	492	2001
09:00:00	13	183	8	0	3	204	17	15	7	0	10	39	9	163	7	0	2	179	24	29	20	0	5	73	495	1982
09:15:00	13	150	10	0	3	173	14	13	5	0	5	32	5	155	13	0	4	173	19	23	20	0	5	62	440	1911
09:30:00	20	149	8	0	1	177	12	16	11	0	5	39	8	148	7	0	10	163	24	26	20	0	2	70	449	1876
09:45:00	14	176	12	0	6	202	13	23	10	0	7	46	8	139	7	0	4	154	12	32	14	0	9	58	460	1844
BREAK																										
16:00:00	24	172	15	0	6	211	29	56	15	0	7	100	8	209	15	1	8	233	22	38	19	0	12	79	623	
16:15:00	21	207	8	0	10	236	24	54	3	0	11	81	12	184	22	0	5	218	28	32	25	0	7	85	620	
16:30:00	12	183	16	0	3	211	16	78	6	0	17	100	10	208	24	0	7	242	23	38	13	0	9	74	627	
16:45:00	28	187	14	0	8	229	23	63	8	0	9	94	6	195	16	0	3	217	28	31	21	0	11	80	620	2490
17:00:00	29	220	12	1	10	262	14	37	6	0	9	57	7	164	21	0	7	192	29	37	23	0	22	89	600	2467
17:15:00	20	184	10	2	11	216	21	55	7	0	12	83	9	208	21	0	7	238	22	32	26	0	10	80	617	2464
17:30:00	26	200	6	0	4	232	24	49	8	0	10	81	9	173	16	1	5	199	13	40	25	0	15	78	590	2427
17:45:00	28	218	16	0	13	262	21	50	10	0	10	81	10	150	23	0	7	183	29	35	21	0	19	85	611	2418
18:00:00	30	168	14	0	9	212	28	52	11	0	25	91	9	214	26	0	10	249	21	33	25	0	9	79	631	2449
18:15:00	27	211	18	1	4	257	19	47	3	0	9	69	5	173	22	0	5	200	36	34	23	0	5	93	619	2451
18:30:00	24	198	14	0	12	236	21	40	6	0	11	67	9	172	20	0	4	201	34	34	21	0	5	89	593	2454
18:45:00	20	173	13	0	7	206	35	38	8	0	10	81	7	198	16	0	9	221	29	32	23	0	8	84	592	2435
Grand Total	456	4251	241	4	139	4952	442	812	159	0	227	1413	165	4062	352	3	171	4582	558	710	491	0	227	1759	**12706**	-
Approach%	9.2%	85.8%	4.9%	0.1%		-	31.3%	57.5%	11.3%	0%		-	3.6%	88.7%	7.7%	0.1%		-	31.7%	40.4%	27.9%	0%		-	-	-
Totals %	3.6%	33.5%	1.9%	0%		39%	3.5%	6.4%	1.3%	0%		11.1%	1.3%	32%	2.8%	0%		36.1%	4.4%	5.6%	3.9%	0%		13.8%	-	-
Heavy	18	195	5	0		-	10	10	5	0		-	4	196	21	0		-	12	5	32	0		-	-	-
Heavy %	3.9%	4.6%	2.1%	0%		-	2.3%	1.2%	3.1%	0%		-	2.4%	4.8%	6%	0%		-	2.2%	0.7%	6.5%	0%		-	-	-
Bicycles	0	0	0	0		-	0	2	0	0		-	1	1	0	0		-	0	2	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0.2%	0%	0%		-	0.6%	0%	0%	0%		-	0%	0.3%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	22	185	5	0	3	212	11	27	5	0	19	43	4	159	13	0	26	176	31	29	23	0	21	83	514
08:15:00	18	171	4	0	4	193	16	22	6	0	17	44	5	177	8	0	23	190	25	38	21	0	25	84	511
08:30:00	10	182	9	0	1	201	9	17	4	0	4	30	7	165	10	0	5	182	14	29	28	0	7	71	484
08:45:00	10	172	12	0	2	194	23	20	6	0	5	49	8	169	11	0	5	188	25	26	10	0	7	61	492
Grand Total	60	710	30	0	10	800	59	86	21	0	45	166	24	670	42	0	59	736	95	122	82	0	60	299	**2001**
Approach%	7.5%	88.8%	3.8%	0%		-	35.5%	51.8%	12.7%	0%		-	3.3%	91%	5.7%	0%		-	31.8%	40.8%	27.4%	0%		-	-
Totals %	3%	35.5%	1.5%	0%		40%	2.9%	4.3%	1%	0%		8.3%	1.2%	33.5%	2.1%	0%		36.8%	4.7%	6.1%	4.1%	0%		14.9%	-
PHF	0.68	0.96	0.63	0		0.94	0.64	0.8	0.88	0		0.85	0.75	0.95	0.81	0		0.97	0.77	0.8	0.73	0		0.89	-
Heavy	7	44	1	0		52	5	5	0	0		10	1	35	14	0		50	5	0	10	0		15	-
Heavy %	11.7%	6.2%	3.3%	0%		6.5%	8.5%	5.8%	0%	0%		6%	4.2%	5.2%	33.3%	0%		6.8%	5.3%	0%	12.2%	0%		5%	-
Lights	53	666	29	0		748	54	81	21	0		156	23	635	28	0		686	90	122	72	0		284	-
Lights %	88.3%	93.8%	96.7%	0%		93.5%	91.5%	94.2%	100%	0%		94%	95.8%	94.8%	66.7%	0%		93.2%	94.7%	100%	87.8%	0%		95%	-
Single-Unit Trucks	0	16	1	0		17	1	1	0	0		2	0	13	0	0		13	0	0	1	0		1	-
Single-Unit Trucks %	0%	2.3%	3.3%	0%		2.1%	1.7%	1.2%	0%	0%		1.2%	0%	1.9%	0%	0%		1.8%	0%	0%	1.2%	0%		0.3%	-
Buses	7	25	0	0		32	4	4	0	0		8	1	20	14	0		35	5	0	9	0		14	-
Buses %	11.7%	3.5%	0%	0%		4%	6.8%	4.7%	0%	0%		4.8%	4.2%	3%	33.3%	0%		4.8%	5.3%	0%	11%	0%		4.7%	-
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	43	-	-	-	-	-	55	-	-	-	-	-	56	-	-
Pedestrians%	-	-	-	-	5.7%	-	-	-	-	-	24.7%	-	-	-	-	-	31.6%	-	-	-	-	-	33.3%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	1.1%	-	-	-	-	-	2.3%	-	-	-	-	-	1.1%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 04:00 PM - 05:00 PM **Weather: Overcast Clouds (21.66 °C)**

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	24	172	15	0	6	211	29	56	15	0	7	100	8	209	15	1	8	233	22	38	19	0	12	79	623
16:15:00	21	207	8	0	10	236	24	54	3	0	11	81	12	184	22	0	5	218	28	32	25	0	7	85	620
16:30:00	12	183	16	0	3	211	16	78	6	0	17	100	10	208	24	0	7	242	23	38	13	0	9	74	627
16:45:00	28	187	14	0	8	229	23	63	8	0	9	94	6	195	16	0	3	217	28	31	21	0	11	80	620
Grand Total	85	749	53	0	27	887	92	251	32	0	44	375	36	796	77	1	23	910	101	139	78	0	39	318	**2490**
Approach%	9.6%	84.4%	6%	0%		-	24.5%	66.9%	8.5%	0%		-	4%	87.5%	8.5%	0.1%		-	31.8%	43.7%	24.5%	0%		-	-
Totals %	3.4%	30.1%	2.1%	0%		35.6%	3.7%	10.1%	1.3%	0%		15.1%	1.4%	32%	3.1%	0%		36.5%	4.1%	5.6%	3.1%	0%		12.8%	-
PHF	0.76	0.9	0.83	0		0.94	0.79	0.8	0.53	0		0.94	0.75	0.95	0.8	0.25		0.94	0.9	0.91	0.78	0		0.94	-
Heavy	1	26	1	0		28	2	2	0	0		4	0	39	2	0		41	0	2	3	0		5	-
Heavy %	1.2%	3.5%	1.9%	0%		3.2%	2.2%	0.8%	0%	0%		1.1%	0%	4.9%	2.6%	0%		4.5%	0%	1.4%	3.8%	0%		1.6%	-
Lights	84	723	52	0		859	90	249	32	0		371	36	757	75	1		869	101	137	75	0		313	-
Lights %	98.8%	96.5%	98.1%	0%		96.8%	97.8%	99.2%	100%	0%		98.9%	100%	95.1%	97.4%	100%		95.5%	100%	98.6%	96.2%	0%		98.4%	-
Single-Unit Trucks	0	10	1	0		11	0	1	0	0		1	0	15	0	0		15	0	1	1	0		2	-
Single-Unit Trucks %	0%	1.3%	1.9%	0%		1.2%	0%	0.4%	0%	0%		0.3%	0%	1.9%	0%	0%		1.6%	0%	0.7%	1.3%	0%		0.6%	-
Buses	1	16	0	0		17	2	1	0	0		3	0	22	2	0		24	0	1	2	0		3	-
Buses %	1.2%	2.1%	0%	0%		1.9%	2.2%	0.4%	0%	0%		0.8%	0%	2.8%	2.6%	0%		2.6%	0%	0.7%	2.6%	0%		0.9%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	24	-	-	-	-	-	41	-	-	-	-	-	21	-	-	-	-	-	38	-	-
Pedestrians%	-	-	-	-	18%		-	-	-	-	30.8%		-	-	-	-	15.8%		-	-	-	-	28.8%		-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	2.3%		-	-	-	-	2.3%		-	-	-	-	1.5%		-	-	-	-	0.8%		-
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	1	0	0	0	-	0	2	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & HILLCREST AVE / KIRWIN AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM **Weather: Broken Clouds (16.96 °C)**

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (21.66 °C)

Turning Movement Count (9 . HURONTARIO ST & CENTRAL PKWY)

Start Time	N Approach HURONTARIO ST						E Approach CENTRAL PKWY						S Approach HURONTARIO ST						W Approach CENTRAL PKWY						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	5	151	30	0	0	186	12	34	27	0	5	73	17	184	6	0	4	207	7	36	7	1	8	51	517	
07:15:00	12	114	15	1	2	142	17	45	28	0	5	90	15	139	5	0	6	159	8	49	7	0	4	64	455	
07:30:00	16	149	22	0	3	187	13	70	32	0	13	115	25	202	9	0	7	236	6	66	19	0	12	91	629	
07:45:00	18	138	47	0	9	203	12	99	30	0	12	141	24	205	8	0	14	237	12	113	16	0	12	141	722	2323
08:00:00	21	174	43	0	0	238	15	130	40	0	7	185	18	186	10	0	9	214	5	124	24	0	6	153	790	2596
08:15:00	18	126	41	0	0	185	17	84	31	0	3	132	34	238	7	0	5	279	9	103	34	0	6	146	742	2883
08:30:00	19	117	39	0	0	175	33	95	35	0	9	163	21	215	9	0	10	245	13	101	23	1	7	138	721	2975
08:45:00	15	169	39	0	2	223	18	102	34	0	15	154	30	195	11	0	6	236	7	99	17	0	4	123	736	2989
BREAK																										
16:00:00	25	155	31	1	0	212	18	135	30	0	8	183	25	171	32	0	4	228	13	166	18	0	3	197	820	
16:15:00	29	165	46	0	0	240	22	113	32	0	10	167	30	214	24	0	9	268	14	138	26	0	11	178	853	
16:30:00	21	129	37	0	3	187	19	167	31	0	11	217	21	176	27	0	2	224	12	139	19	0	8	170	798	
16:45:00	38	155	34	0	1	227	26	168	34	0	8	228	20	167	32	0	6	219	7	129	19	0	4	155	829	3300
17:00:00	21	172	37	0	3	230	21	124	18	0	14	163	25	210	37	0	6	272	9	142	22	0	11	173	838	3318
17:15:00	15	168	25	0	6	208	23	188	53	0	14	264	23	164	30	0	5	217	14	156	18	0	12	188	877	3342
17:30:00	24	162	39	0	2	225	16	160	38	0	8	214	15	160	40	0	3	215	20	145	25	0	8	190	844	3388
17:45:00	24	134	43	0	3	201	17	161	37	1	16	216	31	213	40	0	8	284	20	139	17	0	12	176	877	3436
Grand Total	321	2378	568	2	34	3269	299	1875	530	1	158	2705	374	3039	327	0	104	3740	176	1845	311	2	128	2334	**12048**	-
Approach%	9.8%	72.7%	17.4%	0.1%		-	11.1%	69.3%	19.6%	0%		-	10%	81.3%	8.7%	0%		-	7.5%	79%	13.3%	0.1%		-	-	-
Totals %	2.7%	19.7%	4.7%	0%		27.1%	2.5%	15.6%	4.4%	0%		22.5%	3.1%	25.2%	2.7%	0%		31%	1.5%	15.3%	2.6%	0%		19.4%	-	-
Heavy	4	121	11	0		-	9	40	27	0		-	21	120	8	0		-	7	30	10	0		-	-	-
Heavy %	1.2%	5.1%	1.9%	0%		-	3%	2.1%	5.1%	0%		-	5.6%	3.9%	2.4%	0%		-	4%	1.6%	3.2%	0%		-	-	-
Bicycles	0	1	0	0		-	0	2	0	0		-	0	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & CENTRAL PKWY
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach HURONTARIO ST						E Approach CENTRAL PKWY						S Approach HURONTARIO ST						W Approach CENTRAL PKWY						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	21	174	43	0	0	238	15	130	40	0	7	185	18	186	10	0	9	214	5	124	24	0	6	153	790
08:15:00	18	126	41	0	0	185	17	84	31	0	3	132	34	238	7	0	5	279	9	103	34	0	6	146	742
08:30:00	19	117	39	0	0	175	33	95	35	0	9	163	21	215	9	0	10	245	13	101	23	1	7	138	721
08:45:00	15	169	39	0	2	223	18	102	34	0	15	154	30	195	11	0	6	236	7	99	17	0	4	123	736
Grand Total	73	586	162	0	2	821	83	411	140	0	34	634	103	834	37	0	30	974	34	427	98	1	23	560	**2989**
Approach%	8.9%	71.4%	19.7%	0%		-	13.1%	64.8%	22.1%	0%		-	10.6%	85.6%	3.8%	0%		-	6.1%	76.3%	17.5%	0.2%		-	-
Totals %	2.4%	19.6%	5.4%	0%		27.5%	2.8%	13.8%	4.7%	0%		21.2%	3.4%	27.9%	1.2%	0%		32.6%	1.1%	14.3%	3.3%	0%		18.7%	-
PHF	0.87	0.84	0.94	0		0.86	0.63	0.79	0.88	0		0.86	0.76	0.88	0.84	0		0.87	0.65	0.86	0.72	0.25		0.92	-
Heavy	1	29	5	0		35	3	15	9	0		27	5	34	2	0		41	3	13	8	0		24	-
Heavy %	1.4%	4.9%	3.1%	0%		4.3%	3.6%	3.6%	6.4%	0%		4.3%	4.9%	4.1%	5.4%	0%		4.2%	8.8%	3%	8.2%	0%		4.3%	-
Lights	72	557	157	0		786	80	396	131	0		607	98	800	35	0		933	31	414	90	1		536	-
Lights %	98.6%	95.1%	96.9%	0%		95.7%	96.4%	96.4%	93.6%	0%		95.7%	95.1%	95.9%	94.6%	0%		95.8%	91.2%	97%	91.8%	100%		95.7%	-
Single-Unit Trucks	0	13	1	0		14	2	3	2	0		7	0	16	0	0		16	3	6	4	0		13	-
Single-Unit Trucks %	0%	2.2%	0.6%	0%		1.7%	2.4%	0.7%	1.4%	0%		1.1%	0%	1.9%	0%	0%		1.6%	8.8%	1.4%	4.1%	0%		2.3%	-
Buses	1	15	4	0		20	1	12	7	0		20	5	18	2	0		25	0	7	4	0		11	-
Buses %	1.4%	2.6%	2.5%	0%		2.4%	1.2%	2.9%	5%	0%		3.2%	4.9%	2.2%	5.4%	0%		2.6%	0%	1.6%	4.1%	0%		2%	-
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	33	-	-	-	-	-	28	-	-	-	-	-	23	-	-
Pedestrians%	-	-	-	-	2.2%		-	-	-	-	37.1%		-	-	-	-	31.5%		-	-	-	-	25.8%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	1.1%		-	-	-	-	2.2%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

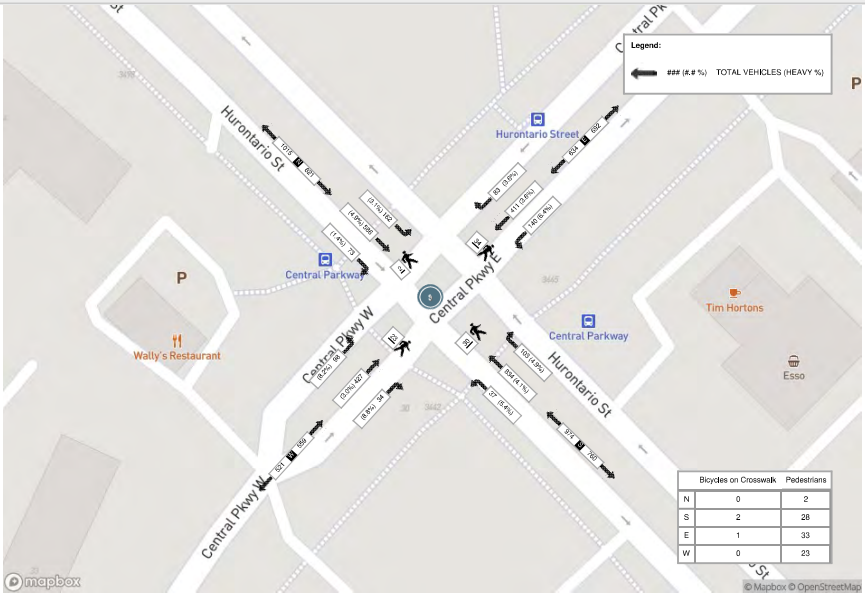
Turning Movement Count
Location Name: HURONTARIO ST & CENTRAL PKWY
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

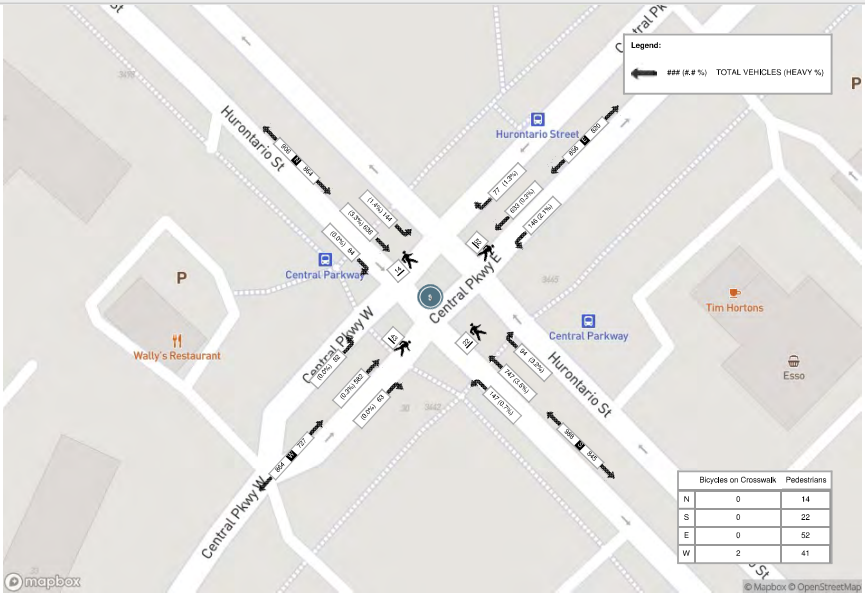
Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach HURONTARIO ST						E Approach CENTRAL PKWY						S Approach HURONTARIO ST						W Approach CENTRAL PKWY						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	21	172	37	0	3	230	21	124	18	0	14	163	25	210	37	0	6	272	9	142	22	0	11	173	838
17:15:00	15	168	25	0	6	208	23	188	53	0	14	264	23	164	30	0	5	217	14	156	18	0	12	188	877
17:30:00	24	162	39	0	2	225	16	160	38	0	8	214	15	160	40	0	3	215	20	145	25	0	8	190	844
17:45:00	24	134	43	0	3	201	17	161	37	1	16	216	31	213	40	0	8	284	20	139	17	0	12	176	877
Grand Total	84	636	144	0	14	864	77	633	146	1	52	857	94	747	147	0	22	988	63	582	82	0	43	727	**3436**
Approach%	9.7%	73.6%	16.7%	0%		-	9%	73.9%	17%	0.1%		-	9.5%	75.6%	14.9%	0%		-	8.7%	80.1%	11.3%	0%		-	-
Totals %	2.4%	18.5%	4.2%	0%		25.1%	2.2%	18.4%	4.2%	0%		24.9%	2.7%	21.7%	4.3%	0%		28.8%	1.8%	16.9%	2.4%	0%		21.2%	-
PHF	0.88	0.92	0.84	0		0.94	0.84	0.84	0.69	0.25		0.81	0.76	0.88	0.92	0		0.87	0.79	0.93	0.82	0		0.96	-
Heavy	0	21	2	0		23	1	2	3	0		6	3	26	1	0		30	0	2	0	0		2	-
Heavy %	0%	3.3%	1.4%	0%		2.7%	1.3%	0.3%	2.1%	0%		0.7%	3.2%	3.5%	0.7%	0%		3%	0%	0.3%	0%	0%		0.3%	-
Lights	84	615	142	0		841	76	631	143	1		851	91	721	146	0		958	63	580	82	0		725	-
Lights %	100%	96.7%	98.6%	0%		97.3%	98.7%	99.7%	97.9%	100%		99.3%	96.8%	96.5%	99.3%	0%		97%	100%	99.7%	100%	0%		99.7%	-
Single-Unit Trucks	0	6	2	0		8	1	1	0	0		2	0	10	0	0		10	0	1	0	0		1	-
Single-Unit Trucks %	0%	0.9%	1.4%	0%		0.9%	1.3%	0.2%	0%	0%		0.2%	0%	1.3%	0%	0%		1%	0%	0.2%	0%	0%		0.1%	-
Buses	0	13	0	0		13	0	1	3	0		4	3	13	1	0		17	0	0	0	0		0	-
Buses %	0%	2%	0%	0%		1.5%	0%	0.2%	2.1%	0%		0.5%	3.2%	1.7%	0.7%	0%		1.7%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	2	0	0		2	0	0	0	0		0	0	3	0	0		3	0	1	0	0		1	-
Articulated Trucks %	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	0%	0.2%	0%	0%		0.1%	-
Pedestrians	-	-	-	-	14	-	-	-	-	-	52	-	-	-	-	-	22	-	-	-	-	-	41	-	-
Pedestrians%	-	-	-	-	10.7%		-	-	-	-	39.7%		-	-	-	-	16.8%		-	-	-	-	31.3%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	1.5%		-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:



Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)



Spectrum

Turning Movement Count
Location Name: DUNDAS ST & KIRWIN AVE / CAMILLA RD
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (8 . DUNDAS ST & KIRWIN AVE / CAMILLA RD)

Start Time	N Approach KIRWIN AVE						E Approach DUNDAS ST						S Approach CAMILLA RD						W Approach DUNDAS ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	5	8	24	0	0	37	11	70	2	0	2	83	10	9	1	0	0	20	6	133	2	0	5	141	281	
07:15:00	3	8	21	0	0	32	19	73	8	0	1	100	11	8	3	0	1	22	7	168	3	0	1	178	332	
07:30:00	4	13	49	0	2	66	17	85	5	0	1	107	13	18	3	0	1	34	11	181	3	0	6	195	402	
07:45:00	2	17	40	0	1	59	28	79	11	0	2	118	15	12	4	0	2	31	11	240	1	0	6	252	460	1475
08:00:00	6	23	37	0	5	66	26	129	13	0	2	168	19	15	11	0	0	45	25	300	2	0	1	327	606	1800
08:15:00	4	20	54	0	0	78	28	127	6	0	0	161	24	17	17	0	2	58	15	234	3	0	4	252	549	2017
08:30:00	6	13	32	0	4	51	40	142	13	0	0	195	16	17	2	0	4	35	20	236	5	0	6	261	542	2157
08:45:00	8	19	42	0	5	69	25	132	22	0	0	179	12	21	13	0	0	46	12	218	3	0	7	233	527	2224
BREAK																										
16:00:00	8	12	24	0	12	44	82	244	14	0	3	340	18	25	8	0	2	51	10	205	9	1	5	225	660	
16:15:00	8	24	36	0	1	68	70	265	28	0	2	363	9	28	18	0	7	55	8	167	6	0	6	181	667	
16:30:00	4	15	33	0	8	52	63	249	14	0	2	326	10	33	24	0	5	67	12	197	7	1	9	217	662	
16:45:00	5	19	33	0	4	57	75	255	14	0	6	344	12	27	32	0	9	71	13	195	11	0	7	219	691	2680
17:00:00	8	14	36	0	2	58	97	220	28	0	0	345	19	22	16	0	1	57	9	152	12	0	5	173	633	2653
17:15:00	11	19	41	0	4	71	76	262	15	0	0	353	18	22	12	0	1	52	12	190	5	0	1	207	683	2669
17:30:00	14	19	36	0	1	69	80	251	26	0	0	357	13	23	17	0	4	53	11	187	14	0	1	212	691	2698
17:45:00	5	15	36	0	6	56	62	196	17	0	1	275	13	26	12	0	3	51	7	183	9	1	2	200	582	2589
Grand Total	101	258	574	0	55	933	799	2779	236	0	22	3814	232	323	193	0	42	748	189	3186	95	3	72	3473	**8968**	-
Approach%	10.8%	27.7%	61.5%	0%		-	20.9%	72.9%	6.2%	0%		-	31%	43.2%	25.8%	0%		-	5.4%	91.7%	2.7%	0.1%		-	-	-
Totals %	1.1%	2.9%	6.4%	0%		10.4%	8.9%	31%	2.6%	0%		42.5%	2.6%	3.6%	2.2%	0%		8.3%	2.1%	35.5%	1.1%	0%		38.7%	-	-
Heavy	2	7	11	0		-	13	103	4	0		-	2	11	9	0		-	7	101	5	0		-	-	-
Heavy %	2%	2.7%	1.9%	0%		-	1.6%	3.7%	1.7%	0%		-	0.9%	3.4%	4.7%	0%		-	3.7%	3.2%	5.3%	0%		-	-	-
Bicycles	2	4	0	0		-	2	1	0	0		-	0	1	0	0		-	0	0	1	0		-	-	-
Bicycle %	2%	1.6%	0%	0%		-	0.3%	0%	0%	0%		-	0%	0.3%	0%	0%		-	0%	0%	1.1%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: DUNDAS ST & KIRWIN AVE / CAMILLA RD
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach KIRWIN AVE						E Approach DUNDAS ST						S Approach CAMILLA RD						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	6	23	37	0	5	66	26	129	13	0	2	168	19	15	11	0	0	45	25	300	2	0	1	327	606
08:15:00	4	20	54	0	0	78	28	127	6	0	0	161	24	17	17	0	2	58	15	234	3	0	4	252	549
08:30:00	6	13	32	0	4	51	40	142	13	0	0	195	16	17	2	0	4	35	20	236	5	0	6	261	542
08:45:00	8	19	42	0	5	69	25	132	22	0	0	179	12	21	13	0	0	46	12	218	3	0	7	233	527
Grand Total	24	75	165	0	14	264	119	530	54	0	2	703	71	70	43	0	6	184	72	988	13	0	18	1073	**2224**
Approach%	9.1%	28.4%	62.5%	0%		-	16.9%	75.4%	7.7%	0%		-	38.6%	38%	23.4%	0%		-	6.7%	92.1%	1.2%	0%		-	-
Totals %	1.1%	3.4%	7.4%	0%		11.9%	5.4%	23.8%	2.4%	0%		31.6%	3.2%	3.1%	1.9%	0%		8.3%	3.2%	44.4%	0.6%	0%		48.2%	-
PHF	0.75	0.82	0.76	0		0.85	0.74	0.93	0.61	0		0.9	0.74	0.83	0.63	0		0.79	0.72	0.82	0.65	0		0.82	-
Heavy	2	5	7	0		14	9	35	0	0		44	1	3	1	0		5	4	39	2	0		45	-
Heavy %	8.3%	6.7%	4.2%	0%		5.3%	7.6%	6.6%	0%	0%		6.3%	1.4%	4.3%	2.3%	0%		2.7%	5.6%	3.9%	15.4%	0%		4.2%	-
Lights	22	70	158	0		250	110	495	54	0		659	70	67	42	0		179	68	949	11	0		1028	-
Lights %	91.7%	93.3%	95.8%	0%		94.7%	92.4%	93.4%	100%	0%		93.7%	98.6%	95.7%	97.7%	0%		97.3%	94.4%	96.1%	84.6%	0%		95.8%	-
Single-Unit Trucks	0	1	1	0		2	3	17	0	0		20	0	0	0	0		0	1	20	0	0		21	-
Single-Unit Trucks %	0%	1.3%	0.6%	0%		0.8%	2.5%	3.2%	0%	0%		2.8%	0%	0%	0%	0%		0%	1.4%	2%	0%	0%		2%	-
Buses	2	4	6	0		12	6	18	0	0		24	1	3	1	0		5	3	15	2	0		20	-
Buses %	8.3%	5.3%	3.6%	0%		4.5%	5%	3.4%	0%	0%		3.4%	1.4%	4.3%	2.3%	0%		2.7%	4.2%	1.5%	15.4%	0%		1.9%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	4	0	0		4	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	-
Pedestrians	-	-	-	-	13		-	-	-	-	1		-	-	-	-	4		-	-	-	-	17		-
Pedestrians%	-	-	-	-	32.5%		-	-	-	-	2.5%		-	-	-	-	10%		-	-	-	-	42.5%		-
Bicycles on Crosswalk	-	-	-	-	1		-	-	-	-	1		-	-	-	-	2		-	-	-	-	1		-
Bicycles on Crosswalk%	-	-	-	-	2.5%		-	-	-	-	2.5%		-	-	-	-	5%		-	-	-	-	2.5%		-
Bicycles on Road	1	0	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach KIRWIN AVE						E Approach DUNDAS ST						S Approach CAMILLA RD						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:45:00	5	19	33	0	4	57	75	255	14	0	6	344	12	27	32	0	9	71	13	195	11	0	7	219	691
17:00:00	8	14	36	0	2	58	97	220	28	0	0	345	19	22	16	0	1	57	9	152	12	0	5	173	633
17:15:00	11	19	41	0	4	71	76	262	15	0	0	353	18	22	12	0	1	52	12	190	5	0	1	207	683
17:30:00	14	19	36	0	1	69	80	251	26	0	0	357	13	23	17	0	4	53	11	187	14	0	1	212	691
Grand Total	38	71	146	0	11	255	328	988	83	0	6	1399	62	94	77	0	15	233	45	724	42	0	14	811	**2698**
Approach%	14.9%	27.8%	57.3%	0%		-	23.4%	70.6%	5.9%	0%		-	26.6%	40.3%	33%	0%		-	5.5%	89.3%	5.2%	0%		-	-
Totals %	1.4%	2.6%	5.4%	0%		9.5%	12.2%	36.6%	3.1%	0%		51.9%	2.3%	3.5%	2.9%	0%		8.6%	1.7%	26.8%	1.6%	0%		30.1%	-
PHF	0.68	0.93	0.89	0		0.9	0.85	0.94	0.74	0		0.98	0.82	0.87	0.6	0		0.82	0.87	0.93	0.75	0		0.93	-
Heavy	0	0	1	0		1	1	22	2	0		25	1	0	4	0		5	0	19	1	0		20	-
Heavy %	0%	0%	0.7%	0%		0.4%	0.3%	2.2%	2.4%	0%		1.8%	1.6%	0%	5.2%	0%		2.1%	0%	2.6%	2.4%	0%		2.5%	-
Lights	38	71	145	0		254	327	966	81	0		1374	61	94	73	0		228	45	705	41	0		791	-
Lights %	100%	100%	99.3%	0%		99.6%	99.7%	97.8%	97.6%	0%		98.2%	98.4%	100%	94.8%	0%		97.9%	100%	97.4%	97.6%	0%		97.5%	-
Single-Unit Trucks	0	0	0	0		0	1	9	2	0		12	1	0	2	0		3	0	8	1	0		9	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0.3%	0.9%	2.4%	0%		0.9%	1.6%	0%	2.6%	0%		1.3%	0%	1.1%	2.4%	0%		1.1%	-
Buses	0	0	1	0		1	0	11	0	0		11	0	0	2	0		2	0	10	0	0		10	-
Buses %	0%	0%	0.7%	0%		0.4%	0%	1.1%	0%	0%		0.8%	0%	0%	2.6%	0%		0.9%	0%	1.4%	0%	0%		1.2%	-
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	1	0	0		1	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	-
Pedestrians	-	-	-	-	9	-	-	-	-	-	6	-	-	-	-	-	15	-	-	-	-	-	13	-	-
Pedestrians%	-	-	-	-	19.6%		-	-	-	-	13%		-	-	-	-	32.6%		-	-	-	-	28.3%		-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	4.3%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	2.2%		-
Bicycles on Road	0	1	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: DUNDAS ST & KIRWIN AVE / CAMILLA RD
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather:

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

	Bicycles on Crosswalk	Pedestrians
N	2	9
S	0	15
E	0	6
W	1	13

Turning Movement Count (7 . DUNDAS ST & JAGUAR VALLEY DR)

Start Time	N Approach JAGUAR VALLEY DR						E Approach DUNDAS ST						S Approach SOUTH DRIVEWAY						W Approach DUNDAS ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	5	0	4	0	0	9	4	81	0	0	0	85	1	0	1	0	1	2	0	138	3	0	0	141	237	
07:15:00	7	0	8	0	0	15	1	77	0	0	0	78	0	0	0	0	2	0	1	150	3	0	2	154	247	
07:30:00	3	0	4	0	1	7	1	104	0	0	0	105	0	0	0	0	4	0	0	190	5	0	0	195	307	
07:45:00	10	0	5	0	2	15	5	83	1	0	0	89	0	0	0	0	10	0	0	232	2	0	0	234	338	1129
08:00:00	10	0	5	0	3	15	3	136	0	0	0	139	0	0	0	0	6	0	0	286	3	0	0	289	443	1335
08:15:00	12	0	5	0	2	17	5	143	0	0	2	148	0	0	0	0	9	0	0	248	2	0	0	250	415	1503
08:30:00	6	0	4	0	4	10	3	146	1	0	2	150	0	0	0	0	8	0	0	249	5	0	0	254	414	1610
08:45:00	10	0	6	0	4	16	7	152	0	0	1	159	1	0	0	0	8	1	0	229	6	0	0	235	411	1683
BREAK																										
16:00:00	12	0	4	0	18	16	7	220	7	0	4	234	4	1	3	0	12	8	2	216	12	1	3	231	489	
16:15:00	16	1	3	0	11	20	14	237	8	0	2	259	9	3	1	0	7	13	1	177	12	0	2	190	482	
16:30:00	13	1	3	0	12	17	14	263	8	0	1	285	10	0	1	0	20	11	2	210	11	2	3	225	538	
16:45:00	14	1	1	0	16	16	13	225	8	1	0	247	4	1	1	0	10	6	3	220	12	0	0	235	504	2013
17:00:00	9	2	4	0	9	15	8	249	8	0	2	265	4	0	1	0	13	5	1	173	14	0	2	188	473	1997
17:15:00	15	0	3	0	12	18	7	274	3	0	1	284	5	1	0	0	18	6	3	205	7	0	0	215	523	2038
17:30:00	13	0	1	0	6	14	9	238	7	0	3	254	7	0	2	0	5	9	6	205	17	0	1	228	505	2005
17:45:00	16	0	2	0	18	18	11	234	6	0	1	251	17	0	1	0	4	18	2	196	14	1	4	213	508	2001
Grand Total	171	5	62	0	118	238	112	2862	57	1	19	3032	62	6	11	0	137	79	21	3324	128	4	17	3477	**6826**	-
Approach%	71.8%	2.1%	26.1%	0%		-	3.7%	94.4%	1.9%	0%		-	78.5%	7.6%	13.9%	0%		-	0.6%	95.6%	3.7%	0.1%		-	-	-
Totals %	2.5%	0.1%	0.9%	0%		3.5%	1.6%	41.9%	0.8%	0%		44.4%	0.9%	0.1%	0.2%	0%		1.2%	0.3%	48.7%	1.9%	0.1%		50.9%	-	-
Heavy	5	0	4	0		-	2	107	1	0		-	2	0	0	0		-	1	108	6	0		-	-	-
Heavy %	2.9%	0%	6.5%	0%		-	1.8%	3.7%	1.8%	0%		-	3.2%	0%	0%	0%		-	4.8%	3.2%	4.7%	0%		-	-	-
Bicycles	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: DUNDAS ST & JAGUAR VALLEY DR
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach JAGUAR VALLEY DR						E Approach DUNDAS ST						S Approach SOUTH DRIVEWAY						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	10	0	5	0	3	15	3	136	0	0	0	139	0	0	0	0	6	0	0	286	3	0	0	289	443
08:15:00	12	0	5	0	2	17	5	143	0	0	2	148	0	0	0	0	9	0	0	248	2	0	0	250	415
08:30:00	6	0	4	0	4	10	3	146	1	0	2	150	0	0	0	0	8	0	0	249	5	0	0	254	414
08:45:00	10	0	6	0	4	16	7	152	0	0	1	159	1	0	0	0	8	1	0	229	6	0	0	235	411
Grand Total	38	0	20	0	13	58	18	577	1	0	5	596	1	0	0	0	31	1	0	1012	16	0	0	1028	**1683**
Approach%	65.5%	0%	34.5%	0%		-	3%	96.8%	0.2%	0%		-	100%	0%	0%	0%		-	0%	98.4%	1.6%	0%		-	-
Totals %	2.3%	0%	1.2%	0%		3.4%	1.1%	34.3%	0.1%	0%		35.4%	0.1%	0%	0%	0%		0.1%	0%	60.1%	1%	0%		61.1%	-
PHF	0.79	0	0.83	0		0.85	0.64	0.95	0.25	0		0.94	0.25	0	0	0		0.25	0	0.88	0.67	0		0.89	-
Heavy	3	0	3	0		6	1	35	0	0		36	0	0	0	0		0	0	43	2	0		45	-
Heavy %	7.9%	0%	15%	0%		10.3%	5.6%	6.1%	0%	0%		6%	0%	0%	0%	0%		0%	0%	4.2%	12.5%	0%		4.4%	-
Lights	35	0	17	0		52	17	542	1	0		560	1	0	0	0		1	0	969	14	0		983	-
Lights %	92.1%	0%	85%	0%		89.7%	94.4%	93.9%	100%	0%		94%	100%	0%	0%	0%		100%	0%	95.8%	87.5%	0%		95.6%	-
Single-Unit Trucks	1	0	1	0		2	0	13	0	0		13	0	0	0	0		0	0	20	0	0		20	-
Single-Unit Trucks %	2.6%	0%	5%	0%		3.4%	0%	2.3%	0%	0%		2.2%	0%	0%	0%	0%		0%	0%	2%	0%	0%		1.9%	-
Buses	2	0	2	0		4	1	21	0	0		22	0	0	0	0		0	0	18	2	0		20	-
Buses %	5.3%	0%	10%	0%		6.9%	5.6%	3.6%	0%	0%		3.7%	0%	0%	0%	0%		0%	0%	1.8%	12.5%	0%		1.9%	-
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	5	0	0		5	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.5%	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	5	-	-	-	-	-	28	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	24.5%		-	-	-	-	10.2%		-	-	-	-	57.1%		-	-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	2%		-	-	-	-	0%		-	-	-	-	6.1%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: DUNDAS ST & JAGUAR VALLEY DR
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

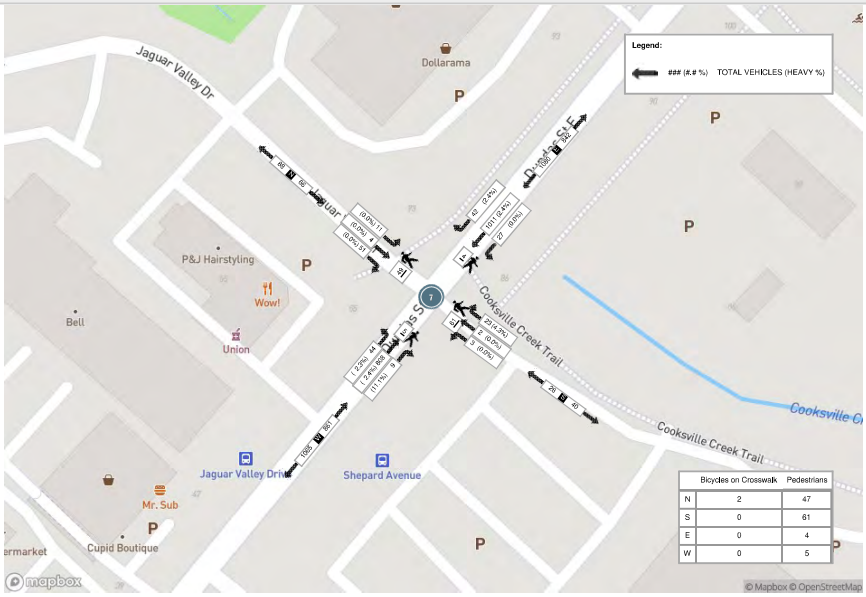
BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach JAGUAR VALLEY DR						E Approach DUNDAS ST						S Approach SOUTH DRIVEWAY						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:30:00	13	1	3	0	12	17	14	263	8	0	1	285	10	0	1	0	20	11	2	210	11	2	3	225	538
16:45:00	14	1	1	0	16	16	13	225	8	1	0	247	4	1	1	0	10	6	3	220	12	0	0	235	504
17:00:00	9	2	4	0	9	15	8	249	8	0	2	265	4	0	1	0	13	5	1	173	14	0	2	188	473
17:15:00	15	0	3	0	12	18	7	274	3	0	1	284	5	1	0	0	18	6	3	205	7	0	0	215	523
Grand Total	51	4	11	0	49	66	42	1011	27	1	4	1081	23	2	3	0	61	28	9	808	44	2	5	863	**2038**
Approach%	77.3%	6.1%	16.7%	0%		-	3.9%	93.5%	2.5%	0.1%		-	82.1%	7.1%	10.7%	0%		-	1%	93.6%	5.1%	0.2%		-	-
Totals %	2.5%	0.2%	0.5%	0%		3.2%	2.1%	49.6%	1.3%	0%		53%	1.1%	0.1%	0.1%	0%		1.4%	0.4%	39.6%	2.2%	0.1%		42.3%	-
PHF	0.85	0.5	0.69	0		0.92	0.75	0.92	0.84	0.25		0.95	0.58	0.5	0.75	0		0.64	0.75	0.92	0.79	0.25		0.92	-
Heavy	0	0	0	0		0	1	24	0	0		25	1	0	0	0		1	1	19	1	0		21	-
Heavy %	0%	0%	0%	0%		0%	2.4%	2.4%	0%	0%		2.3%	4.3%	0%	0%	0%		3.6%	11.1%	2.4%	2.3%	0%		2.4%	-
Lights	51	4	11	0		66	41	987	27	1		1056	22	2	3	0		27	8	789	43	2		842	-
Lights %	100%	100%	100%	0%		100%	97.6%	97.6%	100%	100%		97.7%	95.7%	100%	100%	0%		96.4%	88.9%	97.6%	97.7%	100%		97.6%	-
Single-Unit Trucks	0	0	0	0		0	1	7	0	0		8	1	0	0	0		1	1	7	0	0		8	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	2.4%	0.7%	0%	0%		0.7%	4.3%	0%	0%	0%		3.6%	11.1%	0.9%	0%	0%		0.9%	-
Buses	0	0	0	0		0	0	16	0	0		16	0	0	0	0		0	0	9	1	0		10	-
Buses %	0%	0%	0%	0%		0%	0%	1.6%	0%	0%		1.5%	0%	0%	0%	0%		0%	0%	1.1%	2.3%	0%		1.2%	-
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	3	0	0		3	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	-
Pedestrians	-	-	-	-	47	-	-	-	-	-	4	-	-	-	-	-	61	-	-	-	-	-	5	-	-
Pedestrians%	-	-	-	-	39.5%		-	-	-	-	3.4%		-	-	-	-	51.3%		-	-	-	-	4.2%		-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	1.7%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (11.66 °C)



Turning Movement Count (6 . HURONTARIO ST & DUNDAS ST)

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	8	74	24	0	3	106	6	73	8	0	9	87	7	94	18	0	26	119	11	119	15	0	17	145	457	
07:15:00	12	101	13	0	5	126	8	51	13	0	10	72	10	97	16	0	18	123	13	126	19	0	23	158	479	
07:30:00	10	88	13	0	6	111	8	80	10	0	13	98	4	105	23	0	45	132	12	186	14	0	32	212	553	
07:45:00	12	111	20	0	12	143	8	57	8	0	10	73	9	123	21	0	24	153	9	195	8	0	33	212	581	2070
08:00:00	13	78	30	0	16	121	18	113	12	0	19	143	11	120	35	0	63	166	10	243	13	0	48	266	696	2309
08:15:00	10	74	18	0	9	102	14	133	7	0	15	154	7	102	30	0	29	139	14	223	9	0	29	246	641	2471
08:30:00	15	76	29	0	10	120	18	101	6	0	11	125	18	122	21	0	43	161	10	194	15	0	27	219	625	2543
08:45:00	12	72	27	0	16	111	15	128	13	0	14	156	10	114	26	0	51	150	17	195	12	0	47	224	641	2603
BREAK																										
16:00:00	19	87	29	0	25	135	29	195	20	0	34	244	17	108	38	0	92	163	14	189	30	0	49	233	775	
16:15:00	21	100	24	0	26	145	28	163	16	0	46	227	17	131	43	0	67	191	13	159	22	0	46	194	757	
16:30:00	22	113	31	0	19	166	33	221	17	0	38	271	24	125	35	0	87	184	24	166	28	0	54	218	839	
16:45:00	19	87	19	0	40	125	24	227	11	0	48	262	14	119	61	0	84	194	22	198	29	0	60	249	830	3201
17:00:00	20	114	16	0	13	150	25	205	20	0	32	250	13	102	50	0	55	165	22	154	28	0	49	204	769	3195
17:15:00	22	104	26	0	22	152	19	217	25	0	35	261	16	127	41	0	64	184	21	188	20	0	86	229	826	3264
17:30:00	24	125	27	0	26	176	25	204	23	0	35	252	18	139	37	0	54	194	21	187	26	0	47	234	856	3281
17:45:00	23	105	21	0	19	149	26	190	23	0	49	241	21	120	42	0	52	183	26	154	23	1	57	204	777	3228
Grand Total	262	1509	367	0	267	2138	306	2378	232	0	418	2916	216	1848	537	0	854	2601	259	2876	311	1	704	3447	**11102**	-
Approach%	12.3%	70.6%	17.2%	0%		-	10.5%	81.6%	8%	0%		-	8.3%	71%	20.6%	0%		-	7.5%	83.4%	9%	0%		-	-	-
Totals %	2.4%	13.6%	3.3%	0%		19.3%	2.8%	21.4%	2.1%	0%		26.3%	1.9%	16.6%	4.8%	0%		23.4%	2.3%	25.9%	2.8%	0%		31%	-	-
Heavy	13	86	11	0		-	10	101	8	0		-	8	95	14	0		-	5	92	8	0		-	-	-
Heavy %	5%	5.7%	3%	0%		-	3.3%	4.2%	3.4%	0%		-	3.7%	5.1%	2.6%	0%		-	1.9%	3.2%	2.6%	0%		-	-	-
Bicycles	0	0	0	0		-	1	1	0	0		-	0	1	0	0		-	1	1	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0.3%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0.4%	0%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	13	78	30	0	16	121	18	113	12	0	19	143	11	120	35	0	63	166	10	243	13	0	48	266	696
08:15:00	10	74	18	0	9	102	14	133	7	0	15	154	7	102	30	0	29	139	14	223	9	0	29	246	641
08:30:00	15	76	29	0	10	120	18	101	6	0	11	125	18	122	21	0	43	161	10	194	15	0	27	219	625
08:45:00	12	72	27	0	16	111	15	128	13	0	14	156	10	114	26	0	51	150	17	195	12	0	47	224	641
Grand Total	50	300	104	0	51	454	65	475	38	0	59	578	46	458	112	0	186	616	51	855	49	0	151	955	**2603**
Approach%	11%	66.1%	22.9%	0%		-	11.2%	82.2%	6.6%	0%		-	7.5%	74.4%	18.2%	0%		-	5.3%	89.5%	5.1%	0%		-	-
Totals %	1.9%	11.5%	4%	0%		17.4%	2.5%	18.2%	1.5%	0%		22.2%	1.8%	17.6%	4.3%	0%		23.7%	2%	32.8%	1.9%	0%		36.7%	-
PHF	0.83	0.96	0.87	0		0.94	0.9	0.89	0.73	0		0.93	0.64	0.94	0.8	0		0.93	0.75	0.88	0.82	0		0.9	-
Heavy	5	18	7	0		30	4	32	0	0		36	1	31	2	0		34	3	33	2	0		38	-
Heavy %	10%	6%	6.7%	0%		6.6%	6.2%	6.7%	0%	0%		6.2%	2.2%	6.8%	1.8%	0%		5.5%	5.9%	3.9%	4.1%	0%		4%	-
Lights	45	282	97	0		424	61	443	38	0		542	45	427	110	0		582	48	822	47	0		917	-
Lights %	90%	94%	93.3%	0%		93.4%	93.8%	93.3%	100%	0%		93.8%	97.8%	93.2%	98.2%	0%		94.5%	94.1%	96.1%	95.9%	0%		96%	-
Single-Unit Trucks	2	5	5	0		12	2	12	0	0		14	1	11	0	0		12	2	14	0	0		16	-
Single-Unit Trucks %	4%	1.7%	4.8%	0%		2.6%	3.1%	2.5%	0%	0%		2.4%	2.2%	2.4%	0%	0%		1.9%	3.9%	1.6%	0%	0%		1.7%	-
Buses	2	13	2	0		17	2	19	0	0		21	0	19	1	0		20	1	16	2	0		19	-
Buses %	4%	4.3%	1.9%	0%		3.7%	3.1%	4%	0%	0%		3.6%	0%	4.1%	0.9%	0%		3.2%	2%	1.9%	4.1%	0%		2%	-
Articulated Trucks	1	0	0	0		1	0	1	0	0		1	0	1	1	0		2	0	3	0	0		3	-
Articulated Trucks %	2%	0%	0%	0%		0.2%	0%	0.2%	0%	0%		0.2%	0%	0.2%	0.9%	0%		0.3%	0%	0.4%	0%	0%		0.3%	-
Pedestrians	-	-	-	-	51	-	-	-	-	-	57	-	-	-	-	-	184	-	-	-	-	-	149	-	-
Pedestrians%	-	-	-	-	11.4%		-	-	-	-	12.8%		-	-	-	-	41.2%		-	-	-	-	33.3%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0.4%		-	-	-	-	0.4%		-	-	-	-	0.4%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:45:00	19	87	19	0	40	125	24	227	11	0	48	262	14	119	61	0	84	194	22	198	29	0	60	249	830
17:00:00	20	114	16	0	13	150	25	205	20	0	32	250	13	102	50	0	55	165	22	154	28	0	49	204	769
17:15:00	22	104	26	0	22	152	19	217	25	0	35	261	16	127	41	0	64	184	21	188	20	0	86	229	826
17:30:00	24	125	27	0	26	176	25	204	23	0	35	252	18	139	37	0	54	194	21	167	26	0	47	234	856
Grand Total	85	430	88	0	101	603	93	853	79	0	150	1025	61	487	189	0	257	737	86	727	103	0	242	916	**3281**
Approach%	14.1%	71.3%	14.6%	0%		-	9.1%	83.2%	7.7%	0%		-	8.3%	66.1%	25.6%	0%		-	9.4%	79.4%	11.2%	0%		-	-
Totals %	2.6%	13.1%	2.7%	0%		18.4%	2.8%	26%	2.4%	0%		31.2%	1.9%	14.8%	5.8%	0%		22.5%	2.6%	22.2%	3.1%	0%		27.9%	-
PHF	0.89	0.86	0.81	0		0.86	0.93	0.94	0.79	0		0.98	0.85	0.88	0.77	0		0.95	0.98	0.92	0.89	0		0.92	-
Heavy	2	16	0	0		18	0	21	2	0		23	2	14	5	0		21	0	19	2	0		21	-
Heavy %	2.4%	3.7%	0%	0%		3%	0%	2.5%	2.5%	0%		2.2%	3.3%	2.9%	2.6%	0%		2.8%	0%	2.6%	1.9%	0%		2.3%	-
Lights	83	414	88	0		585	93	832	77	0		1002	59	473	184	0		716	86	708	101	0		895	-
Lights %	97.6%	96.3%	100%	0%		97%	100%	97.5%	97.5%	0%		97.8%	96.7%	97.1%	97.4%	0%		97.2%	100%	97.4%	98.1%	0%		97.7%	-
Single-Unit Trucks	2	4	0	0		6	0	7	2	0		9	1	3	5	0		9	0	6	0	0		6	-
Single-Unit Trucks %	2.4%	0.9%	0%	0%		1%	0%	0.8%	2.5%	0%		0.9%	1.6%	0.6%	2.6%	0%		1.2%	0%	0.8%	0%	0%		0.7%	-
Buses	0	10	0	0		10	0	12	0	0		12	0	9	0	0		9	0	11	0	0		11	-
Buses %	0%	2.3%	0%	0%		1.7%	0%	1.4%	0%	0%		1.2%	0%	1.8%	0%	0%		1.2%	0%	1.5%	0%	0%		1.2%	-
Articulated Trucks	0	2	0	0		2	0	2	0	0		2	1	2	0	0		3	0	2	2	0		4	-
Articulated Trucks %	0%	0.5%	0%	0%		0.3%	0%	0.2%	0%	0%		0.2%	1.6%	0.4%	0%	0%		0.4%	0%	0.3%	1.9%	0%		0.4%	-
Pedestrians	-	-	-	-	100	-	-	-	-	-	149	-	-	-	-	-	257	-	-	-	-	-	241	-	-
Pedestrians%	-	-	-	-	13.3%		-	-	-	-	19.9%		-	-	-	-	34.3%		-	-	-	-	32.1%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0.1%		-	-	-	-	0.1%		-	-	-	-	0%		-	-	-	-	0.1%		-
Bicycles on Road	0	0	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Turning Movement Count (5 . KIRWIN AVE & JAGUAR VALLEY DR)

Start Time	N Approach JAGUAR VALLEY DR						E Approach KIRWIN AVE						S Approach JAGUAR VALLEY DR						W Approach KIRWIN AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	5	3	1	0	1	9	3	11	1	0	2	15	3	3	4	0	4	10	2	15	0	0	2	17	51	
07:15:00	1	4	2	0	1	7	2	12	3	0	0	17	3	3	3	0	2	9	4	7	2	0	3	13	46	
07:30:00	2	2	3	0	1	7	7	13	0	0	3	20	1	11	6	0	3	18	4	22	5	0	3	31	76	
07:45:00	3	6	4	0	3	13	2	19	3	0	4	24	3	12	4	0	2	19	5	23	9	0	3	37	93	266
08:00:00	4	2	4	0	4	10	5	29	6	0	5	40	3	11	6	0	10	20	7	20	7	0	1	34	104	319
08:15:00	4	11	9	0	3	24	4	16	0	0	1	20	2	9	3	0	7	14	3	30	5	0	2	38	96	369
08:30:00	1	4	3	0	2	8	4	31	1	0	1	36	2	7	3	0	3	12	4	31	2	0	4	37	93	386
08:45:00	1	10	6	0	2	17	4	24	4	0	0	32	4	10	1	0	7	15	3	29	4	0	6	36	100	393
BREAK																										
16:00:00	12	11	2	0	3	25	8	57	2	0	5	67	6	9	7	0	0	22	6	27	10	0	8	43	157	
16:15:00	5	8	4	0	3	17	6	50	5	0	5	61	2	11	10	0	6	23	10	36	8	0	3	54	155	
16:30:00	2	8	8	0	6	18	2	62	2	0	2	66	7	9	10	0	7	26	8	21	10	1	4	40	150	
16:45:00	4	11	8	0	6	23	12	55	6	0	3	73	3	9	18	0	3	30	12	32	11	0	2	55	181	643
17:00:00	11	8	7	0	0	26	10	70	6	0	1	86	6	14	10	0	8	30	11	39	4	2	4	56	198	684
17:15:00	4	7	9	0	4	20	4	52	4	0	1	60	4	5	11	0	4	20	7	36	8	0	3	51	151	680
17:30:00	7	16	4	0	2	27	3	64	5	0	2	72	6	11	10	0	5	27	4	38	6	0	2	48	174	704
17:45:00	7	7	5	0	4	19	7	46	2	0	2	55	5	17	12	0	9	34	15	24	13	0	2	52	160	683
Grand Total	73	118	79	0	45	270	83	611	50	0	37	744	60	151	118	0	80	329	105	430	104	3	52	642	**1985**	-
Approach%	27%	43.7%	29.3%	0%		-	11.2%	82.1%	6.7%	0%		-	18.2%	45.9%	35.9%	0%		-	16.4%	67%	16.2%	0.5%		-	-	-
Totals %	3.7%	5.9%	4%	0%		13.6%	4.2%	30.8%	2.5%	0%		37.5%	3%	7.6%	5.9%	0%		16.6%	5.3%	21.7%	5.2%	0.2%		32.3%	-	-
Heavy	4	3	2	0		-	5	14	3	0		-	3	4	6	0		-	4	10	5	0		-	-	-
Heavy %	5.5%	2.5%	2.5%	0%		-	6%	2.3%	6%	0%		-	5%	2.6%	5.1%	0%		-	3.8%	2.3%	4.8%	0%		-	-	-
Bicycles	1	0	0	0		-	0	3	0	0		-	4	1	0	0		-	2	2	0	0		-	-	-
Bicycle %	1.4%	0%	0%	0%		-	0%	0.5%	0%	0%		-	6.7%	0.7%	0%	0%		-	1.9%	0.5%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: KIRWIN AVE & JAGUAR VALLEY DR
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach JAGUAR VALLEY DR						E Approach KIRWIN AVE						S Approach JAGUAR VALLEY DR						W Approach KIRWIN AVE						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	4	2	4	0	4	10	5	29	6	0	5	40	3	11	6	0	10	20	7	20	7	0	1	34	104
08:15:00	4	11	9	0	3	24	4	16	0	0	1	20	2	9	3	0	7	14	3	30	5	0	2	38	96
08:30:00	1	4	3	0	2	8	4	31	1	0	1	36	2	7	3	0	3	12	4	31	2	0	4	37	93
08:45:00	1	10	6	0	2	17	4	24	4	0	0	32	4	10	1	0	7	15	3	29	4	0	6	36	100
Grand Total	10	27	22	0	11	59	17	100	11	0	7	128	11	37	13	0	27	61	17	110	18	0	13	145	**393**
Approach%	16.9%	45.8%	37.3%	0%		-	13.3%	78.1%	8.6%	0%		-	18%	60.7%	21.3%	0%		-	11.7%	75.9%	12.4%	0%		-	-
Totals %	2.5%	6.9%	5.6%	0%		15%	4.3%	25.4%	2.8%	0%		32.6%	2.8%	9.4%	3.3%	0%		15.5%	4.3%	28%	4.6%	0%		36.9%	-
PHF	0.63	0.61	0.61	0		0.61	0.85	0.81	0.46	0		0.8	0.69	0.84	0.54	0		0.76	0.61	0.89	0.64	0		0.95	-
Heavy	0	3	2	0		5	4	6	1	0		11	2	2	0	0		4	2	5	4	0		11	-
Heavy %	0%	11.1%	9.1%	0%		8.5%	23.5%	6%	9.1%	0%		8.6%	18.2%	5.4%	0%	0%		6.6%	11.8%	4.5%	22.2%	0%		7.6%	-
Lights	10	24	20	0		54	13	94	10	0		117	9	35	13	0		57	15	105	14	0		134	-
Lights %	100%	88.9%	90.9%	0%		91.5%	76.5%	94%	90.9%	0%		91.4%	81.8%	94.6%	100%	0%		93.4%	88.2%	95.5%	77.8%	0%		92.4%	-
Single-Unit Trucks	0	1	0	0		1	1	1	0	0		2	0	0	0	0		0	0	1	0	0		1	-
Single-Unit Trucks %	0%	3.7%	0%	0%		1.7%	5.9%	1%	0%	0%		1.6%	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.7%	-
Buses	0	2	2	0		4	3	5	1	0		9	2	2	0	0		4	2	4	4	0		10	-
Buses %	0%	7.4%	9.1%	0%		6.8%	17.6%	5%	9.1%	0%		7%	18.2%	5.4%	0%	0%		6.6%	11.8%	3.6%	22.2%	0%		6.9%	-
Pedestrians	-	-	-	-	9	-	-	-	-	-	6	-	-	-	-	-	25	-	-	-	-	-	13	-	-
Pedestrians%	-	-	-	-	15.5%		-	-	-	-	10.3%		-	-	-	-	43.1%		-	-	-	-	22.4%		-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	3.4%		-	-	-	-	1.7%		-	-	-	-	3.4%		-	-	-	-	0%		-
Bicycles on Road	1	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: KIRWIN AVE & JAGUAR VALLEY DR
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach JAGUAR VALLEY DR						E Approach KIRWIN AVE						S Approach JAGUAR VALLEY DR						W Approach KIRWIN AVE						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:45:00	4	11	8	0	6	23	12	55	6	0	3	73	3	9	18	0	3	30	12	32	11	0	2	55	181
17:00:00	11	8	7	0	0	26	10	70	6	0	1	86	6	14	10	0	8	30	11	39	4	2	4	56	198
17:15:00	4	7	9	0	4	20	4	52	4	0	1	60	4	5	11	0	4	20	7	36	8	0	3	51	151
17:30:00	7	16	4	0	2	27	3	64	5	0	2	72	6	11	10	0	5	27	4	38	6	0	2	48	174
Grand Total	26	42	28	0	12	96	29	241	21	0	7	291	19	39	49	0	20	107	34	145	29	2	11	210	**704**
Approach%	27.1%	43.8%	29.2%	0%		-	10%	82.8%	7.2%	0%		-	17.8%	36.4%	45.8%	0%		-	16.2%	69%	13.8%	1%		-	-
Totals %	3.7%	6%	4%	0%		13.6%	4.1%	34.2%	3%	0%		41.3%	2.7%	5.5%	7%	0%		15.2%	4.8%	20.6%	4.1%	0.3%		29.8%	-
PHF	0.59	0.66	0.78	0		0.89	0.6	0.86	0.88	0		0.85	0.79	0.7	0.68	0		0.89	0.71	0.93	0.66	0.25		0.94	-
Heavy	1	0	0	0		1	0	1	0	0		1	1	0	2	0		3	0	0	0	0		0	-
Heavy %	3.8%	0%	0%	0%		1%	0%	0.4%	0%	0%		0.3%	5.3%	0%	4.1%	0%		2.8%	0%	0%	0%	0%		0%	-
Lights	25	42	28	0		95	29	240	21	0		290	18	39	47	0		104	34	145	29	2		210	-
Lights %	96.2%	100%	100%	0%		99%	100%	99.6%	100%	0%		99.7%	94.7%	100%	95.9%	0%		97.2%	100%	100%	100%	100%		100%	-
Single-Unit Trucks	1	0	0	0		1	0	1	0	0		1	0	0	2	0		2	0	0	0	0		0	-
Single-Unit Trucks %	3.8%	0%	0%	0%		1%	0%	0.4%	0%	0%		0.3%	0%	0%	4.1%	0%		1.9%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	5.3%	0%	0%	0%		0.9%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	7	-	-	-	-	-	19	-	-	-	-	-	10	-	-
Pedestrians%	-	-	-	-	24%		-	-	-	-	14%		-	-	-	-	38%		-	-	-	-	20%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	2%		-	-	-	-	2%		-
Bicycles on Road	0	0	0	0	0	-	0	2	0	0	0	-	2	0	0	0	0	-	2	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Turning Movement Count (4 . KIRWIN AVENUE & 3085 HURONTARIO ST PARKING ACCESS)

Start Time	E Approach KIRWIN AVE					S Approach 3085 HURONTARIO ST PARKING ACCESS					W Approach KIRWIN AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	U-Turn W:W	Peds W:	Approach Total		
07:00:00	19	1	1	0	21	0	0	0	2	0	0	15	0	0	15	36	
07:15:00	16	0	0	0	16	0	0	0	3	0	0	13	1	0	14	30	
07:30:00	20	1	0	0	21	1	0	0	2	1	0	28	0	0	28	50	
07:45:00	26	0	0	0	26	0	0	0	3	0	0	34	0	0	34	60	176
08:00:00	39	1	0	0	40	1	0	0	10	1	1	36	0	0	37	78	218
08:15:00	20	1	0	0	21	1	0	0	9	1	1	34	0	0	35	57	245
08:30:00	30	4	0	0	34	2	0	0	2	2	1	35	0	0	36	72	267
08:45:00	27	1	0	0	28	1	0	0	7	1	3	38	0	0	41	70	277
BREAK																	
16:00:00	65	9	1	0	75	11	9	0	2	20	8	29	0	0	37	132	
16:15:00	61	4	0	0	65	5	11	0	5	16	4	49	2	1	55	136	
16:30:00	64	10	0	0	74	5	11	0	4	16	1	35	1	0	37	127	
16:45:00	73	3	0	0	76	4	8	0	4	12	5	52	0	1	57	145	540
17:00:00	85	9	1	0	95	5	7	0	4	12	3	53	1	2	57	164	572
17:15:00	60	9	1	0	70	5	5	0	7	10	10	46	1	0	57	137	573
17:30:00	71	6	1	0	78	1	4	0	4	5	3	50	0	1	53	136	582
17:45:00	62	7	2	0	71	10	11	0	5	21	6	40	0	0	46	138	575
Grand Total	738	66	7	0	811	52	66	0	73	118	46	587	6	5	639	**1568**	-
Approach%	91%	8.1%	0.9%		-	44.1%	55.9%	0%		-	7.2%	91.9%	0.9%		-	-	-
Totals %	47.1%	4.2%	0.4%		51.7%	3.3%	4.2%	0%		7.5%	2.9%	37.4%	0.4%		40.8%	-	-
Heavy	24	0	0		-	0	0	0		-	0	18	0		-	-	-
Heavy %	3.3%	0%	0%		-	0%	0%	0%		-	0%	3.1%	0%		-	-	-
Bicycles	4	3	0		-	1	0	0		-	0	3	0		-	-	-
Bicycle %	0.5%	4.5%	0%		-	1.9%	0%	0%		-	0%	0.5%	0%		-	-	-

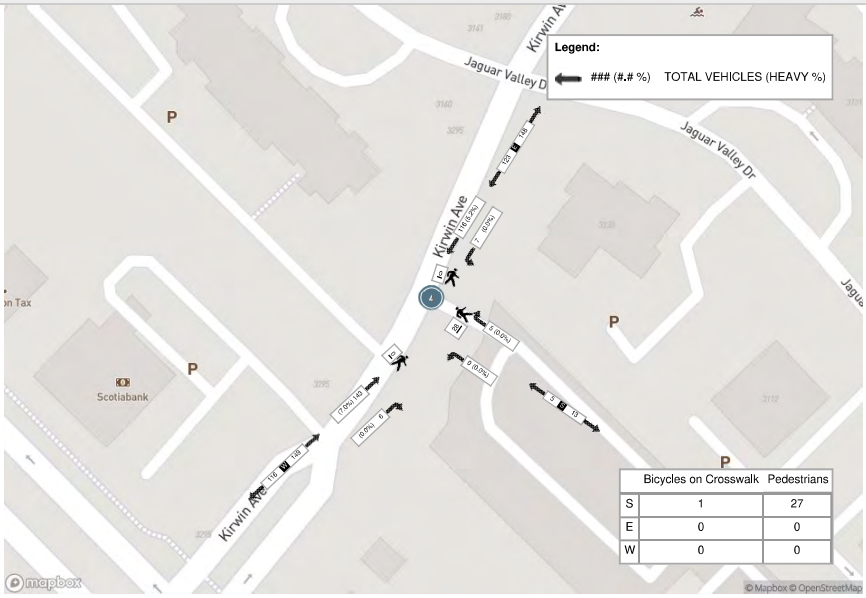
Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	E Approach KIRWIN AVE					S Approach 3085 HURONTARIO ST PARKING ACCESS					W Approach KIRWIN AVE					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
08:00:00	39	1	0	0	40	1	0	0	10	1	1	36	0	0	37	78
08:15:00	20	1	0	0	21	1	0	0	9	1	1	34	0	0	35	57
08:30:00	30	4	0	0	34	2	0	0	2	2	1	35	0	0	36	72
08:45:00	27	1	0	0	28	1	0	0	7	1	3	38	0	0	41	70
Grand Total	116	7	0	0	123	5	0	0	28	5	6	143	0	0	149	**277**
Approach%	94.3%	5.7%	0%		-	100%	0%	0%		-	4%	96%	0%		-	-
Totals %	41.9%	2.5%	0%		44.4%	1.8%	0%	0%		1.8%	2.2%	51.6%	0%		53.8%	-
PHF	0.74	0.44	0		0.77	0.63	0	0		0.63	0.5	0.94	0		0.91	-
Heavy	6	0	0		6	0	0	0		0	0	10	0		10	-
Heavy %	5.2%	0%	0%		4.9%	0%	0%	0%		0%	0%	7%	0%		6.7%	-
Lights	110	7	0		117	5	0	0		5	6	133	0		139	-
Lights %	94.8%	100%	0%		95.1%	100%	0%	0%		100%	100%	93%	0%		93.3%	-
Single-Unit Trucks	1	0	0		1	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0.9%	0%	0%		0.8%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	5	0	0		5	0	0	0		0	0	10	0		10	-
Buses %	4.3%	0%	0%		4.1%	0%	0%	0%		0%	0%	7%	0%		6.7%	-
Pedestrians	-	-	-	0	-	-	-	-	27	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	96.4%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	3.6%		-	-	-	0%		-
Bicycles on Road	1	2	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

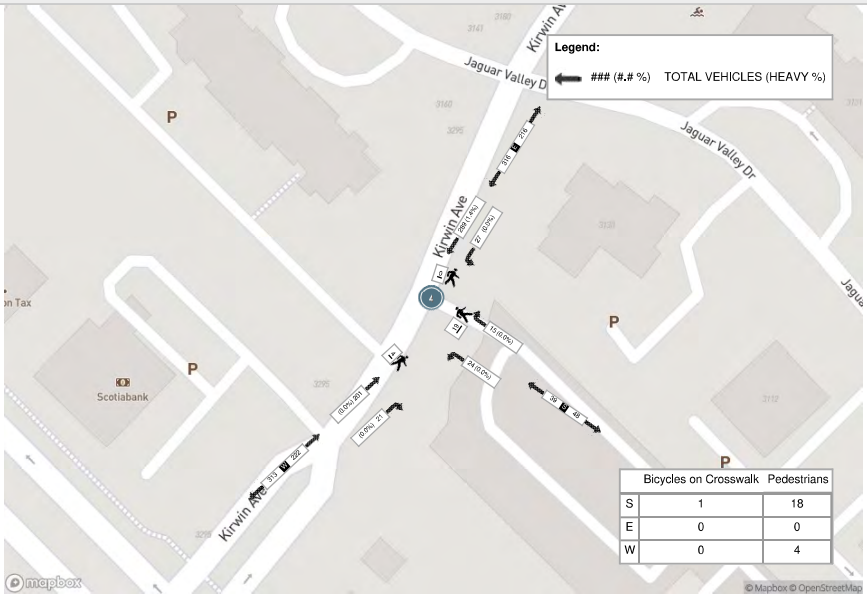
Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)

Start Time	E Approach KIRWIN AVE					S Approach 3085 HURONTARIO ST PARKING ACCESS					W Approach KIRWIN AVE					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
16:45:00	73	3	0	0	76	4	8	0	4	12	5	52	0	1	57	145
17:00:00	85	9	1	0	95	5	7	0	4	12	3	53	1	2	57	164
17:15:00	60	9	1	0	70	5	5	0	7	10	10	46	1	0	57	137
17:30:00	71	6	1	0	78	1	4	0	4	5	3	50	0	1	53	136
Grand Total	289	27	3	0	319	15	24	0	19	39	21	201	2	4	224	**582**
Approach%	90.6%	8.5%	0.9%		-	38.5%	61.5%	0%		-	9.4%	89.7%	0.9%		-	-
Totals %	49.7%	4.6%	0.5%		54.8%	2.6%	4.1%	0%		6.7%	3.6%	34.5%	0.3%		38.5%	-
PHF	0.85	0.75	0.75		0.84	0.75	0.75	0		0.81	0.53	0.95	0.5		0.98	-
Heavy	4	0	0		4	0	0	0		0	0	0	0		0	-
Heavy %	1.4%	0%	0%		1.3%	0%	0%	0%		0%	0%	0%	0%		0%	-
Lights	285	27	3		315	15	24	0		39	21	201	2		224	-
Lights %	98.6%	100%	100%		98.7%	100%	100%	0%		100%	100%	100%	100%		100%	-
Single-Unit Trucks	4	0	0		4	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	1.4%	0%	0%		1.3%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	0	0		0	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	18	-	-	-	-	4	-	-
Pedestrians%	-	-	-	0%		-	-	-	78.3%		-	-	-	17.4%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	4.3%		-	-	-	0%		-
Bicycles on Road	2	1	0	0	-	1	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:



Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (11.66 °C)



Turning Movement Count (3 . HURONTARIO ST & 3085 HURONTARIO ST MAIN ACCESS)

Start Time	N Approach HURONTARIO ST					E Approach 3085 HURONTARIO ST MAIN ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	U-Turn S:S	Peds S:	Approach Total		
07:00:00	112	1	0	0	113	2	0	0	5	2	0	117	0	0	117	232	
07:15:00	127	0	0	0	127	0	0	0	1	0	1	123	0	0	124	251	
07:30:00	139	0	0	0	139	1	1	0	3	2	2	132	0	0	134	275	
07:45:00	139	0	0	0	139	0	0	0	2	0	2	142	0	0	144	283	1041
08:00:00	139	1	0	0	140	0	0	0	6	0	1	141	0	0	142	282	1091
08:15:00	171	0	0	0	171	2	0	0	2	2	2	167	1	0	170	343	1183
08:30:00	130	0	0	0	130	0	0	0	5	0	2	158	0	0	160	290	1198
08:45:00	126	0	0	0	126	0	3	0	4	3	2	151	0	0	153	282	1197
BREAK																	
16:00:00	166	6	1	0	173	3	2	0	25	5	9	193	0	0	202	380	
16:15:00	134	4	0	0	138	5	8	0	13	13	13	165	0	0	178	329	
16:30:00	156	1	1	0	158	7	2	0	21	9	11	192	0	0	203	370	
16:45:00	151	5	1	0	157	7	5	0	21	12	5	181	0	0	186	355	1434
17:00:00	153	2	0	0	155	12	5	0	9	17	7	154	0	0	161	333	1387
17:15:00	148	2	0	0	150	13	5	0	18	18	12	172	0	0	184	352	1410
17:30:00	169	4	0	0	173	8	2	0	12	10	9	186	0	0	195	378	1418
17:45:00	159	6	0	0	165	13	5	0	21	18	5	184	0	0	189	372	1435
Grand Total	2319	32	3	0	2354	73	38	0	168	111	83	2558	1	0	2642	**5107**	-
Approach%	98.5%	1.4%	0.1%		-	65.8%	34.2%	0%		-	3.1%	96.8%	0%		-	-	-
Totals %	45.4%	0.6%	0.1%		46.1%	1.4%	0.7%	0%		2.2%	1.6%	50.1%	0%		51.7%	-	-
Heavy	128	2	0		-	2	0	0		-	1	134	0		-	-	-
Heavy %	5.5%	6.3%	0%		-	2.7%	0%	0%		-	1.2%	5.2%	0%		-	-	-
Bicycles	1	0	0		-	0	0	0		-	0	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	-	-

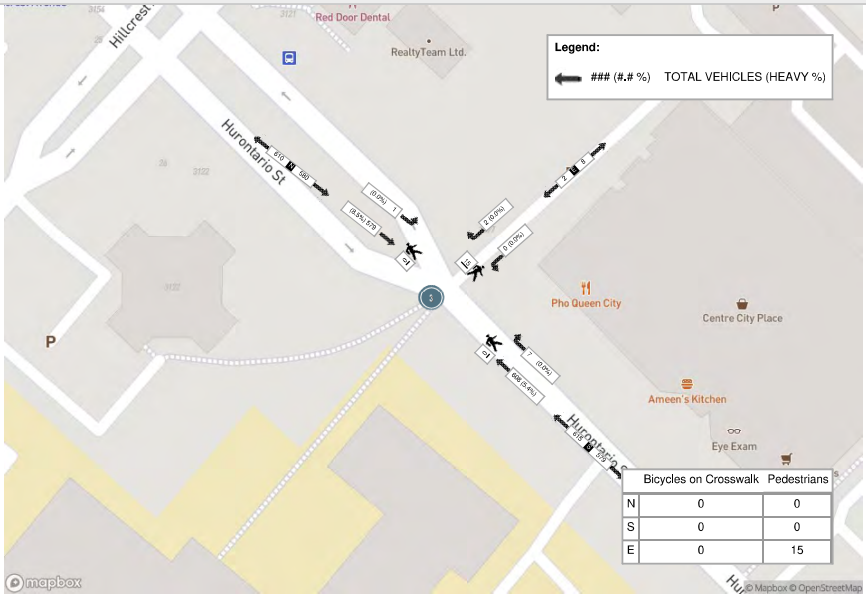
Peak Hour: 07:45 AM - 08:45 AM Weather:

Start Time	N Approach HURONTARIO ST					E Approach 3085 HURONTARIO ST MAIN ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
07:45:00	139	0	0	0	139	0	0	0	2	0	2	142	0	0	144	283
08:00:00	139	1	0	0	140	0	0	0	6	0	1	141	0	0	142	282
08:15:00	171	0	0	0	171	2	0	0	2	2	2	167	1	0	170	343
08:30:00	130	0	0	0	130	0	0	0	5	0	2	158	0	0	160	290
Grand Total	579	1	0	0	580	2	0	0	15	2	7	608	1	0	616	**1198**
Approach%	99.8%	0.2%	0%		-	100%	0%	0%		-	1.1%	98.7%	0.2%		-	-
Totals %	48.3%	0.1%	0%		48.4%	0.2%	0%	0%		0.2%	0.6%	50.8%	0.1%		51.4%	-
PHF	0.85	0.25	0		0.85	0.25	0	0		0.25	0.88	0.91	0.25		0.91	-
Heavy	49	0	0		49	0	0	0		0	0	33	0		33	-
Heavy %	8.5%	0%	0%		8.4%	0%	0%	0%		0%	0%	5.4%	0%		5.4%	-
Lights	530	1	0		531	2	0	0		2	7	575	1		583	-
Lights %	91.5%	100%	0%		91.6%	100%	0%	0%		100%	100%	94.6%	100%		94.6%	-
Single-Unit Trucks	22	0	0		22	0	0	0		0	0	13	0		13	-
Single-Unit Trucks %	3.8%	0%	0%		3.8%	0%	0%	0%		0%	0%	2.1%	0%		2.1%	-
Buses	26	0	0		26	0	0	0		0	0	17	0		17	-
Buses %	4.5%	0%	0%		4.5%	0%	0%	0%		0%	0%	2.8%	0%		2.8%	-
Articulated Trucks	1	0	0		1	0	0	0		0	0	3	0		3	-
Articulated Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.5%	0%		0.5%	-
Pedestrians	-	-	-	0	-	-	-	-	15	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	100%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)

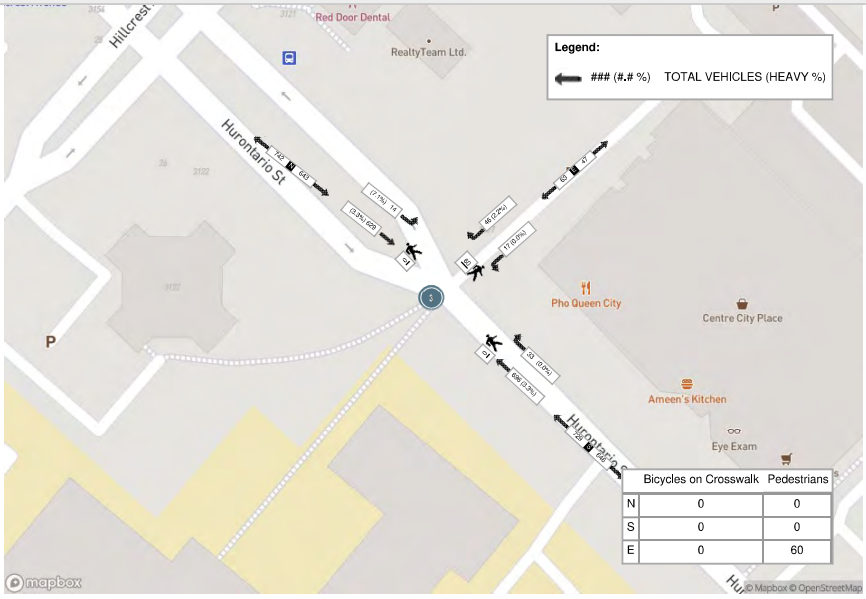
Start Time	N Approach HURONTARIO ST					E Approach 3085 HURONTARIO ST MAIN ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
17:00:00	153	2	0	0	155	12	5	0	9	17	7	154	0	0	161	333
17:15:00	148	2	0	0	150	13	5	0	18	18	12	172	0	0	184	352
17:30:00	169	4	0	0	173	8	2	0	12	10	9	186	0	0	195	378
17:45:00	159	6	0	0	165	13	5	0	21	18	5	184	0	0	189	372
Grand Total	629	14	0	0	643	46	17	0	60	63	33	696	0	0	729	**1435**
Approach%	97.8%	2.2%	0%		-	73%	27%	0%		-	4.5%	95.5%	0%		-	-
Totals %	43.8%	1%	0%		44.8%	3.2%	1.2%	0%		4.4%	2.3%	48.5%	0%		50.8%	-
PHF	0.93	0.58	0		0.93	0.88	0.85	0		0.88	0.69	0.94	0		0.93	-
Heavy	21	1	0		22	1	0	0		1	0	23	0		23	-
Heavy %	3.3%	7.1%	0%		3.4%	2.2%	0%	0%		1.6%	0%	3.3%	0%		3.2%	-
Lights	608	13	0		621	45	17	0		62	33	673	0		706	-
Lights %	96.7%	92.9%	0%		96.6%	97.8%	100%	0%		98.4%	100%	96.7%	0%		96.8%	-
Single-Unit Trucks	6	1	0		7	1	0	0		1	0	10	0		10	-
Single-Unit Trucks %	1%	7.1%	0%		1.1%	2.2%	0%	0%		1.6%	0%	1.4%	0%		1.4%	-
Buses	12	0	0		12	0	0	0		0	0	12	0		12	-
Buses %	1.9%	0%	0%		1.9%	0%	0%	0%		0%	0%	1.7%	0%		1.6%	-
Articulated Trucks	3	0	0		3	0	0	0		0	0	1	0		1	-
Articulated Trucks %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	0%	0.1%	0%		0.1%	-
Pedestrians	-	-	-	0	-	-	-	-	60	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	100%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:45 AM - 08:45 AM Weather:



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	0	15

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	0	60

Turning Movement Count (2 . HURONTARIO ST & HILLCREST AVE / KIRWIN AVE)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	101	3	0	0	104	8	9	2	0	6	19	0	123	0	0	2	123	10	12	8	0	4	30	276	
07:15:00	1	112	1	0	0	114	6	11	3	0	2	20	1	119	1	0	4	121	12	11	4	0	9	27	282	
07:30:00	0	127	4	0	0	131	5	13	2	0	3	20	3	135	1	0	5	139	10	27	6	0	12	43	333	
07:45:00	3	131	3	0	0	137	8	19	2	0	6	29	3	136	1	0	14	140	12	28	5	0	6	45	351	1242
08:00:00	3	127	3	0	0	133	9	31	2	0	17	42	2	138	1	0	44	141	9	32	4	0	29	45	361	1327
08:15:00	1	149	4	0	0	154	9	10	3	0	11	22	5	170	1	0	33	176	13	34	6	0	49	53	405	1450
08:30:00	5	122	6	0	0	133	13	23	0	0	7	36	4	157	1	0	7	162	10	32	4	0	16	46	377	1494
08:45:00	2	111	5	0	0	118	13	15	0	0	6	28	6	146	1	0	9	153	14	35	9	0	8	58	357	1500
BREAK																										
16:00:00	3	152	9	0	0	164	20	42	2	0	15	64	11	185	0	0	6	196	16	27	3	0	9	46	470	
16:15:00	1	122	7	0	3	130	16	59	4	0	9	79	9	153	6	0	12	168	14	45	1	0	22	60	437	
16:30:00	1	129	7	0	4	137	11	59	5	0	16	75	18	183	2	0	9	203	18	24	4	0	16	46	461	
16:45:00	7	128	5	0	4	140	10	65	7	0	17	82	9	173	3	0	14	185	17	36	3	0	13	56	463	1831
17:00:00	3	131	17	0	1	151	12	92	4	0	9	108	9	162	3	0	19	174	18	30	8	0	9	56	489	1850
17:15:00	6	146	5	0	1	157	18	59	3	0	21	80	17	186	6	0	15	209	9	41	8	0	17	58	504	1917
17:30:00	11	149	6	0	1	166	24	60	3	0	12	87	15	171	4	0	23	190	16	39	6	0	25	61	504	1960
17:45:00	8	134	16	0	0	158	20	64	5	0	18	89	6	179	15	0	12	200	24	36	12	0	14	72	519	2016
Grand Total	55	2071	101	0	14	2227	202	631	47	0	175	880	118	2516	46	0	228	2680	222	489	91	0	258	802	**6589**	-
Approach%	2.5%	93%	4.5%	0%		-	23%	71.7%	5.3%	0%		-	4.4%	93.9%	1.7%	0%		-	27.7%	61%	11.3%	0%		-	-	-
Totals %	0.8%	31.4%	1.5%	0%		33.8%	3.1%	9.6%	0.7%	0%		13.4%	1.8%	38.2%	0.7%	0%		40.7%	3.4%	7.4%	1.4%	0%		12.2%	-	-
Heavy	3	112	3	0		-	6	15	3	0		-	6	125	3	0		-	10	9	8	0		-	-	-
Heavy %	5.5%	5.4%	3%	0%		-	3%	2.4%	6.4%	0%		-	5.1%	5%	6.5%	0%		-	4.5%	1.8%	8.8%	0%		-	-	-
Bicycles	0	0	0	0		-	1	0	0	0		-	1	2	0	0		-	3	1	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0.5%	0%	0%	0%		-	0.8%	0.1%	0%	0%		-	1.4%	0.2%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	3	127	3	0	0	133	9	31	2	0	17	42	2	138	1	0	44	141	9	32	4	0	29	45	361
08:15:00	1	149	4	0	0	154	9	10	3	0	11	22	5	170	1	0	33	176	13	34	6	0	49	53	405
08:30:00	5	122	6	0	0	133	13	23	0	0	7	36	4	157	1	0	7	162	10	32	4	0	16	46	377
08:45:00	2	111	5	0	0	118	13	15	0	0	6	28	6	146	1	0	9	153	14	35	9	0	8	58	357
Grand Total	11	509	18	0	0	538	44	79	5	0	41	128	17	611	4	0	93	632	46	133	23	0	102	202	**1500**
Approach%	2%	94.6%	3.3%	0%		-	34.4%	61.7%	3.9%	0%		-	2.7%	96.7%	0.6%	0%		-	22.8%	65.8%	11.4%	0%		-	-
Totals %	0.7%	33.9%	1.2%	0%		35.9%	2.9%	5.3%	0.3%	0%		8.5%	1.1%	40.7%	0.3%	0%		42.1%	3.1%	8.9%	1.5%	0%		13.5%	-
PHF	0.55	0.85	0.75	0		0.87	0.85	0.64	0.42	0		0.76	0.71	0.9	1	0		0.9	0.82	0.95	0.64	0		0.87	-
Heavy	2	28	1	0		31	2	5	0	0		7	3	38	1	0		42	7	6	2	0		15	-
Heavy %	18.2%	5.5%	5.6%	0%		5.8%	4.5%	6.3%	0%	0%		5.5%	17.6%	6.2%	25%	0%		6.6%	15.2%	4.5%	8.7%	0%		7.4%	-
Lights	9	481	17	0		507	42	74	5	0		121	14	573	3	0		590	39	127	21	0		187	-
Lights %	81.8%	94.5%	94.4%	0%		94.2%	95.5%	93.7%	100%	0%		94.5%	82.4%	93.8%	75%	0%		93.4%	84.8%	95.5%	91.3%	0%		92.8%	-
Single-Unit Trucks	0	14	1	0		15	1	1	0	0		2	0	18	0	0		18	0	0	1	0		1	-
Single-Unit Trucks %	0%	2.8%	5.6%	0%		2.8%	2.3%	1.3%	0%	0%		1.6%	0%	2.9%	0%	0%		2.8%	0%	0%	4.3%	0%		0.5%	-
Buses	2	13	0	0		15	1	4	0	0		5	3	19	1	0		23	7	6	1	0		14	-
Buses %	18.2%	2.6%	0%	0%		2.8%	2.3%	5.1%	0%	0%		3.9%	17.6%	3.1%	25%	0%		3.6%	15.2%	4.5%	4.3%	0%		6.9%	-
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	39	-	-	-	-	-	88	-	-	-	-	-	100	-	-
Pedestrians%	-	-	-	-	0%		-	-	-	-	16.5%		-	-	-	-	37.3%		-	-	-	-	42.4%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0.8%		-	-	-	-	2.1%		-	-	-	-	0.8%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	3	131	17	0	1	151	12	92	4	0	9	108	9	162	3	0	19	174	18	30	8	0	9	56	489
17:15:00	6	146	5	0	1	157	18	59	3	0	21	80	17	186	6	0	15	209	9	41	8	0	17	58	504
17:30:00	11	149	6	0	1	166	24	60	3	0	12	87	15	171	4	0	23	190	16	39	6	0	25	61	504
17:45:00	8	134	16	0	0	158	20	64	5	0	18	89	6	179	15	0	12	200	24	36	12	0	14	72	519
Grand Total	28	560	44	0	3	632	74	275	15	0	60	364	47	698	28	0	69	773	67	146	34	0	65	247	**2016**
Approach%	4.4%	88.6%	7%	0%		-	20.3%	75.5%	4.1%	0%		-	6.1%	90.3%	3.6%	0%		-	27.1%	59.1%	13.8%	0%		-	-
Totals %	1.4%	27.8%	2.2%	0%		31.3%	3.7%	13.6%	0.7%	0%		18.1%	2.3%	34.6%	1.4%	0%		38.3%	3.3%	7.2%	1.7%	0%		12.3%	-
PHF	0.64	0.94	0.65	0		0.95	0.77	0.75	0.75	0		0.84	0.69	0.94	0.47	0		0.92	0.7	0.89	0.71	0		0.86	-
Heavy	0	23	0	0		23	2	0	0	0		2	0	25	0	0		25	0	0	0	0		0	-
Heavy %	0%	4.1%	0%	0%		3.6%	2.7%	0%	0%	0%		0.5%	0%	3.6%	0%	0%		3.2%	0%	0%	0%	0%		0%	-
Lights	28	537	44	0		609	72	275	15	0		362	47	673	28	0		748	67	146	34	0		247	-
Lights %	100%	95.9%	100%	0%		96.4%	97.3%	100%	100%	0%		99.5%	100%	96.4%	100%	0%		96.8%	100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	8	0	0		8	2	0	0	0		2	0	11	0	0		11	0	0	0	0		0	-
Single-Unit Trucks %	0%	1.4%	0%	0%		1.3%	2.7%	0%	0%	0%		0.5%	0%	1.6%	0%	0%		1.4%	0%	0%	0%	0%		0%	-
Buses	0	12	0	0		12	0	0	0	0		0	0	12	0	0		12	0	0	0	0		0	-
Buses %	0%	2.1%	0%	0%		1.9%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.6%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.5%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	59	-	-	-	-	-	67	-	-	-	-	-	62	-	-
Pedestrians%	-	-	-	-	1%		-	-	-	-	29.9%		-	-	-	-	34%		-	-	-	-	31.5%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	3	-	-
Bicycles on Crosswalk%	-	-	-	-	0.5%		-	-	-	-	0.5%		-	-	-	-	1%		-	-	-	-	1.5%		-
Bicycles on Road	0	0	0	0	0	-	1	0	0	0	0	-	0	2	0	0	0	-	2	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather:

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)

Turning Movement Count (1 . HURONTARIO ST & JOHN ST)

Start Time	N Approach HURONTARIO ST						E Approach JOHN ST						S Approach HURONTARIO ST						W Approach JOHN ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	70	105	10	0	19	185	31	2	0	0	9	33	2	126	4	1	1	133	2	0	41	0	2	43	394	
07:15:00	25	106	14	0	8	145	19	3	4	0	5	26	3	111	6	0	4	120	1	2	22	0	4	25	316	
07:30:00	72	128	22	0	14	222	55	4	3	0	6	62	6	137	6	0	2	149	8	7	35	0	6	50	483	
07:45:00	53	127	20	0	7	200	48	1	4	0	9	53	0	142	3	0	4	145	2	4	40	0	18	46	444	1637
08:00:00	82	131	29	0	16	242	42	1	0	0	20	43	1	145	7	0	8	153	5	9	42	0	10	56	494	1737
08:15:00	27	129	38	0	7	194	63	2	0	0	15	65	1	178	2	0	2	181	9	5	36	0	37	50	490	1911
08:30:00	30	113	29	0	2	172	47	1	2	0	9	50	1	178	3	0	5	182	4	1	18	0	14	23	427	1855
08:45:00	35	116	37	0	6	188	44	4	3	0	7	51	2	155	8	0	3	165	4	5	26	0	5	35	439	1850
BREAK																										
16:00:00	26	144	33	0	9	203	56	3	4	0	16	63	4	177	8	1	12	190	3	4	23	0	7	30	486	
16:15:00	30	140	44	0	3	214	52	1	5	0	9	58	8	173	5	0	7	186	4	3	24	0	13	31	489	
16:30:00	22	132	28	0	10	182	50	6	3	0	18	59	6	184	3	0	7	193	3	3	11	0	17	17	451	
16:45:00	24	134	39	0	8	197	56	7	4	0	6	67	6	154	9	0	19	169	8	11	28	1	33	48	481	1907
17:00:00	21	165	41	1	6	228	70	6	3	0	8	79	1	187	8	1	4	197	3	6	37	0	15	46	550	1971
17:15:00	31	153	44	0	9	228	53	7	0	0	16	60	1	192	7	0	3	200	1	5	17	0	10	23	511	1993
17:30:00	49	155	49	1	14	254	34	5	3	0	14	42	5	168	8	0	9	181	1	4	18	0	32	23	500	2042
17:45:00	29	149	35	0	20	213	62	6	6	0	18	74	1	213	4	0	5	218	13	14	52	0	9	79	584	2145
Grand Total	626	2127	512	2	158	3267	782	59	44	0	185	885	48	2620	91	3	95	2762	71	83	470	1	232	625	**7539**	-
Approach%	19.2%	65.1%	15.7%	0.1%		-	88.4%	6.7%	5%	0%		-	1.7%	94.9%	3.3%	0.1%		-	11.4%	13.3%	75.2%	0.2%		-	-	-
Totals %	8.3%	28.2%	6.8%	0%		43.3%	10.4%	0.8%	0.6%	0%		11.7%	0.6%	34.8%	1.2%	0%		36.6%	0.9%	1.1%	6.2%	0%		8.3%	-	-
Heavy	32	112	15	0		-	20	1	1	0		-	2	113	8	0		-	1	0	22	0		-	-	-
Heavy %	5.1%	5.3%	2.9%	0%		-	2.6%	1.7%	2.3%	0%		-	4.2%	4.3%	8.8%	0%		-	1.4%	0%	4.7%	0%		-	-	-
Bicycles	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & JOHN ST
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:30 AM - 08:30 AM Weather:

Start Time	N Approach HURONTARIO ST						E Approach JOHN ST						S Approach HURONTARIO ST						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:30:00	72	128	22	0	14	222	55	4	3	0	6	62	6	137	6	0	2	149	8	7	35	0	6	50	483
07:45:00	53	127	20	0	7	200	48	1	4	0	9	53	0	142	3	0	4	145	2	4	40	0	18	46	444
08:00:00	82	131	29	0	16	242	42	1	0	0	20	43	1	145	7	0	8	153	5	9	42	0	10	56	494
08:15:00	27	129	38	0	7	194	63	2	0	0	15	65	1	178	2	0	2	181	9	5	36	0	37	50	490
Grand Total	234	515	109	0	44	858	208	8	7	0	50	223	8	602	18	0	16	628	24	25	153	0	71	202	**1911**
Approach%	27.3%	60%	12.7%	0%		-	93.3%	3.6%	3.1%	0%		-	1.3%	95.9%	2.9%	0%		-	11.9%	12.4%	75.7%	0%		-	-
Totals %	12.2%	26.9%	5.7%	0%		44.9%	10.9%	0.4%	0.4%	0%		11.7%	0.4%	31.5%	0.9%	0%		32.9%	1.3%	1.3%	8%	0%		10.6%	-
PHF	0.71	0.98	0.72	0		0.89	0.83	0.5	0.44	0		0.86	0.33	0.85	0.64	0		0.87	0.67	0.69	0.91	0		0.9	-
Heavy	9	36	9	0		54	9	0	1	0		10	1	30	1	0		32	0	0	5	0		5	-
Heavy %	3.8%	7%	8.3%	0%		6.3%	4.3%	0%	14.3%	0%		4.5%	12.5%	5%	5.6%	0%		5.1%	0%	0%	3.3%	0%		2.5%	-
Lights	225	479	100	0		804	199	8	6	0		213	7	572	17	0		596	24	25	148	0		197	-
Lights %	96.2%	93%	91.7%	0%		93.7%	95.7%	100%	85.7%	0%		95.5%	87.5%	95%	94.4%	0%		94.9%	100%	100%	96.7%	0%		97.5%	-
Single-Unit Trucks	1	14	4	0		19	3	0	1	0		4	1	10	0	0		11	0	0	1	0		1	-
Single-Unit Trucks %	0.4%	2.7%	3.7%	0%		2.2%	1.4%	0%	14.3%	0%		1.8%	12.5%	1.7%	0%	0%		1.8%	0%	0%	0.7%	0%		0.5%	-
Buses	7	20	5	0		32	6	0	0	0		6	0	17	1	0		18	0	0	4	0		4	-
Buses %	3%	3.9%	4.6%	0%		3.7%	2.9%	0%	0%	0%		2.7%	0%	2.8%	5.6%	0%		2.9%	0%	0%	2.6%	0%		2%	-
Articulated Trucks	1	2	0	0		3	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	-
Articulated Trucks %	0.4%	0.4%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.5%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	43	-	-	-	-	-	48	-	-	-	-	-	16	-	-	-	-	-	71	-	-
Pedestrians%	-	-	-	-	23.8%		-	-	-	-	26.5%		-	-	-	-	8.8%		-	-	-	-	39.2%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0.6%		-	-	-	-	1.1%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

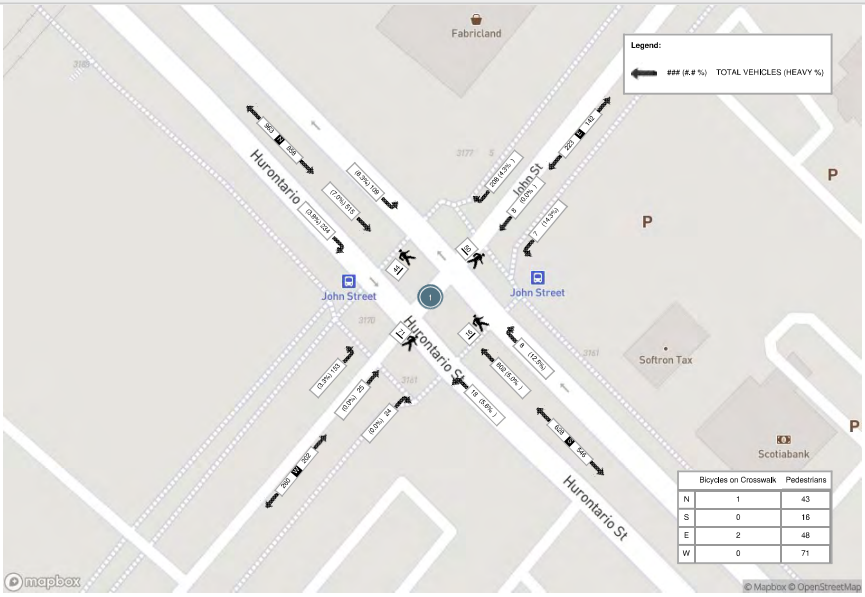
Turning Movement Count
Location Name: HURONTARIO ST & JOHN ST
Date: Wed, Nov 09, 2022 Deployment Lead: Peter Ilias

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

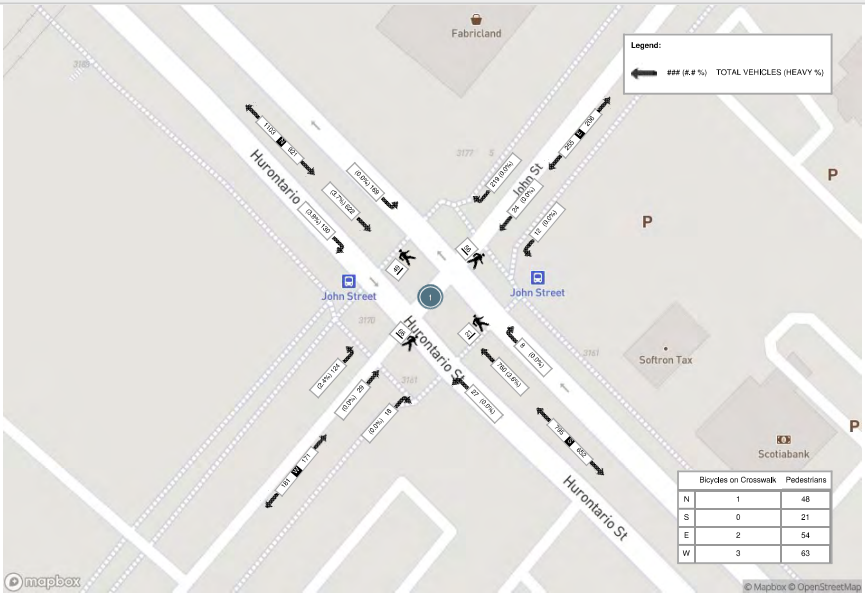
Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)

Start Time	N Approach HURONTARIO ST						E Approach JOHN ST						S Approach HURONTARIO ST						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	21	165	41	1	6	228	70	6	3	0	8	79	1	187	8	1	4	197	3	6	37	0	15	46	550
17:15:00	31	153	44	0	9	228	53	7	0	0	16	60	1	192	7	0	3	200	1	5	17	0	10	23	511
17:30:00	49	155	49	1	14	254	34	5	3	0	14	42	5	168	8	0	9	181	1	4	18	0	32	23	500
17:45:00	29	149	35	0	20	213	62	6	6	0	18	74	1	213	4	0	5	218	13	14	52	0	9	79	584
Grand Total	130	622	169	2	49	923	219	24	12	0	56	255	8	760	27	1	21	796	18	29	124	0	66	171	**2145**
Approach%	14.1%	67.4%	18.3%	0.2%		-	85.9%	9.4%	4.7%	0%		-	1%	95.5%	3.4%	0.1%		-	10.5%	17%	72.5%	0%		-	-
Totals %	6.1%	29%	7.9%	0.1%		43%	10.2%	1.1%	0.6%	0%		11.9%	0.4%	35.4%	1.3%	0%		37.1%	0.8%	1.4%	5.8%	0%		8%	-
PHF	0.66	0.94	0.86	0.5		0.91	0.78	0.86	0.5	0		0.81	0.4	0.89	0.84	0.25		0.91	0.35	0.52	0.6	0		0.54	-
Heavy	5	23	0	0		28	0	0	0	0		0	0	27	0	0		27	0	0	3	0		3	-
Heavy %	3.8%	3.7%	0%	0%		3%	0%	0%	0%	0%		0%	0%	3.6%	0%	0%		3.4%	0%	0%	2.4%	0%		1.8%	-
Lights	125	599	169	2		895	219	24	12	0		255	8	733	27	1		769	18	29	121	0		168	-
Lights %	96.2%	96.3%	100%	100%		97%	100%	100%	100%	0%		100%	100%	96.4%	100%	100%		96.6%	100%	100%	97.6%	0%		98.2%	-
Single-Unit Trucks	1	8	0	0		9	0	0	0	0		0	0	13	0	0		13	0	0	0	0		0	-
Single-Unit Trucks %	0.8%	1.3%	0%	0%		1%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.6%	0%	0%	0%	0%		0%	-
Buses	4	12	0	0		16	0	0	0	0		0	0	12	0	0		12	0	0	3	0		3	-
Buses %	3.1%	1.9%	0%	0%		1.7%	0%	0%	0%	0%		0%	0%	1.6%	0%	0%		1.5%	0%	0%	2.4%	0%		1.8%	-
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.5%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	48	-	-	-	-	-	54	-	-	-	-	-	21	-	-	-	-	-	63	-	-
Pedestrians%	-	-	-	-	25%		-	-	-	-	28.1%		-	-	-	-	10.9%		-	-	-	-	32.8%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-
Bicycles on Crosswalk%	-	-	-	-	0.5%		-	-	-	-	1%		-	-	-	-	0%		-	-	-	-	1.6%		-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 07:30 AM - 08:30 AM Weather:



Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (11.66 °C)



Appendix I:
Signal Timing Plans

Signal Timing Report

Runtime: 2021-08-04 08:47:54

Device: 2216

Region: Mississauga **Signal ID:** 2216 **Location:** CONFEDERATION PARKWAY N at Hillcrest Avenue

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	13	0	12	0	0	0	0
Ped Clear	Sec	0	28	0	26	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	2.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	10	36	0	30	0	0	0	0
Maximum 2	Sec	10	36	0	30	0	0	0	0
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	3.0	0.0	3.5	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	120	110	110	0	0	0	0	0
Offset	Sec	81	91	71	0	0	0	0	0
Split	Split	1	2	3	0	0	0	0	0
Sequence	Sequence	1	1	1	0	0	0	0	0

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	21	53	0	46	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	11	51	0	48	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	14	48	0	48	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J-----------	-F----------	---A--------	----M-------	------J-----
Day of Week	Bit	-MTWTF-	------S	S------	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	123456789012345 678901234567890 1	123456789012345 678901234567890 1	123456789012345 678901234567890 1	1------------------------ -------	---------------5--------- -------	-2-------------------- ---------	----------------------4- ------	1------------------------ -------
Day Plan	Number	1	2	3	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	---------O--	-----------D	-----------D	-----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2---------------------- -------	-----6------------------- ------	----------1-------------- ------	------------------------- -7----	------------------------- --8---	----------------------- 4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	7	9	16	18	21	3	0
Plan 1 Minute	Min	0	0	0	0	30	30	0	0
Plan 1 Action	Number	8	1	2	3	2	8	7	0
Plan 2 Hour	Hour	0	9	21	0	0	0	3	0
Plan 2 Minute	Min	0	0	30	0	0	0	0	0
Plan 2 Action	Number	8	2	8	0	0	0	7	0
Plan 3 Hour	Hour	0	10	18	0	0	0	3	0
Plan 3 Minute	Min	0	0	30	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	7	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Interconnect	Interconnect	Interconnect	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-04 09:05:26

Device: 1401

Region: Mississauga **Signal ID:** 1401 **Location:** HURONTARIO STREET N at Dundas Street E

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	14	0	16	0	14	0	16
Ped Clear	Sec	0	20	0	22	0	20	0	22
Min Green	Sec	5	8	5	8	5	8	5	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Maximum 1	Sec	10	15	10	40	10	15	10	40
Maximum 2	Sec	10	15	10	40	10	15	10	40
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	3.5	0.0	3.0	0.0	3.5
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Ped Recall Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Ped Recall Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	2	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(7,8)	(7,8)	(1,2)	(1,2)	(3,4)	(3,4)

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	0	0	0	0	0	0	0
Ped Clear	Sec	0	0	0	0	0	0	0	0
Min Green	Sec	0	0	1	1	1	1	1	1
Passage	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	0	0	0	0	0	0	0
Maximum 2	Sec	0	0	0	0	0	0	0	0
Yellow Change	Sec	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	other	other	other	other	other	other	other
[P2] Options	Bit	0	0	0	0	0	0	0	0
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Veh Detector	Units	1	2	3	4	5	6	7	8
Options	Bit	Passage Call	0	Passage Call	Passage Call	Passage Call	0	Passage Call	Passage Call
Call Phase	Phase	1	0	3	4	5	0	7	8
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	60	0	60	60	60	0	60	60
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	255	0	255	255	255	0	255	255

Veh Detector	Units	9	10	11	12	13	14	15	16
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0

Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Vol/Occ	**Units**	**Value**							
Period	Sec	0							

Ped Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Call Phase	Phase	0	2	0	4	0	6	0	8
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	1	0	0	0	1
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Unit Param	**Units**	**Value**							
Start Up Flash	Sec	0							
Auto Ped Clear	Enum	enable							
Back Up Time	Sec	300							
Red Revert	Sec	0.0							
Coord Param	**Units**	**Value**							
Operational Mode	Enum	Automatic							
Correction Mode	Enum	shortway							
Maximum Mode	Enum	maxInhibit							
Force Mode	Enum	other							
Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	72	88	130	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Pattern	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	9	10	11	12	13	14	15	16
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	14	66	14	66	14	66	14	66
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	18	61	16	65	18	61	16	65
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	14	61	14	71	14	61	14	71
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false
Coord Split	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	**Units**	**Value**
Daylight Saving	Enum	3
Standard Time Zone	Sec	-18000
Pattern Sync	Sec	0

TB Schedule	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	J----------	-F---------	---A-------
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890 1	12345678901234567890 1	12345678901234567890 1	-2------------------------------	------------------------------0----	-2------------------------------	------------------------------0----	------------------------------4----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	----M-------	-----J-----	-------A----	--------S---	---------O--	----------D	----------D	----------D
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	------------------------------2--	--3------------------------------	------7----------	---4------------------------------	--------9----------	------------------------------	------------------------------	------------------------------
Day Plan	Number	3	3	3	3	3	3	3	3

TB Dayplan	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Plan 1 Hour	Hour	0	6	9	15	19	3	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	7	0	0
Plan 2 Hour	Hour	0	7	3	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	7	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	7	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Action	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB Action	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Pattern	Enum	Pattern 9	Pattern 10	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB DST	**Units**	**Value**
Begin Month	Enum	
Begin Occurrence	Enum	
Begin DOW	Enum	
Begin DOM	Date	
End Occurrence	Enum	
End DOW	Enum	
End DOM	Date	
End Seconds	Sec	
Adjustment	Sec	

Preempt Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**
Control	Bit	0	0	0	0	0	0
Link	Preempt	0	0	0	0	0	0
Delay	Sec	0	0	0	0	0	0
Min Duration	Sec	0	0	0	0	0	0
Min Green	Sec	255	255	255	255	255	255
Min Walk	Sec	255	255	255	255	255	255
Enter Ped Clear	Sec	255	255	255	255	255	255
Track Green	Sec	0	0	0	0	0	0
Min Dwell	Sec	5	5	5	5	5	5
Max Presence	Sec	0	0	0	0	0	0
[P2] Track Phase	Phase (,)	()	()	()	()	()	()
[P2] Dwell Phase	Phase (,)	()	()	(2,6)	(4,8)	()	()
[P2] Dwell Ped	Phase (,)	()	()	()	()	()	()
[P2] Exit Phase	Phase (,)	()	()	()	()	()	()
[S] State	Enum						
[P2] Track Overlap	Phase (,)	()	()	()	()	()	()
[P2] Dwell Overlap	Phase (,)	()	()	()	()	()	()

Signal Timing Report

Runtime: 2021-08-03 15:56:08

Device: 2217

Region: Mississauga **Signal ID:** 2217 **Location:** HILLCREST AVENUE E at GO West Access

[P2] Cycling Phase	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Ped	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Overlap	Phase (,)	()	()	()	()	()	()		
Enter Yellow Change	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Enter Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Yellow	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Ring	**Units**	**1**		**2**		**3**		**4**	
[P2] Sequence 1	Phase (,)	()		()		()		()	
[P2] Sequence 2	Phase (,)	()		()		()		()	
[P2] Sequence 3	Phase (,)	()		()		()		()	
[P2] Sequence 4	Phase (,)	()		()		()		()	

Channel Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Control Source	Phase or Overlap	1	2	3	4	5	6	7	8
Control Type	Enum	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle
Flash	Bit	0	Flash Red	0	Flash Red Half Hertz	0	Flash Red	0	Flash Red Half Hertz
Dimming	Bit	0	0	0	0	0	0	0	0

Channel Param	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Control Source	Phase or Overlap	2	4	6	8	0	0	0	0
Control Type	Enum	phasePedestrian	phasePedestrian	phasePedestrian	phasePedestrian	other	other	other	other
Flash	Bit	0	0	0	0	0	0	0	0
Dimming	Bit	0	0	0	0	0	0	0	0

Overlap	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
[P2] Type	Enum	other	other	other	other	other	other	other	other
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
[P2] Type	Enum	other	other	other	other	other	other	other	other
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Walk	Sec	0	10	0	9	0	0	0	0
Ped Clear	Sec	0	21	0	16	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	2.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	10	31	0	25	0	0	0	0
Maximum 2	Sec	10	31	0	25	0	0	0	0
Yellow Change	Sec	3.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0
Red Clearance	Sec	0.0	3.5	0.0	2.5	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Phase	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Walk	Sec	0	0	0	0	0	0	0	0
Ped Clear	Sec	0	0	0	0	0	0	0	0
Min Green	Sec	1	1	1	1	1	1	1	1
Passage	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	0	0	0	0	0	0	0
Maximum 2	Sec	0	0	0	0	0	0	0	0
Yellow Change	Sec	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	0	0	0	0	0	0	0	0
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Veh Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Options	Bit	Passage Call	0	0	Passage Call	0	0	0	0
Call Phase	Phase	1	0	0	4	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	60	0	0	60	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	255	0	0	255	0	0	0	0

Veh Detector	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Options	Bit	0	0	Volume Occupancy	Volume Occupancy	0	0	0	0
Call Phase	Phase	0	0	2	2	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0

Veh Vol/Occ	**Units**	**Value**
Period	Sec	60

Ped Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Call Phase	Phase	0	2	0	4	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	1	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0

Unit Param	**Units**	**Value**
Start Up Flash	Sec	0
Auto Ped Clear	Enum	enable
Back Up Time	Sec	300
Red Revert	Sec	0.0

Coord Param	**Units**	**Value**
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	fixed

Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	105	0	110	0	0	0	0	0
Offset	Sec	90	0	109	0	0	0	0	0
Split	Split	1	2	3	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Pattern	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Cycle Time	Sec	0	100	0	0	0	0	0	0
Offset	Sec	0	76	0	0	0	0	0	0
Split	Split	1	10	1	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	10	62	0	33	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	10	53	0	47	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	12	33	0	55	0	0	0	0
Split 10 - Coord	Enum	false	true	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false
Coord Split	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	**Units**	**Value**
Daylight Saving	Enum	3
Standard Time Zone	Sec	-18000
Pattern Sync	Sec	0

TB Schedule	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	------J----
Day of Week	Bit	-MTWTF-	------S	S------	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890 1	12345678901234567890 1	12345678901234567890 1	1-------	-------5--------	-2-------	----------4-	1-------
Day Plan	Number	1	2	3	3	3	3	3	3

TB Schedule	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	--------A----	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-------	-----6----------	---------1----------	-7----	--8---	4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Plan 1 Hour	Hour	0	7	8	16	18	3	0	0
Plan 1 Minute	Min	0	30	30	30	30	0	0	0
Plan 1 Action	Number	8	1	8	3	8	7	0	0
Plan 2 Hour	Hour	0	0	0	0	0	3	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	0	0	0	0	7	0	0
Plan 3 Hour	Hour	0	0	0	0	0	3	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	0	0	0	0	7	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Action	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Interconnect	Interconnect	Interconnect	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB Action	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Pattern	Enum	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB DST	**Units**	**Value**
Begin Month	Enum	
Begin Occurrence	Enum	
Begin DOW	Enum	
Begin DOM	Date	
End Occurrence	Enum	
End DOW	Enum	
End DOM	Date	
End Seconds	Sec	
Adjustment	Sec	

Preempt Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**
Control	Bit	0	0	0	0	0	0
Link	Preempt	0	0	0	0	0	0
Delay	Sec	0	0	0	0	0	0
Min Duration	Sec	0	0	0	0	0	0
Min Green	Sec	255	255	255	255	255	255
Min Walk	Sec	255	255	255	255	255	255
Enter Ped Clear	Sec	255	255	255	255	255	255
Track Green	Sec	0	0	0	0	0	0
Min Dwell	Sec	1	1	1	1	1	1
Max Presence	Sec	0	0	0	0	0	0
[P2] Track Phase	Phase (,)	()	()	()	()	()	()
[P2] Dwell Phase	Phase (,)	()	()	(2)	(4)	()	()
[P2] Dwell Ped	Phase (,)	()	()	()	()	()	()
[P2] Exit Phase	Phase (,)	()	()	(2)	(2)	()	()
[S] State	Enum						
[P2] Track Overlap	Phase (,)	()	()	()	()	()	()
[P2] Dwell Overlap	Phase (,)	()	()	(1)	()	()	()

[P2] Cycling Phase	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Ped	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Overlap	Phase (,)	()	()	()	()	()	()		
Enter Yellow Change	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Enter Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Yellow	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Ring	**Units**	**1**		**2**		**3**		**4**	
[P2] Sequence 1	Phase (,)	(1,2,4)		()		()		()	
[P2] Sequence 2	Phase (,)	()		()		()		()	
[P2] Sequence 3	Phase (,)	()		()		()		()	
[P2] Sequence 4	Phase (,)	()		()		()		()	
Channel Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Control Source	Phase or Overlap	1	2	0	4	0	0	0	0
Control Type	Enum	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle
Flash	Bit	Flash Red	Flash Red	Flash Red Half Hertz	Flash Red Half Hertz	0	0	0	0
Dimming	Bit	0	0	0	0	0	0	0	0
Channel Param	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Control Source	Phase or Overlap	2	4	0	0	1	0	0	0
Control Type	Enum	phasePedestrian	phasePedestrian	phasePedestrian	phasePedestrian	overlap	overlap	overlap	overlap
Flash	Bit	0	0	0	0	Flash Red	Flash Red	Flash Red	Flash Yellow Half Hertz
Dimming	Bit	0	0	0	0	0	0	0	0
Overlap	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
[P2] Type	Enum	normal	normal	normal	normal	normal	normal	normal	normal
[P2] Included	Phase (,)	(1,2)	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
[P2] Type	Enum	normal	normal	normal	normal	normal	normal	normal	normal
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Signal Timing Report

Runtime: 2021-08-03 15:52:42

Device: 2218

Region: Mississauga **Signal ID:** 2218 **Location:** HILLCREST AVENUE E at GO East

Phase	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Walk	Sec	0	9	0	8	0	0	0	0
Ped Clear	Sec	0	17	0	12	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	25	32	0	45	0	0	0	0
Maximum 2	Sec	25	32	0	45	0	0	0	0
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.5	0.0	2.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	redClear	other	phaseNotOn	other	other	other	other
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()
Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	0	0	160	0	0	0	0	0
Offset	Sec	0	0	74	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	pedRecall	none	none	none	none
Split 3 - Time	Sec	10	77	0	73	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
TB Schedule	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	-----J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890 1	12345678901234567890 1	12345678901234567890 1	1-------------------	----------5---------	-2-----------------	----------4-	1-------------------
Day Plan	Number	1	3	2	3	3	3	3	3
TB Schedule	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	--------A---	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2----------	----6------	---------1----------	----------	----------	----------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0
TB Dayplan	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Plan 1 Hour	Hour	0	3	16	19	0	0	0	0
Plan 1 Minute	Min	0	0	30	30	0	0	0	0
Plan 1 Action	Number	8	7	3	8	0	0	0	0
Plan 2 Hour	Hour	0	0	0	3	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	0	0	7	0	0	0	0
Plan 3 Hour	Hour	0	0	0	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	0	0	7	0	0	0	0
TB Action	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Audit Report

Runtime: 2021-08-03 15:26:05

Device: 2114

Region: Mississauga **Signal ID:** 2114 **Location:** HURONTARIO STREET N at Fairview Road E

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	9	0	14	0	9	0	14
Ped Clear	Sec	0	13	0	19	0	13	0	19
Min Green	Sec	5	8	0	8	0	8	5	8
Passage	Sec	2.0	3.0	0.0	3.0	0.0	3.0	2.0	3.0
Maximum 1	Sec	12	39	0	30	0	39	10	30
Maximum 2	Sec	12	39	0	30	0	39	10	30
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	other	phaseNotOn	other	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	0	Enabled Non Lock Det Dual Entry	0	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Max Veh Recall	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	0	1	0	2	2	2
[P2] Concurrency	Phase (,)	(6)	(6)	()	(7,8)	()	(1,2)	(4)	(4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	35	18	106	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	13	88	0	59	0	101	0	59
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	14	90	0	56	0	104	0	56
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	16	91	0	53	0	107	0	53
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F----------	---A-------	-----M------	------J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	1----------	----------5--------	-2----------	----------	1----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2----------	-----6----------	---------1----------	----------	----------	----------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	9	15	19	3	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	7	0	0
Plan 2 Hour	Hour	0	7	3	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	7	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	7	0	0	0	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-03 15:45:04

Device: 2115

Region: Mississauga **Signal ID:** 2115 **Location:** HURONTARIO STREET N at Hillcrest Avenue / Kirwin Avenue

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	14	0	15	0	14	0	15
Ped Clear	Sec	0	30	0	33	0	30	0	33
Min Green	Sec	7	8	5	8	5	8	0	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	15	35	15	25	15	35	0	25
Maximum 2	Sec	15	35	15	25	15	35	0	25
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.5	0.0	4.0	0.0	3.5	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	0	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(8)	(8)	(1,2)	(1,2)	()	(3,4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	160	160	0	0	0
Offset	Sec	99	93	107	62	104	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	13	62	21	64	13	62	0	85
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	13	78	13	56	13	78	0	69
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	16	54	26	64	16	54	0	90
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 4 - Time	Sec	13	62	21	64	13	62	0	85
Split 4 - Coord	Enum	false	true	false	false	false	true	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	13	78	13	56	13	78	0	69
Split 5 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F----------	---A-------	----M------	------J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	1----------	----------5--------	-2----------	----------4-	1----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2----------	-----6----------	---------1----------	----------	----------	----------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	7	9	9	15	3	16
Plan 1 Minute	Min	0	0	0	0	30	0	0	0
Plan 1 Action	Number	8	1	4	1	2	5	7	3
Plan 2 Hour	Hour	0	7	0	0	0	0	3	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	7	0
Plan 3 Hour	Hour	0	8	23	0	0	0	3	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	7	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-03 15:38:08

Device: 2117

Region: Mississauga **Signal ID:** 2117 **Location:** HURONTARIO STREET N at John Street

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	10	0	12	0	10	0	12
Ped Clear	Sec	0	21	0	26	0	21	0	26
Min Green	Sec	5	8	5	8	5	8	0	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	15	30	15	35	15	30	0	35
Maximum 2	Sec	15	30	15	35	15	30	0	35
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	4.0	0.0	3.0	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In	0	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	0	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(8)	(8)	(1,2)	(1,2)	()	(3,4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	160	160	0	0	0
Offset	Sec	107	102	115	107	115	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	20	79	15	46	20	79	0	61
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	20	79	15	46	20	79	0	61
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	20	74	20	46	20	74	0	66
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 4 - Time	Sec	20	79	15	46	20	79	0	61
Split 4 - Coord	Enum	false	true	false	false	false	true	false	false
Split 5 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 5 - Time	Sec	20	74	20	46	20	74	0	66
Split 5 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	-----J----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	1---------- ---------- ----------	---------- ---------- ----------	-2---------- ---------- ----------	---------- ---------- ---------- -4	1---------- ---------- ----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	--------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2---------- ---------- ------	----6---------- ---------- -----	---------1---------- ---------- -----	---------- ---------- ---------- 7----	---------- ---------- ---------- -8---	---------- ---------- ---------- 4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	7	9	9	15	16	18
Plan 1 Minute	Min	0	0	0	0	30	0	30	30
Plan 1 Action	Number	8	1	4	1	2	3	5	3
Plan 2 Hour	Hour	0	7	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	0	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Appendix J:
GO Station Trip Generation Data

Project No: 6956.23
Project: Bramalea GO Station
Study Location: Bramalea GO Station Parking Lots
Study Date: Tuesday, Oct 2, 2012
Study Time: 6:30-9:00 AM and 4-7 PM

Site Traffic

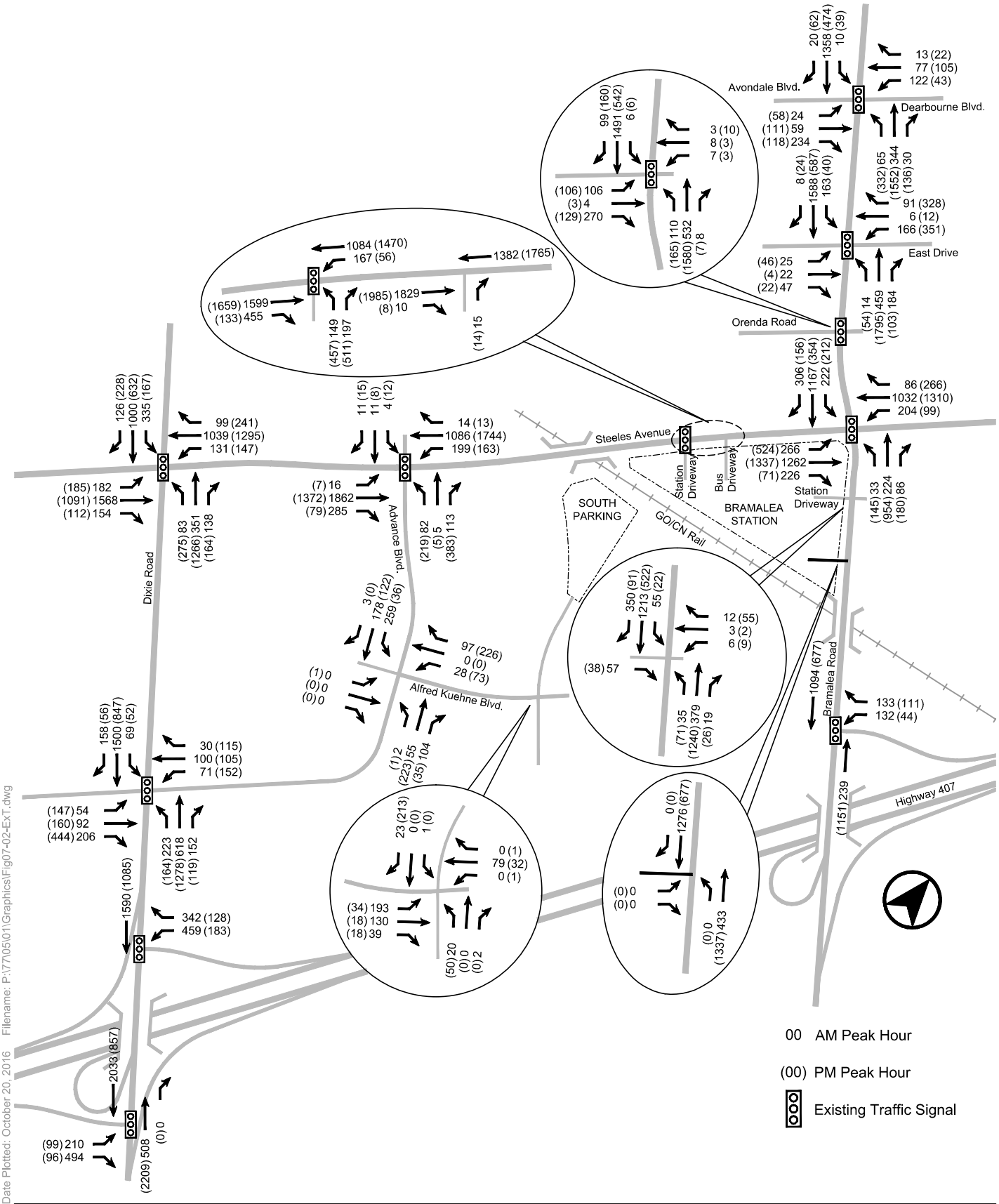
Period	Steeles Ave E - GO Station West Access				Steeles Ave E - GO Station East Access		Bramalea Rd - GO Station Access					
Ending	EB Right In	WB Left In	NB Right Out	NB Left Out	EB Right In	NB Right Out	SB Right In	WB Thru In	NB Left In	EB Right Out	EB Thru Out	EB Left Out
6:45	93	54	56	39	1	4	125	1	8	15	0	0
7:00	64	23	32	30	2	4	87	1	9	12	0	0
7:15	126	45	52	36	2	2	157	0	3	26	0	0
7:30	165	98	42	48	4	4	225	1	10	24	0	0
7:45	116	32	53	54	0	10	103	0	12	26	0	0
8:00	92	38	34	30	4	4	102	0	4	11	0	0
8:15	70	39	47	44	2	4	94	0	5	18	0	0
8:30	56	17	36	33	2	5	80	0	8	16	0	0
8:45	19	9	9	5	1	5	19	0	4	8	0	0
9:00	17	8	12	19	3	4	25	0	3	12	0	0
Total	818	363	373	338	21	46	1017	3	66	168	0	0
Site Peak 7:00-8:00	499	213	181	168	10	20	587	1	29	87	0	0
16:15	25	8	50	56	2	5	17	0	7	7	0	0
16:30	28	7	56	64	5	3	10	1	13	10	0	0
16:45	22	5	19	31	3	3	35	0	15	8	0	0
17:00	19	5	75	77	3	6	25	1	8	17	0	0
17:15	25	6	77	116	2	8	27	0	13	11	0	0
17:30	34	9	121	107	2	6	26	0	18	20	0	0
17:45	32	11	91	75	3	6	28	0	10	13	0	0
18:00	32	14	77	58	1	8	34	0	17	17	0	0
18:15	29	12	132	160	2	5	21	0	9	47	0	1
18:30	37	13	76	72	2	4	28	0	7	13	0	0
18:45	27	9	107	115	1	7	15	0	5	20	1	0
19:00	16	7	25	23	4	2	21	0	3	7	0	1
Total	326	106	906	954	30	63	287	2	125	190	1	2
Site Peak 17:15-18:15	127	46	421	400	8	25	109	0	54	97	0	1
Street Peak 17:00-18:00	123	40	366	356	8	28	115	0	58	61	0	0

Period	Alfred Kuehne Blvd - Brampton GO Station Access						Site Total			
Ending	WB Right In	NB Thru In	EB Left In	SB Right	SB Thru	SB Left	In	Out	2-Way	Hourly
6:45	0	0	35	6	0	0	317	120	437	
7:00	1	0	15	2	0	0	202	80	282	
7:15	0	0	59	8	0	0	392	124	516	
7:30	0	0	121	15	0	1	624	134	758	1993
7:45	0	0	53	12	0	0	316	155	471	2027
8:00	0	0	74	4	0	0	314	83	397	2142
8:15	0	0	38	4	0	0	248	117	365	1991
8:30	0	0	58	5	0	0	221	95	316	1549
8:45	0	0	2	6	0	0	54	33	87	1165
9:00	0	0	1	0	0	0	57	47	104	872
Total	1	0	456	62	0	1	2745	988	3733	
Site Peak 7:00-8:00	0	0	307	39	0	1	1646	496	2142	
16:15	0	0	0	23	0	0	59	141	200	
16:30	0	1	3	0	1	0	68	134	202	
16:45	0	0	3	1	0	1	83	63	146	
17:00	0	0	6	58	2	0	67	235	302	850
17:15	0	0	7	6	0	0	80	218	298	948
17:30	0	0	9	77	0	0	98	331	429	1175
17:45	0	0	9	12	0	0	93	197	290	1319
18:00	0	0	8	104	0	0	106	264	370	1387
18:15	0	0	5	20	0	1	78	366	444	1533
18:30	0	0	4	95	0	0	91	260	351	1455
18:45	0	0	5	14	0	0	62	264	326	1491
19:00	0	0	1	4	0	0	52	62	114	1235
Total	0	1	60	414	3	2	937	2535	3472	
Site Peak 17:15-18:15	0	0	31	213	0	1	375	1158	1533	
Street Peak 17:00-18:00	0	0	33	199	0	0	377	1010	1387	

Project No: 6956.23
Project: Bramalea GO Station
Study Location: Bramalea GO Station PU/DO Areas
Study Date: Tuesday, Oct 2, 2012
Study Time: 6:30-9:00 AM and 4-7 PM

PU /DO Traffic

Period	Main PU/DO Area			Southwest Lot PU/DO Area			Total			
Ending	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way	Hourly
6:45	85	78	163	5	4	9	90	82	172	
7:00	46	41	87	3	4	7	49	45	94	
7:15	71	68	139	6	6	12	77	74	151	
7:30	90	74	164	23	20	43	113	94	207	624
7:45	67	91	158	8	11	19	75	102	177	629
8:00	47	41	88	5	4	9	52	45	97	632
8:15	66	73	139	3	3	6	69	76	145	626
8:30	56	53	109	5	7	12	61	60	121	540
8:45	13	11	24	0	0	0	13	11	24	387
9:00	19	17	36	1	0	1	20	17	37	327
Total	560	547	1107	59	59	118	619	606	1225	
Site Peak 7:00-8:00	275	274	549	42	41	83	317	315	632	
16:15	26	22	48	1	3	4	27	25	52	
16:30	18	14	32	1	1	2	19	15	34	
16:45	29	18	47	2	0	2	31	18	49	
17:00	27	27	54	4	6	10	31	33	64	199
17:15	25	15	40	3	0	3	28	15	43	190
17:30	32	40	72	9	11	20	41	51	92	248
17:45	36	25	61	4	1	5	40	26	66	265
18:00	31	38	69	10	14	24	41	52	93	294
18:15	31	37	68	0	0	0	31	37	68	319
18:30	37	39	76	6	6	12	43	45	88	315
18:45	31	45	76	3	2	5	34	47	81	330
19:00	8	9	17	0	1	1	8	10	18	255
Total	331	329	660	43	45	88	374	374	748	
Site Peak 17:45-18:45	130	159	289	19	22	41	149	181	330	
Street Peak 17:00-18:00	124	118	242	26	26	52	150	144	294	

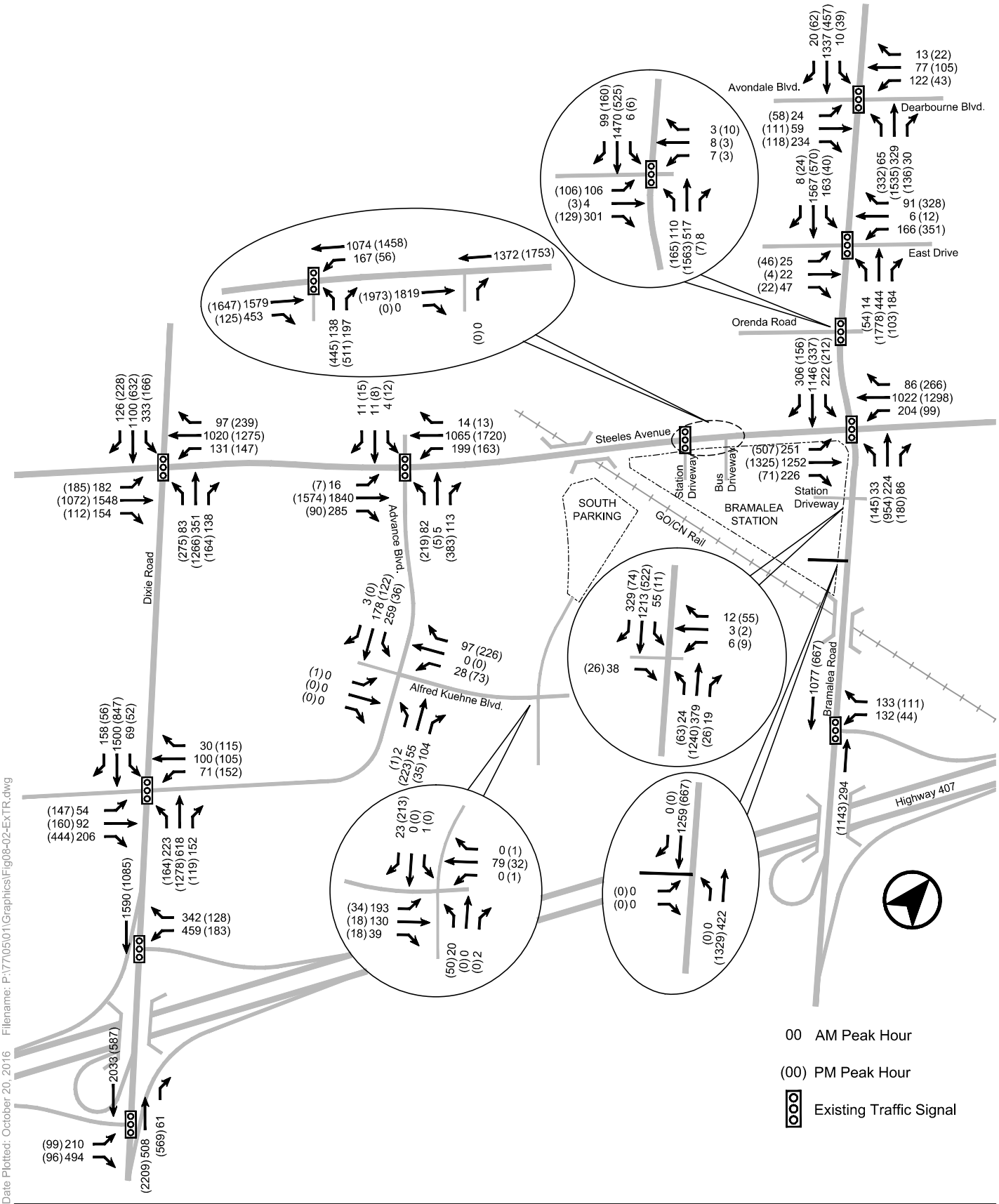


EXISTING TRAFFIC VOLUMES

BA Group

Bramalea GO Station
7705-01 October 2016

Figure 7



EXISTING TRAFFIC VOLUMES
(Existing Bus Movements Removed)

BA Group

Bramalea GO Station
7705-01 October 2016

Figure 8

Table 2: Trip Generation for Future Additional Parking Supply (Additional 1,000 Spaces)

Land Use	AM Peak Hour		PM Peak Hour	
	Rate (vehicle trips/space)	Vehicle Trips	Rate (vehicle trips/space)	Vehicle Trips
Parkade (Additional 1000 spaces)	0.754 in 0.03 out	754 in 30 out	0.27 in 0.56 out	270 in 560 out

6.3 Site Traffic Distribution

The distribution of the passenger home locations from the 2007/2008 GO Rail Passenger Survey estimated that:

- 40% of all trips originate in the area northwest of Cooksville GO Train Station
- 24% of all trips originate in the area southwest of Cooksville GO Train Station
- 10% of all trips originate in the area southeast of Cooksville GO Train Station
- 26% of all trips originate in the area northeast of Cooksville GO Train Station

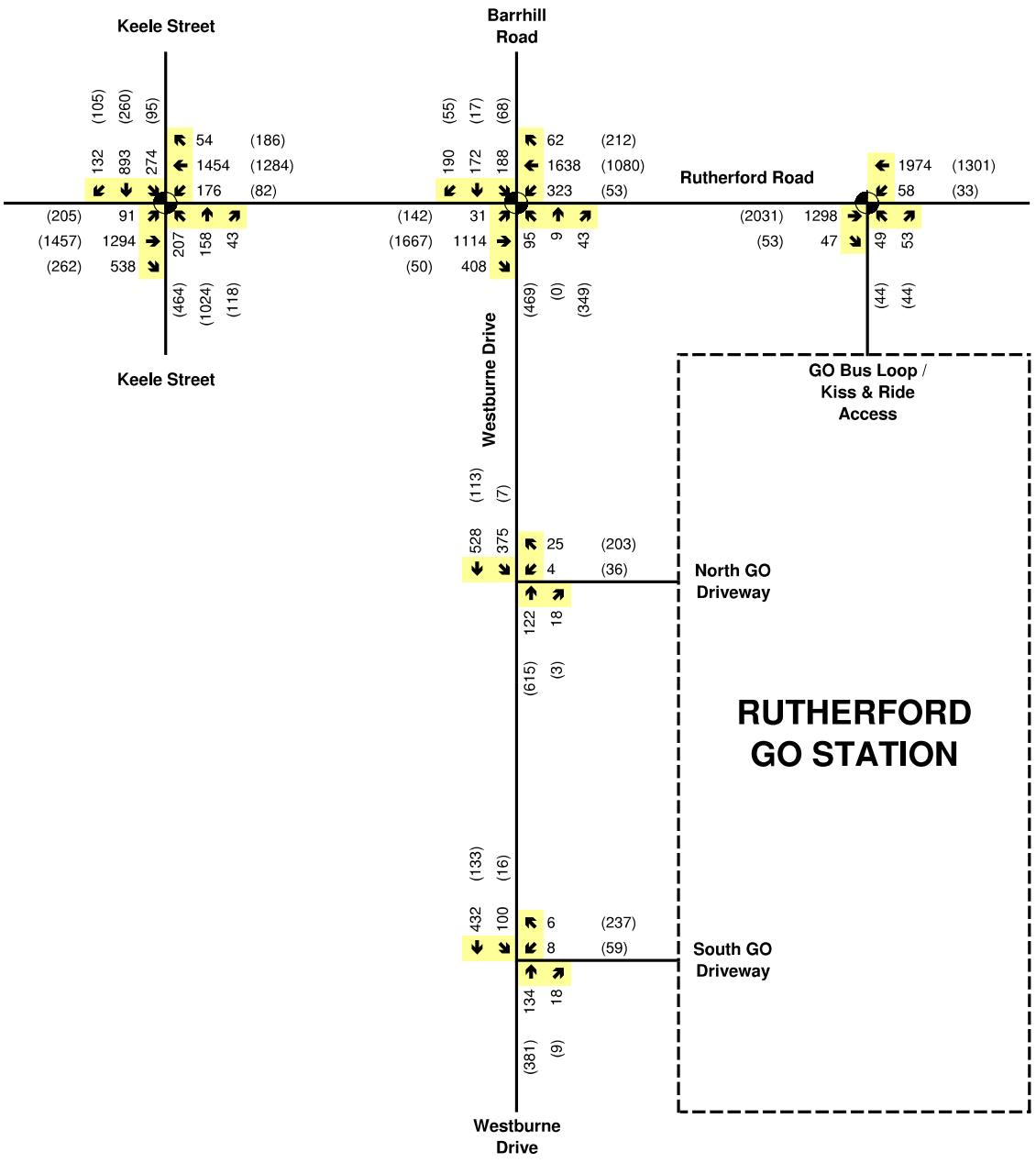
Based on the preceding Survey information, trip distribution was assumed for AM peak hour and PM peak periods to link GO Transit Cooksville Station trips to home-based travel origin and destination.

6.3.1 Short-Term Site Access Prior to John Street Extension

Site generated volumes were assigned to proposed access locations based on proximity and permitted turning movements. It was assumed that 70% trips to/from the north along Confederation Parkway, from the west along Hillcrest Avenue, from the south along Confederation Parkway, from the south along Hurontario Street and from the north along Hurontario Street would access the site using either the GO Access (Cooksville GO Transit East Access). The remaining 30% trips are assumed to enter/exit the site through the Cooksville GO Transit West Access. Weekday AM peak hour and PM peak hour site generated traffic volumes are shown in Figure 5.

6.3.2 Site Access with John Street Extension

With the John Street access available, it is assumed that trips to/from the south on Hurontario Street will have an equal opportunity to access the site through either the GO Access (Cooksville GO Transit East Access) or through the John Street access along Hurontario Street. It was also assumed that all trips to/from the north along Hurontario Street would enter/exit the site through the John Street access. All other site generated trips assignments remain unchanged with the John Street access option. Weekday AM peak hour and PM peak hour site generated traffic volumes are shown in Figure 6.



EXISTING (2012) TRAFFIC VOLUMES

FIGURE 2

Table 4-3: Site-Generated Traffic during the AM and PM Peak Hours in the Opening Year (2023)

Number of parking stalls	Mode	2023 Mode Share	AM Peak Hour			PM Peak Hour		
			Trip Generation Rate (Trip/parking stall)	IN	OUT	Trip Generation Rate (Trip/parking stall)	IN	OUT
1000	Park & Ride	71%	0.56	398	0	0.59	0	421
	PPUDO	11%		62	62		66	66
	Transit	8%		47	47		49	49
Total				***507***	***109***		***115***	***536***

Trip Distribution and Trip Assignment

The site-generated traffic was distributed and assigned to the road network based on an assessment of the overall transportation network within and in the vicinity of the Study Area, the existing traffic distribution within the Woodbine Districts, and on the findings of the 2016 Transportation Tomorrow Survey (TTS). The distribution of the site-generated traffic on the Study Area road network that was adopted for both the AM and PM peak hours is presented in **Table 4-4** and illustrated in **Figure 4-4**. Accordingly, the site-generated traffic volumes for the AM and PM peak hours are illustrated in **Figure 4-5** and **Figure 4-6**.

Table 4-4: Site-Generated Traffic Distribution Patterns on the Study Area Road Network

Direction	Route	Site-Generated Traffic Distribution
North	Highway 27	10%
	Highway 427	10%
	Humberwood Boulevard	5%
East	Rexdale Boulevard	15%
South	Highway 27	25%
	Carlingview Drive	20%
West	Goreway Drive	15%

4.1.1.3 Future Total Traffic Volumes

The Future Background traffic volumes in the AM and PM peak hours of 2023 (shown in **Figure 4-2** and **Figure 4-3**, respectively) were added to the site-generated traffic volumes in their respective peak-hour (shown in **Figure 4-5** and **Figure 4-6**) to develop the Future Total traffic volumes in 2023. The Future Total traffic volumes during the AM and PM peak hours in 2023 are shown in **Figure 4-7** and **Figure 4-8**, respectively.

4.1 TRIP GENERATION

The site traffic of the proposed GO Station is derived for each station facility: a bus loop, pick-up/drop-off facility, and parking facilities. The EPR forecasted the trip generation of the GO Station based on 10th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. This study will provide supplementary information to verify the assumptions utilized in the EPR and the recommended transportation infrastructure requirements.

4.1.1 Trip Generation of Bus Loop

The proposed bus facility provides eight (8) bus bays and space for wheel-trans vehicles. The number of bus bays is determined through consultation with various transit agencies. The details of the transit routes have not yet finalized as they are in the development phase. Therefore, the trip generation of the bus loop is derived based on the capacity of the bus loop during the peak hour.

As the proposed bus loop provides transfers with other transit services and GO train services, provision for the dwelling time of 5- 10 minutes and the boarding/alighting time of 5 minutes would be appropriate. Therefore, the minimum headway for each bus bay would be 15 minutes. Therefore, the maximum transit traffic of the proposed bus loop would be 32 inbound and 32 outbound transit trips during the peak hour.

4.1.2 Trip Generation of Parking Facilities

The proposed GO Station will provide two surface parking lots with a total parking supply of 1,000 spaces. The west parking lot will provide 370 spaces while the east parking lot will provide 630 spaces. The EPR derived the trip generation based on the GO Passenger Survey and Metrolinx's trip generation model for the AM and PM peak periods. **Table 4-1** displays the estimated site-generated traffic during the weekday AM and PM peak hours.

Table 4-1: TPAP Site Generated Traffic

Number of Parking Stall	Mode	2023 Mode Share	AM Peak Hour			PM Peak Hour		
			Trip Generation Rate	IN	OUT	Trip Generation Rate	IN	OUT
1000	Park and Ride	71%	0.56	398	0	0.59	0	421
	PUDO	11%		62	62		66	66
	Transit	8%		47	47		49	49
Total				**507**	**109**		**115**	**536**

To verify the trip generation, proxy site survey results including the ITE Trip Generation Manual were reviewed. As this study will determine the transportation infrastructure requirement for the proposed GO Station, the trip generation should consider site traffic of the full utilization of the parking lots. Therefore, the proxy sites that were considered consists of stations with high usage parking lots and similar parking supplies. The details of proxy sites are contained in **Appendix F**.

The Dixie Go Station, which runs along the Milton Line, is located at the intersection of Dixie Road and Blundell Road in the City of Mississauga. The station has 993 parking spaces along with a bus bay that can accommodate 4 buses and a pick-up and drop-off consisting of 4 lanes. The parking lot is utilized at 81% - 90% as per Metrolinx's Access Plan. The turning movement counts at all access points to the Dixie GO Station were collected from 4:00 to 7:00 PM on Tuesday, April 2, 2019. During the PM peak hour, a total of 601 two-way trips were generated by the parking lot and the pick-up and drop-off facility. The observed PM peak hour trip rate is 0.61 trips per parking space.

The Langstaff GO Station runs along the Richmond Hill Line and is located at the intersection of Highway 7 and Red Maple Road in the City of Richmond Hill. The station north parking lot has 711 parking spaces, along with a 4 lane pick-up and drop-off. The parking lot is utilized at 91% – 100% utilization according to Metrolinx's Access Plan. The turning movement counts at all access points to the north parking lot at the Langstaff GO Station were collected from 4:00 to 7:00 PM on Thursday, September 26, 2013. During the PM peak hour, a total of 316 two-way trips were observed. The observed PM peak hour trip rate is 0.44 trips per parking space.

ITE Trip Generation Manual provides trip generation rates for park-and-ride lot with bus or light rail service (Land Use 090). The trip generation rate for occupied parking spaces was derived based on 45 studies with coefficient of determination (R^2) with 0.87, which represents high reliability in the prediction. The equation of the ITE Trip Generation Manual indicates that 1,000 occupied parking space would generate 542 two-way trips.

Table 4-2 compares the different trip generation rates produced by the proxy sites and ITE trip generation.

Table 4-2: Trip Generation Rate Comparison

Trip Generation Rate Reference	PM Trip Rate	Park and Ride Mode Share	Two-Way Trips	Pick-Up/Drop-Off Inclusion (2015 Modal Split)
Dixie Go	0.61	72%	605	Yes (17%)
Langstaff Go	0.44	74%	444	Yes (12%)
ITE	0.54	71%	542	No
EPR Rate	0.59	71%	590*	No
*two-way trips are calculated based on the trip generation rate identified in the EPR				

The trip generation rates identified in the EPR reflect the higher trip generation for the GO Station in comparison to observed trip generation rates at proxy sites and ITE Trip Generation Manual. Therefore, the trip generation rates identified through Metrolinx's trip generation model are utilized to determine the traffic impact of the proposed GO Station and to recommend the transportation infrastructure.

The Highway 27 - Woodbine GO Station is expected to see a large increase in ridership by 2031. This increase in ridership is a result of users who choose to switch stations when the new Woodbine Station is in place as well as riders who would have otherwise used another GO station. The Initial Business Case indicate that 34% of the ridership at the Highway 27 - Woodbine GO Station is related to passengers who choose to switch stations. Therefore, 34% of the Woodbine GO Station site traffic is considered to be trips diverted

from the Etobicoke North GO Station. These trips are considered to already exist on the road network but will be attracted to the subject site and add traffic volumes to the site accesses. As such, traffic volumes have been added to the relevant movements in the network based on the routes these new station visitors would take and subtracted from the relevant movements that they would have taken to get to Etobicoke North GO Station. These diverted trips are shown in **Appendix F.**

4.1.3 Trip Generation of Pick-Up/Drop-Off Facility

The proposed GO Station will provide a pick-up/drop-off facility consisting of 40 waiting spaces and 10 drop-off spaces. The trip generation of the pick-up/drop-off facility was derived based on the proportion of the park-and-ride modal split in comparison to the pick-up/drop-off modal split. The EPR assumed that the 11% of the proposed GO Station would be pick-up/drop-off activities which exhibits the similar existing modal split pattern as the Etobicoke North GO Station. This is equivalent to 15% of the auto trips. To be conservative, it is assumed that the pick-up/drop-off facility would generate additional 15% of trips for the peak direction in addition to the trip generation of the parking facilities. It is assumed that the same trips would be utilizing the reverse direction within the same peak hour. These pick-up/drop-off trips were assigned as pass-by trips.

4.1.4 Trip Generation of Highway 27 – Woodbine GO Station

The site traffic of the proposed Highway 27 – Woodbine GO Station with the high utilization of automobile usage is summarized in **Table 4-3**.

Table 4-3: Trip Generation of Highway 27-Woodbine GO Station with High Automobile Usage

Station Facility		AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Parking	Gross	560	0	560	0	590	590
	Etobicoke North GO Diverted Trips	190	0	190	0	201	201
	Primary	370	0	370	0	389	389
PUDO (Pass-by Trips)		86	86	172	91	91	182
Bus Facility		32	32	64	32	32	64
Total Gross Trips		678	118	796	123	713	836
Total Primary Trips		402	32	434	32	421	453

The trip generation shown in **Table 4-3** reflect the full utilization of the facilities that encourage high utilization of automobiles. Without the effort to reduce the automobile dependency, the proposed GO Station could generate approximately 400 trips in the dominant direction during the peak hour. Therefore, it

Spectrum

Turning Movement Count
Location Name: BAYLY ST & GO BUS ACCESS
Date: Thu, May 11, 2017 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (5 . BAYLY ST & GO BUS ACCESS)

Start Time	N Approach GO BUS ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	U-Turn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	2	2	0	1	4	2	153	0	0	155	106	3	1	0	110	269	
07:15:00	4	2	0	2	6	2	244	0	1	246	146	3	4	0	153	405	
07:30:00	3	3	0	1	6	2	188	0	0	190	196	3	1	0	200	396	
07:45:00	3	2	0	1	5	1	189	0	0	190	170	6	1	0	177	372	1442
08:00:00	2	4	0	0	6	1	156	0	0	157	183	3	0	0	186	349	1522
08:15:00	3	3	0	1	6	2	149	0	0	151	210	3	0	1	213	370	1487
08:30:00	1	2	0	0	3	1	166	0	0	167	192	2	0	0	194	364	1455
08:45:00	1	3	0	1	4	3	168	0	0	171	209	3	0	0	212	387	1470
BREAK																	
16:00:00	6	1	0	0	7	2	266	0	0	268	225	2	0	2	227	502	
16:15:00	2	2	0	1	4	4	215	1	0	220	249	1	0	0	250	474	
16:30:00	5	1	0	3	6	2	268	0	0	270	284	4	0	0	288	564	
16:45:00	3	1	0	4	4	2	244	0	0	246	290	3	0	0	293	543	2083
17:00:00	4	3	0	1	7	3	272	0	0	275	327	4	0	0	331	613	2194
17:15:00	2	3	0	3	5	3	245	0	0	248	323	2	0	0	325	578	2298
17:30:00	5	1	0	3	6	4	211	0	0	215	350	3	0	0	353	574	2308
17:45:00	5	4	0	0	9	2	190	0	0	192	355	3	0	0	358	559	2324
Grand Total	51	37	0	22	88	36	3324	1	1	3361	3815	48	7	3	3870	**7319**	-
Approach%	58%	42%	0%		-	1.1%	98.9%	0%		-	98.6%	1.2%	0.2%		-	-	-
Totals %	0.7%	0.5%	0%		1.2%	0.5%	45.4%	0%		45.9%	52.1%	0.7%	0.1%		52.9%	-	-
Heavy	50	36	0		-	35	124	0		-	152	48	0		-	-	-
Heavy %	98%	97.3%	0%		-	97.2%	3.7%	0%		-	4%	100%	0%		-	-	-
Bicycles	0	1	0		-	1	4	0		-	6	0	0		-	-	-
Bicycle %	0%	2.7%	0%		-	2.8%	0.1%	0%		-	0.2%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: BAYLY ST & PICKERING GO IN / RIGHT OUT ACCESS
Date: Thu, May 11, 2017 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (3 . BAYLY ST & PICKERING GO IN / RIGHT OUT ACCESS)

Start Time	N Approach PICKERING GO IN / RIGHT OUT ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	U-Turn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	22	0	0	0	22	1	74	0	0	75	101	119	0	0	220	317	
07:15:00	72	0	0	0	72	0	100	0	0	100	134	236	0	0	370	542	
07:30:00	57	0	0	1	57	1	105	0	0	106	185	143	0	0	328	491	
07:45:00	60	0	0	4	60	0	102	0	0	102	171	182	0	0	353	515	1865
08:00:00	33	0	0	1	33	1	102	0	0	103	173	105	0	0	278	414	1962
08:15:00	28	1	0	0	29	0	84	0	0	84	200	102	0	0	302	415	1835
08:30:00	31	0	0	1	31	0	110	0	0	110	183	74	0	0	257	398	1742
08:45:00	33	0	0	0	33	0	124	0	0	124	211	63	0	0	274	431	1658
BREAK																	
16:00:00	17	0	0	0	17	1	259	0	0	260	222	26	0	1	248	525	
16:15:00	32	0	0	0	32	0	227	0	0	227	222	30	0	0	252	511	
16:30:00	59	0	0	2	59	0	286	0	0	286	232	22	0	0	254	599	
16:45:00	42	0	0	1	42	0	243	0	0	243	253	27	0	0	280	565	2200
17:00:00	71	0	0	1	71	1	315	0	0	316	251	41	0	0	292	679	2354
17:15:00	40	0	0	0	40	0	262	0	0	262	264	39	0	0	303	605	2448
17:30:00	83	0	0	1	83	0	258	0	0	258	269	40	0	0	309	650	2499
17:45:00	79	0	0	0	79	0	235	0	0	235	258	37	0	0	295	609	2543
Grand Total	759	1	0	12	760	5	2886	0	0	2891	3329	1286	0	1	4615	**8266**	-
Approach%	99.9%	0.1%	0%		-	0.2%	99.8%	0%		-	72.1%	27.9%	0%		-	-	-
Totals %	9.2%	0%	0%		9.2%	0.1%	34.9%	0%		35%	40.3%	15.6%	0%		55.8%	-	-
Heavy	0	0	0		-	1	184	0		-	195	1	0		-	-	-
Heavy %	0%	0%	0%		-	20%	6.4%	0%		-	5.9%	0.1%	0%		-	-	-
Bicycles	0	0	0		-	0	3	0		-	0	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0.1%	0%		-	0%	0%	0%		-	-	-

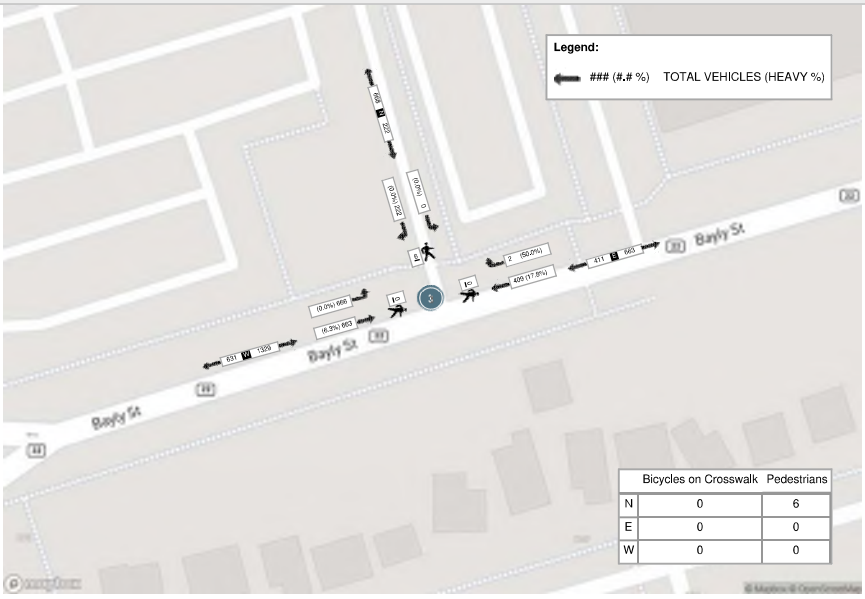
Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach PICKERING GO IN / RIGHT OUT ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	72	0	0	0	72	0	100	0	0	100	134	236	0	0	370	542
07:30:00	57	0	0	1	57	1	105	0	0	106	185	143	0	0	328	491
07:45:00	60	0	0	4	60	0	102	0	0	102	171	182	0	0	353	515
08:00:00	33	0	0	1	33	1	102	0	0	103	173	105	0	0	278	414
Grand Total	222	0	0	6	222	2	409	0	0	411	663	666	0	0	1329	**1962**
Approach%	100%	0%	0%		-	0.5%	99.5%	0%		-	49.9%	50.1%	0%		-	-
Totals %	11.3%	0%	0%		11.3%	0.1%	20.8%	0%		20.9%	33.8%	33.9%	0%		67.7%	-
PHF	0.77	0	0		0.77	0.5	0.97	0		0.97	0.9	0.71	0		0.9	-
Heavy	0	0	0		0	1	73	0		74	42	0	0		42	-
Heavy %	0%	0%	0%		0%	50%	17.8%	0%		18%	6.3%	0%	0%		3.2%	-
Lights	222	0	0		222	1	336	0		337	621	666	0		1287	-
Lights %	100%	0%	0%		100%	50%	82.2%	0%		82%	93.7%	100%	0%		96.8%	-
Single-Unit Trucks	0	0	0		0	0	33	0		33	10	0	0		10	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	8.1%	0%		8%	1.5%	0%	0%		0.8%	-
Buses	0	0	0		0	0	28	0		28	25	0	0		25	-
Buses %	0%	0%	0%		0%	0%	6.8%	0%		6.8%	3.8%	0%	0%		1.9%	-
Articulated Trucks	0	0	0		0	1	12	0		13	7	0	0		7	-
Articulated Trucks %	0%	0%	0%		0%	50%	2.9%	0%		3.2%	1.1%	0%	0%		0.5%	-
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	1	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

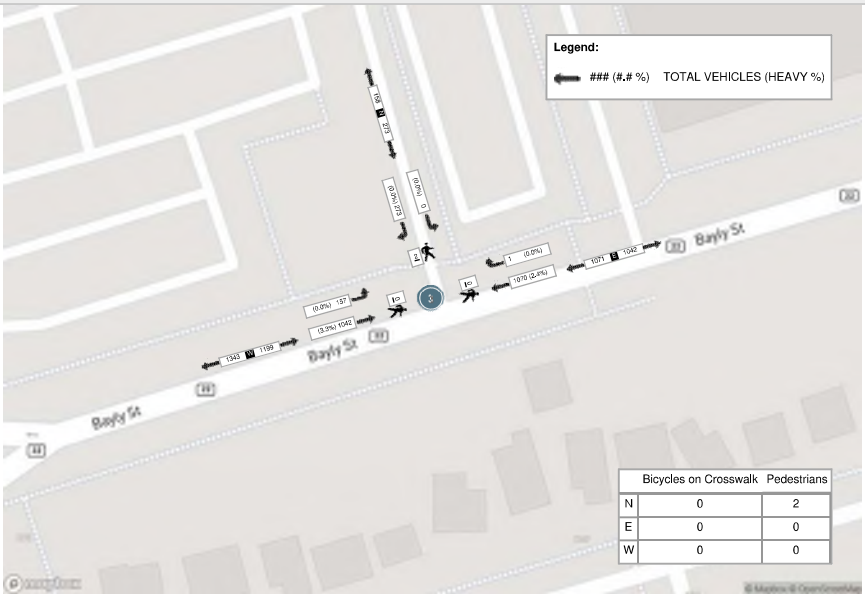
Start Time	N Approach PICKERING GO IN / RIGHT OUT ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	71	0	0	1	71	1	315	0	0	316	251	41	0	0	292	679
17:15:00	40	0	0	0	40	0	262	0	0	262	264	39	0	0	303	605
17:30:00	83	0	0	1	83	0	258	0	0	258	269	40	0	0	309	650
17:45:00	79	0	0	0	79	0	235	0	0	235	258	37	0	0	295	609
Grand Total	273	0	0	2	273	1	1070	0	0	1071	1042	157	0	0	1199	**2543**
Approach%	100%	0%	0%		-	0.1%	99.9%	0%		-	86.9%	13.1%	0%		-	-
Totals %	10.7%	0%	0%		10.7%	0%	42.1%	0%		42.1%	41%	6.2%	0%		47.1%	-
PHF	0.82	0	0		0.82	0.25	0.85	0		0.85	0.97	0.96	0		0.97	-
Heavy	0	0	0		0	0	26	0		26	34	0	0		34	-
Heavy %	0%	0%	0%		0%	0%	2.4%	0%		2.4%	3.3%	0%	0%		2.8%	-
Lights	273	0	0		273	1	1044	0		1045	1008	157	0		1165	-
Lights %	100%	0%	0%		100%	100%	97.6%	0%		97.6%	96.7%	100%	0%		97.2%	-
Single-Unit Trucks	0	0	0		0	0	6	0		6	17	0	0		17	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0.6%	0%		0.6%	1.6%	0%	0%		1.4%	-
Buses	0	0	0		0	0	17	0		17	14	0	0		14	-
Buses %	0%	0%	0%		0%	0%	1.6%	0%		1.6%	1.3%	0%	0%		1.2%	-
Articulated Trucks	0	0	0		0	0	3	0		3	3	0	0		3	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.3%	0%		0.3%	0.3%	0%	0%		0.3%	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	6
E	0	0
W	0	0

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	2
E	0	0
W	0	0

Turning Movement Count (4 . BAYLY ST & PICKERING GO SIGNALIZED ACCESS)

Start Time	N Approach PICKERING GO SIGNALIZED ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	U-Turn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	10	0	0	10	78	75	0	0	153	99	0	0	0	99	262	
07:15:00	2	25	0	3	27	150	102	0	0	252	133	0	0	4	133	412	
07:30:00	4	17	0	1	21	92	97	0	0	189	187	0	0	2	187	397	
07:45:00	1	14	0	3	15	99	102	0	0	201	167	2	0	0	169	385	1456
08:00:00	0	19	0	1	19	53	102	0	0	155	166	0	0	1	166	340	1534
08:15:00	2	22	0	1	24	73	83	0	0	156	197	0	0	2	197	377	1499
08:30:00	5	11	0	2	16	58	107	0	0	165	183	0	0	4	183	364	1466
08:45:00	3	11	0	0	14	39	131	0	0	170	205	1	0	0	206	390	1471
BREAK																	
16:00:00	8	8	0	3	16	10	258	0	0	268	225	0	0	4	225	509	
16:15:00	18	38	0	1	56	6	207	0	0	213	215	0	0	4	215	484	
16:30:00	37	49	0	4	86	15	250	0	0	265	236	0	0	2	236	587	
16:45:00	27	46	0	2	73	21	219	0	0	240	251	0	1	2	252	565	2145
17:00:00	50	79	0	5	129	10	258	0	0	268	259	0	0	5	259	656	2292
17:15:00	34	44	0	4	78	17	233	0	0	250	281	0	0	8	281	609	2417
17:30:00	66	93	0	3	159	16	201	0	0	217	270	0	0	3	270	646	2476
17:45:00	62	105	0	2	167	16	167	0	0	183	263	0	0	5	263	613	2524
Grand Total	319	591	0	35	910	753	2592	0	0	3345	3337	3	1	46	3341	**7596**	-
Approach%	35.1%	64.9%	0%		-	22.5%	77.5%	0%		-	99.9%	0.1%	0%		-	-	-
Totals %	4.2%	7.8%	0%		12%	9.9%	34.1%	0%		44%	43.9%	0%	0%		44%	-	-
Heavy	0	0	0		-	0	182	0		-	198	0	0		-	-	-
Heavy %	0%	0%	0%		-	0%	7%	0%		-	5.9%	0%	0%		-	-	-
Bicycles	0	3	0		-	2	4	0		-	0	0	0		-	-	-
Bicycle %	0%	0.5%	0%		-	0.3%	0.2%	0%		-	0%	0%	0%		-	-	-

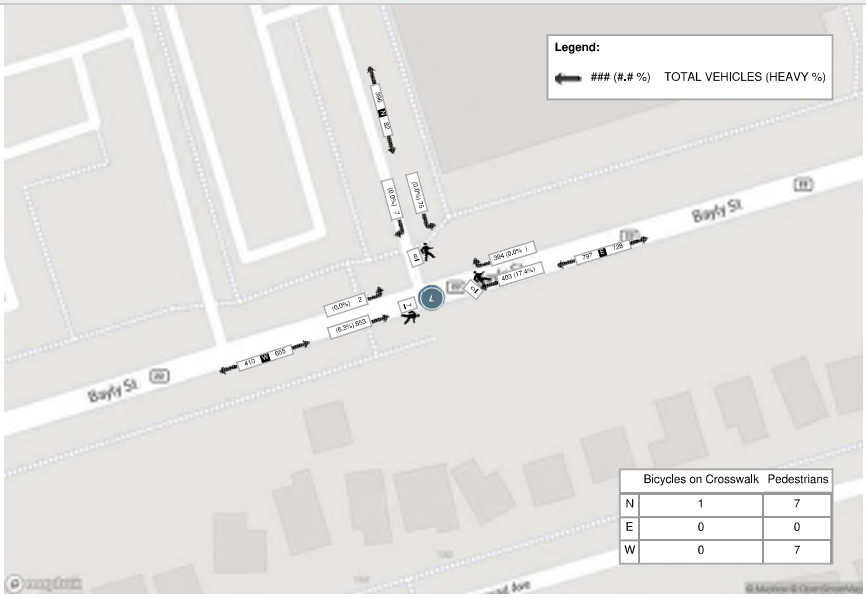
Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach PICKERING GO SIGNALIZED ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	2	25	0	3	27	150	102	0	0	252	133	0	0	4	133	412
07:30:00	4	17	0	1	21	92	97	0	0	189	187	0	0	2	187	397
07:45:00	1	14	0	3	15	99	102	0	0	201	167	2	0	0	169	385
08:00:00	0	19	0	1	19	53	102	0	0	155	166	0	0	1	166	340
Grand Total	7	75	0	8	82	394	403	0	0	797	653	2	0	7	655	**1534**
Approach%	8.5%	91.5%	0%		-	49.4%	50.6%	0%		-	99.7%	0.3%	0%		-	-
Totals %	0.5%	4.9%	0%		5.3%	25.7%	26.3%	0%		52%	42.6%	0.1%	0%		42.7%	-
PHF	0.44	0.75	0		0.76	0.66	0.99	0		0.79	0.87	0.25	0		0.88	-
Heavy	0	0	0		0	0	70	0		70	41	0	0		41	-
Heavy %	0%	0%	0%		0%	0%	17.4%	0%		8.8%	6.3%	0%	0%		6.3%	-
Lights	7	75	0		82	394	333	0		727	612	2	0		614	-
Lights %	100%	100%	0%		100%	100%	82.6%	0%		91.2%	93.7%	100%	0%		93.7%	-
Single-Unit Trucks	0	0	0		0	0	28	0		28	10	0	0		10	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	6.9%	0%		3.5%	1.5%	0%	0%		1.5%	-
Buses	0	0	0		0	0	29	0		29	24	0	0		24	-
Buses %	0%	0%	0%		0%	0%	7.2%	0%		3.6%	3.7%	0%	0%		3.7%	-
Articulated Trucks	0	0	0		0	0	13	0		13	7	0	0		7	-
Articulated Trucks %	0%	0%	0%		0%	0%	3.2%	0%		1.6%	1.1%	0%	0%		1.1%	-
Pedestrians	-	-	-	7	-	-	-	-	0	-	-	-	-	7	-	-
Pedestrians%	-	-	-	46.7%		-	-	-	0%		-	-	-	46.7%		-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	6.7%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	1	0	0	-	0	1	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

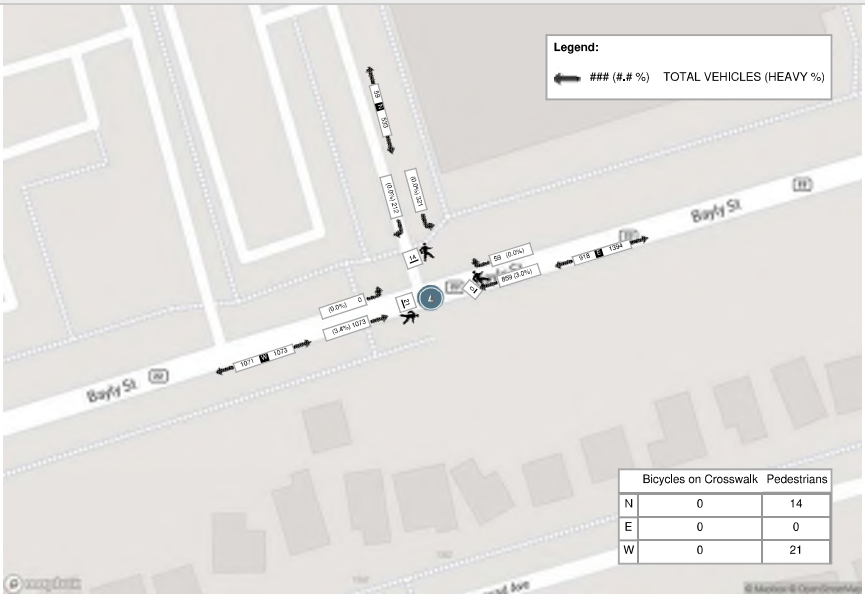
Start Time	N Approach PICKERING GO SIGNALIZED ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	50	79	0	5	129	10	258	0	0	268	259	0	0	5	259	656
17:15:00	34	44	0	4	78	17	233	0	0	250	281	0	0	8	281	609
17:30:00	66	93	0	3	159	16	201	0	0	217	270	0	0	3	270	646
17:45:00	62	105	0	2	167	16	167	0	0	183	263	0	0	5	263	613
Grand Total	212	321	0	14	533	59	859	0	0	918	1073	0	0	21	1073	**2524**
Approach%	39.8%	60.2%	0%		-	6.4%	93.6%	0%		-	100%	0%	0%		-	-
Totals %	8.4%	12.7%	0%		21.1%	2.3%	34%	0%		36.4%	42.5%	0%	0%		42.5%	-
PHF	0.8	0.76	0		0.8	0.87	0.83	0		0.86	0.95	0	0		0.95	-
Heavy	0	0	0		0	0	26	0		26	37	0	0		37	-
Heavy %	0%	0%	0%		0%	0%	3%	0%		2.8%	3.4%	0%	0%		3.4%	-
Lights	212	321	0		533	59	833	0		892	1036	0	0		1036	-
Lights %	100%	100%	0%		100%	100%	97%	0%		97.2%	96.6%	0%	0%		96.6%	-
Single-Unit Trucks	0	0	0		0	0	7	0		7	18	0	0		18	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0.8%	0%		0.8%	1.7%	0%	0%		1.7%	-
Buses	0	0	0		0	0	15	0		15	14	0	0		14	-
Buses %	0%	0%	0%		0%	0%	1.7%	0%		1.6%	1.3%	0%	0%		1.3%	-
Articulated Trucks	0	0	0		0	0	4	0		4	5	0	0		5	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.5%	0%		0.4%	0.5%	0%	0%		0.5%	-
Pedestrians	-	-	-	14	-	-	-	-	0	-	-	-	-	21	-	-
Pedestrians%	-	-	-	40%		-	-	-	0%		-	-	-	60%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	1	1	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	7
E	0	0
W	0	7

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)



Turning Movement Count (13 . SANDY BEACH RD & ALLIANCE RD / GO OVERFLOW LOT)

Start Time	N Approach SANDY BEACH RD						E Approach ALLIANCE RD						S Approach SANDY BEACH RD						W Approach GO OVERFLOW LOT						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	0	0	1	0	2	0	0	3	1	5	3	0	1	9	0	0	0	0	0	0	12	
07:15:00	0	1	0	0	0	1	1	2	5	0	0	8	5	11	35	0	0	51	1	1	0	0	0	2	62	
07:30:00	0	2	0	0	0	2	4	0	6	0	0	10	6	3	4	0	0	13	1	0	0	0	0	1	26	
07:45:00	0	0	0	0	0	0	1	0	5	0	0	6	0	5	8	0	0	13	0	0	0	0	0	0	19	119
08:00:00	0	2	1	0	0	3	4	0	4	0	0	8	3	3	11	0	0	17	0	0	0	0	0	0	28	135
08:15:00	0	0	0	0	0	0	1	0	5	0	0	6	3	3	6	0	0	12	0	0	0	0	0	0	18	91
08:30:00	0	2	0	0	0	2	1	0	9	0	0	10	0	5	2	0	0	7	0	0	0	0	0	0	19	84
08:45:00	0	2	0	0	0	2	1	0	4	0	0	5	4	3	3	0	1	10	0	0	0	0	0	0	17	82
BREAK																										
16:00:00	0	2	1	0	0	3	0	0	6	0	0	6	6	0	1	0	0	7	0	0	0	0	0	0	16	
16:15:00	0	1	0	0	0	1	1	0	15	0	0	16	9	2	0	0	1	11	3	0	0	0	0	3	31	
16:30:00	0	2	1	0	0	3	3	0	7	0	0	10	6	0	0	0	0	6	1	0	0	0	0	1	20	
16:45:00	0	3	0	0	0	3	1	0	10	0	0	11	10	1	0	0	0	11	0	0	0	0	0	0	25	92
17:00:00	0	11	0	0	0	11	0	3	17	1	0	21	12	2	2	0	1	16	8	0	0	0	0	8	56	132
17:15:00	0	5	2	0	0	7	1	1	14	0	0	16	15	2	0	0	0	17	8	1	0	0	0	9	49	150
17:30:00	0	9	2	0	0	11	0	0	15	0	0	15	14	2	3	0	0	19	17	0	0	0	0	17	62	192
17:45:00	0	8	0	0	0	8	1	0	16	0	0	17	10	3	1	0	0	14	11	0	0	0	0	11	50	217
Grand Total	0	50	7	0	0	57	21	6	140	1	0	168	104	50	79	0	4	233	50	2	0	0	0	52	**510**	-
Approach%	0%	87.7%	12.3%	0%		-	12.5%	3.6%	83.3%	0.6%		-	44.6%	21.5%	33.9%	0%		-	96.2%	3.8%	0%	0%		-	-	-
Totals %	0%	9.8%	1.4%	0%		11.2%	4.1%	1.2%	27.5%	0.2%		32.9%	20.4%	9.8%	15.5%	0%		45.7%	9.8%	0.4%	0%	0%		10.2%	-	-
Heavy	0	6	1	0		-	5	0	53	0		-	12	2	0	0		-	0	0	0	0		-	-	-
Heavy %	0%	12%	14.3%	0%		-	23.8%	0%	37.9%	0%		-	11.5%	4%	0%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Spectrum

Turning Movement Count
Location Name: SANDY BEACH RD & ALLIANCE RD / GO OVERFLOW LOT
Date: Thu, May 11, 2017 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach SANDY BEACH RD						E Approach ALLIANCE RD						S Approach SANDY BEACH RD						W Approach GO OVERFLOW LOT						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	0	1	0	0	0	1	1	2	5	0	0	8	5	11	35	0	0	51	1	1	0	0	0	2	62
07:30:00	0	2	0	0	0	2	4	0	6	0	0	10	6	3	4	0	0	13	1	0	0	0	0	1	26
07:45:00	0	0	0	0	0	0	1	0	5	0	0	6	0	5	8	0	0	13	0	0	0	0	0	0	19
08:00:00	0	2	1	0	0	3	4	0	4	0	0	8	3	3	11	0	0	17	0	0	0	0	0	0	28
Grand Total	0	5	1	0	0	6	10	2	20	0	0	32	14	22	58	0	0	94	2	1	0	0	0	3	135
Approach%	0%	83.3%	16.7%	0%		-	31.3%	6.3%	62.5%	0%		-	14.9%	23.4%	61.7%	0%		-	66.7%	33.3%	0%	0%		-	-
Totals %	0%	3.7%	0.7%	0%		4.4%	7.4%	1.5%	14.8%	0%		23.7%	10.4%	16.3%	43%	0%		69.6%	1.5%	0.7%	0%	0%		2.2%	-
PHF	0	0.63	0.25	0		0.5	0.63	0.25	0.83	0		0.8	0.58	0.5	0.41	0		0.46	0.5	0.25	0	0		0.38	-
Heavy	0	4	0	0		4	1	0	14	0		15	3	1	0	0		4	0	0	0	0		0	-
Heavy %	0%	80%	0%	0%		66.7%	10%	0%	70%	0%		46.9%	21.4%	4.5%	0%	0%		4.3%	0%	0%	0%	0%		0%	-
Lights	0	1	1	0		2	9	2	6	0		17	11	21	58	0		90	2	1	0	0		3	-
Lights %	0%	20%	100%	0%		33.3%	90%	100%	30%	0%		53.1%	78.6%	95.5%	100%	0%		95.7%	100%	100%	0%	0%		100%	-
Single-Unit Trucks	0	3	0	0		3	1	0	7	0		8	1	1	0	0		2	0	0	0	0		0	-
Single-Unit Trucks %	0%	60%	0%	0%		50%	10%	0%	35%	0%		25%	7.1%	4.5%	0%	0%		2.1%	0%	0%	0%	0%		0%	-
Buses	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Buses %	0%	20%	0%	0%		16.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0	0		0	0	0	7	0		7	2	0	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	35%	0%		21.9%	14.3%	0%	0%	0%		2.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

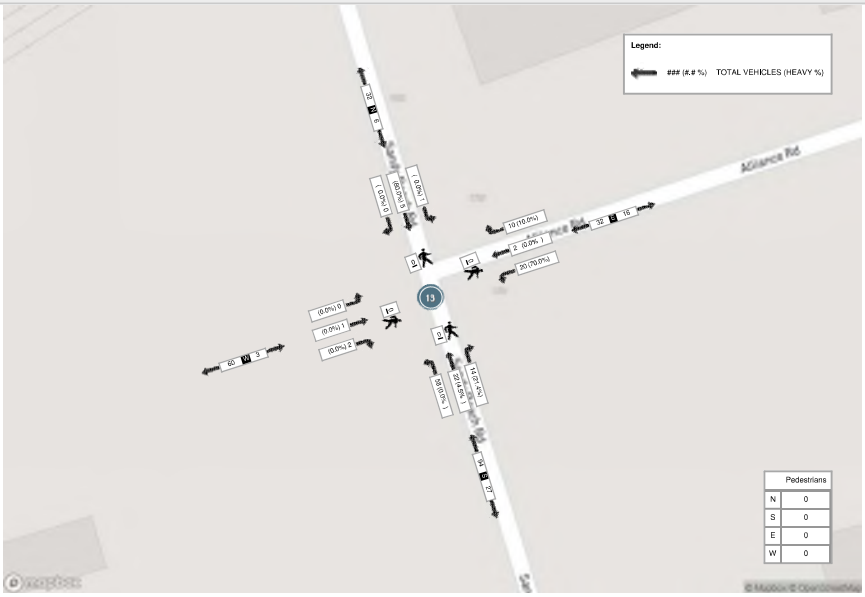
Turning Movement Count
Location Name: SANDY BEACH RD & ALLIANCE RD / GO OVERFLOW LOT
Date: Thu, May 11, 2017 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

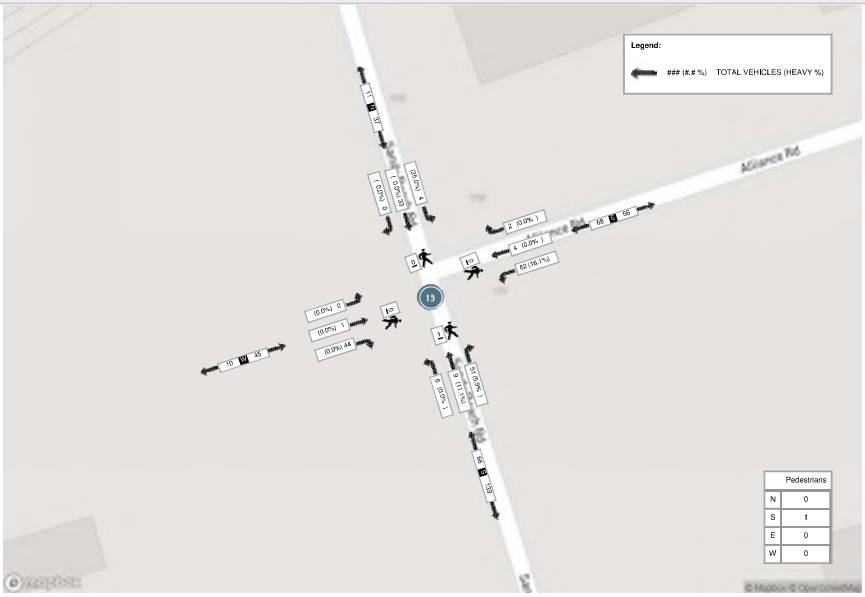
Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

Start Time	N Approach SANDY BEACH RD						E Approach ALLIANCE RD						S Approach SANDY BEACH RD						W Approach GO OVERFLOW LOT						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	0	11	0	0	0	11	0	3	17	1	0	21	12	2	2	0	1	16	8	0	0	0	0	8	56
17:15:00	0	5	2	0	0	7	1	1	14	0	0	16	15	2	0	0	0	17	8	1	0	0	0	9	49
17:30:00	0	9	2	0	0	11	0	0	15	0	0	15	14	2	3	0	0	19	17	0	0	0	0	17	62
17:45:00	0	8	0	0	0	8	1	0	16	0	0	17	10	3	1	0	0	14	11	0	0	0	0	11	50
Grand Total	0	33	4	0	0	37	2	4	62	1	0	69	51	9	6	0	1	66	44	1	0	0	0	45	217
Approach%	0%	89.2%	10.8%	0%		-	2.9%	5.8%	89.9%	1.4%		-	77.3%	13.6%	9.1%	0%		-	97.8%	2.2%	0%	0%		-	-
Totals %	0%	15.2%	1.8%	0%		17.1%	0.9%	1.8%	28.6%	0.5%		31.8%	23.5%	4.1%	2.8%	0%		30.4%	20.3%	0.5%	0%	0%		20.7%	-
PHF	0	0.75	0.5	0		0.84	0.5	0.33	0.91	0.25		0.82	0.85	0.75	0.5	0		0.87	0.65	0.25	0	0		0.66	-
Heavy	0	0	1	0		1	0	0	10	0		10	3	1	0	0		4	0	0	0	0		0	-
Heavy %	0%	0%	25%	0%		2.7%	0%	0%	16.1%	0%		14.5%	5.9%	11.1%	0%	0%		6.1%	0%	0%	0%	0%		0%	-
Lights	0	33	3	0		36	2	4	52	1		59	48	8	6	0		62	44	1	0	0		45	-
Lights %	0%	100%	75%	0%		97.3%	100%	100%	83.9%	100%		85.5%	94.1%	88.9%	100%	0%		93.9%	100%	100%	0%	0%		100%	-
Single-Unit Trucks	0	0	0	0		0	0	0	4	0		4	2	1	0	0		3	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	6.5%	0%		5.8%	3.9%	11.1%	0%	0%		4.5%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	1	0		1	0	0	6	0		6	1	0	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0%	25%	0%		2.7%	0%	0%	9.7%	0%		8.7%	2%	0%	0%	0%		1.5%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM **Weather: Overcast (5.7 °C)**



Peak Hour: 05:00 PM - 06:00 PM **Weather: Mostly Cloudy (15.8 °C)**



Turning Movement Count (14 . SANDY BEACH RD & PICKERING GO OVERFLOW LOT NORTH DRIVEWAY)

Start Time	N Approach SANDY BEACH RD						E Approach RETAIL DRIVEWAY						S Approach SANDY BEACH RD						W Approach PICKERING GO OVERFLOW LOT NORTH DRIVEWAY						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	0	4	
07:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	11	1	0	13	0	0	0	0	0	0	13	
07:30:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	3	0	0	3	0	0	0	0	0	0	5	
07:45:00	0	0	0	0	0	0	0	0	0	0	2	0	3	0	3	0	0	6	0	0	0	0	0	0	6	28
08:00:00	0	0	0	0	0	0	0	0	1	0	1	1	1	0	3	2	0	6	0	0	0	0	0	0	7	31
08:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	2	20
08:30:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	4	0	0	0	0	0	0	5	20
08:45:00	0	0	0	0	0	0	0	0	1	0	0	1	3	0	1	0	0	4	0	0	0	0	0	0	5	19
BREAK																										
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15:00	0	0	0	0	0	0	0	0	1	0	0	1	2	0	1	0	0	3	0	0	0	0	0	0	4	
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
16:45:00	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	2	0	0	0	0	2	4	9
17:00:00	0	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	2	8	0	0	0	0	8	11	20
17:15:00	0	0	0	0	0	0	0	0	2	0	1	2	0	0	1	2	0	3	2	0	0	0	0	2	7	23
17:30:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	7	0	0	0	0	7	10	32
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	0	0	0	0	5	7	35
Grand Total	0	0	0	0	0	0	0	0	12	0	5	12	14	0	34	7	0	55	24	0	0	0	0	24	**91**	-
Approach%	0%	0%	0%	0%		-	0%	0%	100%	0%		-	25.5%	0%	61.8%	12.7%		-	100%	0%	0%	0%		-	-	-
Totals %	0%	0%	0%	0%		0%	0%	0%	13.2%	0%		13.2%	15.4%	0%	37.4%	7.7%		60.4%	26.4%	0%	0%	0%		26.4%	-	-
Heavy	0	0	0	0		-	0	0	4	0		-	1	0	1	1		-	0	0	0	0		-	-	-
Heavy %	0%	0%	0%	0%		-	0%	0%	33.3%	0%		-	7.1%	0%	2.9%	14.3%		-	0%	0%	0%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

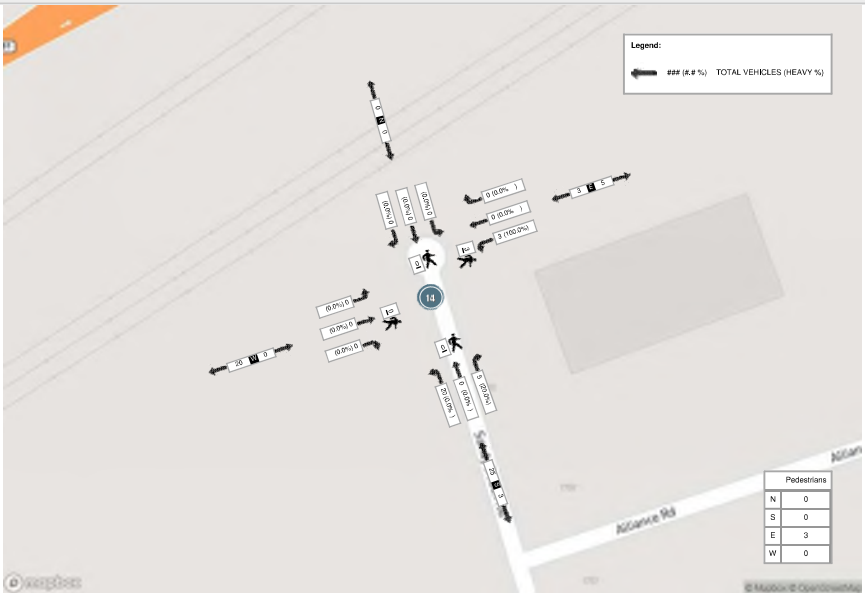
Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach SANDY BEACH RD						E Approach RETAIL DRIVEWAY						S Approach SANDY BEACH RD						W Approach PICKERING GO OVERFLOW LOT NORTH DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	11	1	0	13	0	0	0	0	0	0	13
07:30:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	3	0	0	3	0	0	0	0	0	0	5
07:45:00	0	0	0	0	0	0	0	0	0	0	2	0	3	0	3	0	0	6	0	0	0	0	0	0	6
08:00:00	0	0	0	0	0	0	0	0	1	0	1	1	1	0	3	2	0	6	0	0	0	0	0	0	7
Grand Total	0	0	0	0	0	0	0	0	3	0	3	3	5	0	20	3	0	28	0	0	0	0	0	0	**31**
Approach%	0%	0%	0%	0%		-	0%	0%	100%	0%		-	17.9%	0%	71.4%	10.7%		-	0%	0%	0%	0%		-	-
Totals %	0%	0%	0%	0%		0%	0%	0%	9.7%	0%		9.7%	16.1%	0%	64.5%	9.7%		90.3%	0%	0%	0%	0%		0%	-
PHF	0	0	0	0		0	0	0	0.38	0		0.38	0.42	0	0.45	0.38		0.54	0	0	0	0		0	-
Heavy	0	0	0	0		0	0	0	3	0		3	1	0	0	1		2	0	0	0	0		0	-
Heavy %	0%	0%	0%	0%		0%	0%	0%	100%	0%		100%	20%	0%	0%	33.3%		7.1%	0%	0%	0%	0%		0%	-
Lights	0	0	0	0		0	0	0	0	0		0	4	0	20	2		26	0	0	0	0		0	-
Lights %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	80%	0%	100%	66.7%		92.9%	0%	0%	0%	0%		0%	-
Single-Unit Trucks	0	0	0	0		0	0	0	3	0		3	1	0	0	0		1	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	100%	0%		100%	20%	0%	0%	0%		3.6%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	1		1	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	33.3%		3.6%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

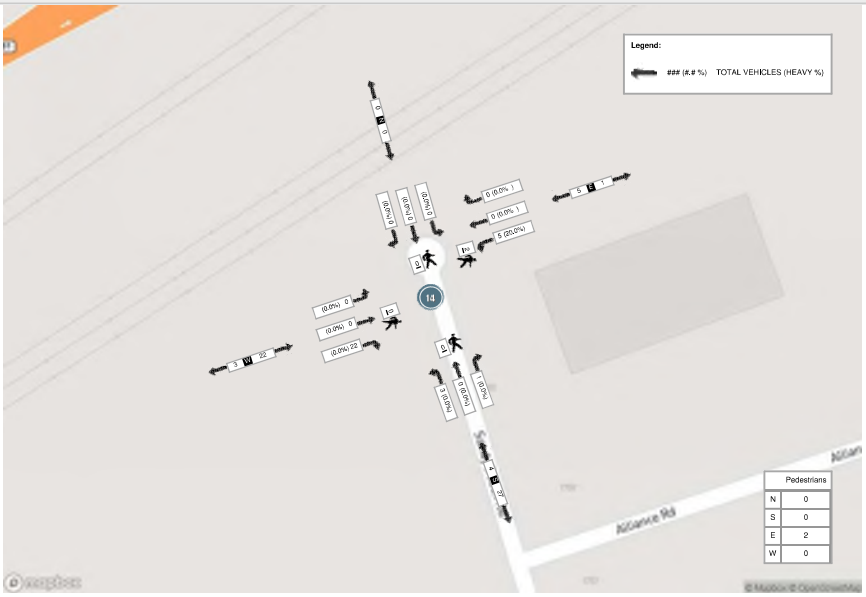
Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

Start Time	N Approach SANDY BEACH RD						E Approach RETAIL DRIVEWAY						S Approach SANDY BEACH RD						W Approach PICKERING GO OVERFLOW LOT NORTH DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	0	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	2	8	0	0	0	0	8	11
17:15:00	0	0	0	0	0	0	0	0	2	0	1	2	0	0	1	2	0	3	2	0	0	0	0	2	7
17:30:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	7	0	0	0	0	7	10
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	0	0	0	0	5	7
Grand Total	0	0	0	0	0	0	0	0	5	0	2	5	1	0	3	4	0	8	22	0	0	0	0	22	**35**
Approach%	0%	0%	0%	0%		-	0%	0%	100%	0%		-	12.5%	0%	37.5%	50%		-	100%	0%	0%	0%		-	-
Totals %	0%	0%	0%	0%		0%	0%	0%	14.3%	0%		14.3%	2.9%	0%	8.6%	11.4%		22.9%	62.9%	0%	0%	0%		62.9%	-
PHF	0	0	0	0		0	0	0	0.63	0		0.63	0.25	0	0.75	0.5		0.67	0.69	0	0	0		0.69	-
Heavy	0	0	0	0		0	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	-
Heavy %	0%	0%	0%	0%		0%	0%	0%	20%	0%		20%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Lights	0	0	0	0		0	0	0	4	0		4	1	0	3	4		8	22	0	0	0		22	-
Lights %	0%	0%	0%	0%		0%	0%	0%	80%	0%		80%	100%	0%	100%	100%		100%	100%	0%	0%	0%		100%	-
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0	0		0	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	20%	0%		20%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)



Peak Hour: 05:00 PM - 06:00 PM **Weather: Mostly Cloudy (15.8 °C)**



Turning Movement Count (12 . SANDY BEACH RD & PICKERING GO OVERFLOW LOT SOUTH DRIVEWAY)

Start Time	N Approach SANDY BEACH RD					S Approach SANDY BEACH RD					W Approach PICKERING GO OVERFLOW LOT SOUTH DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	U-Turn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	2	0	0	2	8	1	0	0	9	0	0	0	0	0	11	
07:15:00	0	8	0	0	8	52	2	0	0	54	0	0	0	0	0	62	
07:30:00	0	9	0	0	9	11	0	0	0	11	1	0	0	0	1	21	
07:45:00	0	5	0	0	5	12	0	0	0	12	0	0	0	0	0	17	111
08:00:00	0	6	0	0	6	17	0	0	0	17	0	0	0	0	0	23	123
08:15:00	0	5	0	0	5	12	0	0	0	12	0	0	0	0	0	17	78
08:30:00	0	11	0	0	11	8	1	0	0	9	0	0	0	0	0	20	77
08:45:00	0	6	0	0	6	9	2	2	0	13	2	0	0	0	2	21	81
BREAK																	
16:00:00	0	8	0	0	8	9	0	0	0	9	1	0	0	0	1	18	
16:15:00	0	19	0	0	19	9	0	0	0	9	0	0	0	0	0	28	
16:30:00	0	10	0	0	10	6	0	0	0	6	0	0	0	0	0	16	
16:45:00	0	13	0	0	13	11	0	0	0	11	0	0	0	0	0	24	86
17:00:00	0	36	0	0	36	16	2	0	0	18	1	0	0	1	1	55	123
17:15:00	0	27	0	0	27	17	1	1	0	19	1	0	0	0	1	47	142
17:30:00	0	41	0	0	41	20	0	0	0	20	3	0	0	0	3	64	190
17:45:00	0	35	0	0	35	13	0	1	0	14	1	0	0	0	1	50	216
Grand Total	0	241	0	0	241	230	9	4	0	243	10	0	0	1	10	**494**	-
Approach%	0%	100%	0%		-	94.7%	3.7%	1.6%		-	100%	0%	0%		-	-	-
Totals %	0%	48.8%	0%		48.8%	46.6%	1.8%	0.8%		49.2%	2%	0%	0%		2%	-	-
Heavy	0	60	0		-	14	0	0		-	2	0	0		-	-	-
Heavy %	0%	24.9%	0%		-	6.1%	0%	0%		-	20%	0%	0%		-	-	-
Bicycles	0	0	0		-	1	0	0		-	0	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0.4%	0%	0%		-	0%	0%	0%		-	-	-

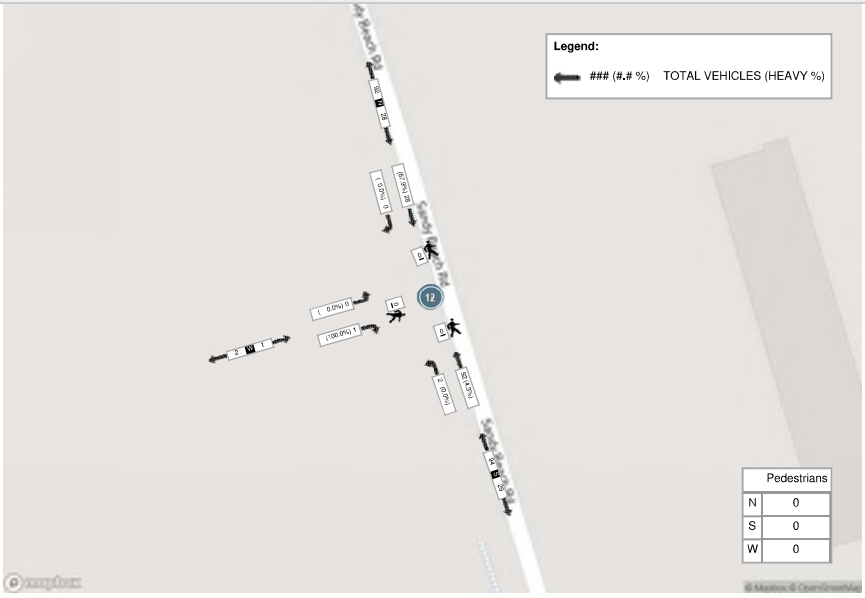
Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach SANDY BEACH RD					S Approach SANDY BEACH RD					W Approach PICKERING GO OVERFLOW LOT SOUTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	
07:15:00	0	8	0	0	8	52	2	0	0	54	0	0	0	0	0	62
07:30:00	0	9	0	0	9	11	0	0	0	11	1	0	0	0	1	21
07:45:00	0	5	0	0	5	12	0	0	0	12	0	0	0	0	0	17
08:00:00	0	6	0	0	6	17	0	0	0	17	0	0	0	0	0	23
Grand Total	0	28	0	0	28	92	2	0	0	94	1	0	0	0	1	**123**
Approach%	0%	100%	0%		-	97.9%	2.1%	0%		-	100%	0%	0%		-	-
Totals %	0%	22.8%	0%		22.8%	74.8%	1.6%	0%		76.4%	0.8%	0%	0%		0.8%	-
PHF	0	0.78	0		0.78	0.44	0.25	0		0.44	0.25	0	0		0.25	-
Heavy	0	19	0		19	4	0	0		4	1	0	0		1	-
Heavy %	0%	67.9%	0%		67.9%	4.3%	0%	0%		4.3%	100%	0%	0%		100%	-
Lights	0	9	0		9	88	2	0		90	0	0	0		0	-
Lights %	0%	32.1%	0%		32.1%	95.7%	100%	0%		95.7%	0%	0%	0%		0%	-
Single-Unit Trucks	0	11	0		11	2	0	0		2	0	0	0		0	-
Single-Unit Trucks %	0%	39.3%	0%		39.3%	2.2%	0%	0%		2.1%	0%	0%	0%		0%	-
Buses	0	1	0		1	0	0	0		0	1	0	0		1	-
Buses %	0%	3.6%	0%		3.6%	0%	0%	0%		0%	100%	0%	0%		100%	-
Articulated Trucks	0	7	0		7	2	0	0		2	0	0	0		0	-
Articulated Trucks %	0%	25%	0%		25%	2.2%	0%	0%		2.1%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	1	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

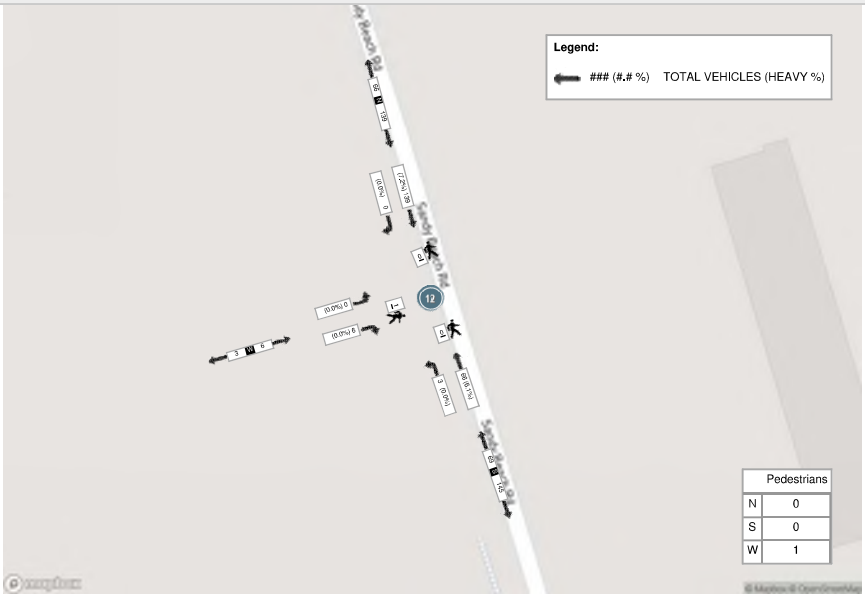
Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

Start Time	N Approach SANDY BEACH RD					S Approach SANDY BEACH RD					W Approach PICKERING GO OVERFLOW LOT SOUTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	
17:00:00	0	36	0	0	36	16	2	0	0	18	1	0	0	1	1	55
17:15:00	0	27	0	0	27	17	1	1	0	19	1	0	0	0	1	47
17:30:00	0	41	0	0	41	20	0	0	0	20	3	0	0	0	3	64
17:45:00	0	35	0	0	35	13	0	1	0	14	1	0	0	0	1	50
Grand Total	0	139	0	0	139	66	3	2	0	71	6	0	0	1	6	**216**
Approach%	0%	100%	0%		-	93%	4.2%	2.8%		-	100%	0%	0%		-	-
Totals %	0%	64.4%	0%		64.4%	30.6%	1.4%	0.9%		32.9%	2.8%	0%	0%		2.8%	-
PHF	0	0.85	0		0.85	0.83	0.38	0.5		0.89	0.5	0	0		0.5	-
Heavy	0	10	0		10	4	0	0		4	0	0	0		0	-
Heavy %	0%	7.2%	0%		7.2%	6.1%	0%	0%		5.6%	0%	0%	0%		0%	-
Lights	0	129	0		129	62	3	2		67	6	0	0		6	-
Lights %	0%	92.8%	0%		92.8%	93.9%	100%	100%		94.4%	100%	0%	0%		100%	-
Single-Unit Trucks	0	4	0		4	3	0	0		3	0	0	0		0	-
Single-Unit Trucks %	0%	2.9%	0%		2.9%	4.5%	0%	0%		4.2%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	0	0		0	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Articulated Trucks	0	6	0		6	1	0	0		1	0	0	0		0	-
Articulated Trucks %	0%	4.3%	0%		4.3%	1.5%	0%	0%		1.4%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	100%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)



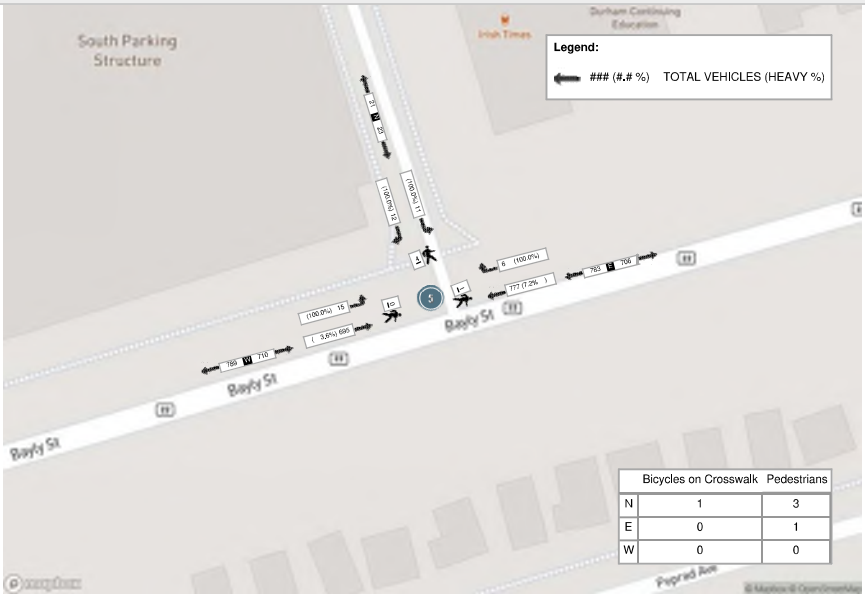
Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)

Start Time	N Approach GO BUS ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
07:15:00	4	2	0	2	6	2	244	0	1	246	146	3	4	0	153	405
07:30:00	3	3	0	1	6	2	188	0	0	190	196	3	1	0	200	396
07:45:00	3	2	0	1	5	1	189	0	0	190	170	6	1	0	177	372
08:00:00	2	4	0	0	6	1	156	0	0	157	183	3	0	0	186	349
Grand Total	12	11	0	4	23	6	777	0	1	783	695	15	6	0	716	**1522**
Approach%	52.2%	47.8%	0%		-	0.8%	99.2%	0%		-	97.1%	2.1%	0.8%		-	-
Totals %	0.8%	0.7%	0%		1.5%	0.4%	51.1%	0%		51.4%	45.7%	1%	0.4%		47%	-
PHF	0.75	0.69	0		0.96	0.75	0.8	0		0.8	0.89	0.63	0.38		0.9	-
Heavy	12	11	0		23	6	56	0		62	25	15	0		40	-
Heavy %	100%	100%	0%		100%	100%	7.2%	0%		7.9%	3.6%	100%	0%		5.6%	-
Lights	0	0	0		0	0	721	0		721	670	0	6		676	-
Lights %	0%	0%	0%		0%	0%	92.8%	0%		92.1%	96.4%	0%	100%		94.4%	-
Single-Unit Trucks	0	0	0		0	0	26	0		26	10	0	0		10	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	3.3%	0%		3.3%	1.4%	0%	0%		1.4%	-
Buses	12	11	0		23	6	16	0		22	8	15	0		23	-
Buses %	100%	100%	0%		100%	100%	2.1%	0%		2.8%	1.2%	100%	0%		3.2%	-
Articulated Trucks	0	0	0		0	0	14	0		14	7	0	0		7	-
Articulated Trucks %	0%	0%	0%		0%	0%	1.8%	0%		1.8%	1%	0%	0%		1%	-
Pedestrians	-	-	-	3	-	-	-	-	1	-	-	-	-	0	-	-
Pedestrians%	-	-	-	60%		-	-	-	20%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	20%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	1	0	0	-	0	1	0	0	-	2	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)

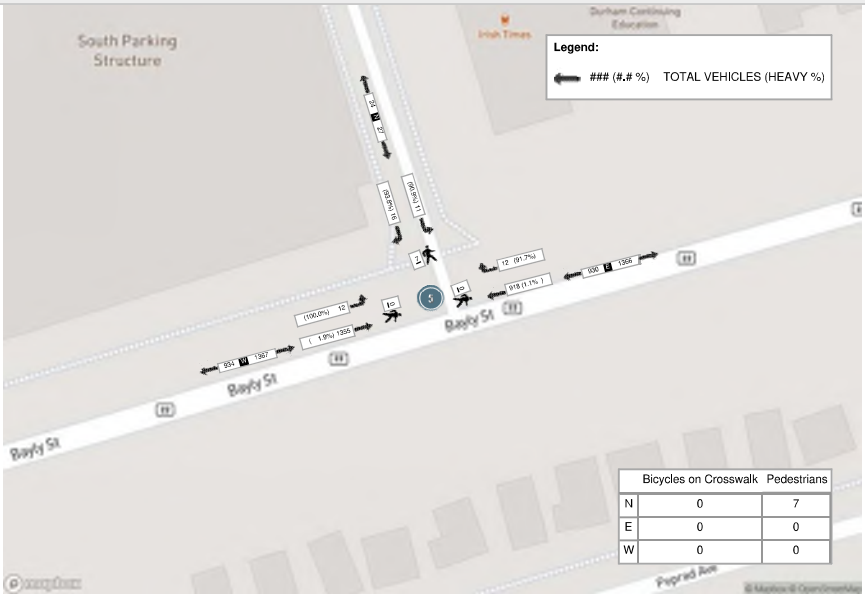
Start Time	N Approach GO BUS ACCESS					E Approach BAYLY ST					W Approach BAYLY ST					Int. Total (15 min)
	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	4	3	0	1	7	3	272	0	0	275	327	4	0	0	331	613
17:15:00	2	3	0	3	5	3	245	0	0	248	323	2	0	0	325	578
17:30:00	5	1	0	3	6	4	211	0	0	215	350	3	0	0	353	574
17:45:00	5	4	0	0	9	2	190	0	0	192	355	3	0	0	358	559
Grand Total	16	11	0	7	27	12	918	0	0	930	1355	12	0	0	1367	**2324**
Approach%	59.3%	40.7%	0%		-	1.3%	98.7%	0%		-	99.1%	0.9%	0%		-	-
Totals %	0.7%	0.5%	0%		1.2%	0.5%	39.5%	0%		40%	58.3%	0.5%	0%		58.8%	-
PHF	0.8	0.69	0		0.75	0.75	0.84	0		0.85	0.95	0.75	0		0.95	-
Heavy	15	10	0		25	11	10	0		21	26	12	0		38	-
Heavy %	93.8%	90.9%	0%		92.6%	91.7%	1.1%	0%		2.3%	1.9%	100%	0%		2.8%	-
Lights	1	1	0		2	1	908	0		909	1329	0	0		1329	-
Lights %	6.3%	9.1%	0%		7.4%	8.3%	98.9%	0%		97.7%	98.1%	0%	0%		97.2%	-
Single-Unit Trucks	0	1	0		1	1	6	0		7	22	0	0		22	-
Single-Unit Trucks %	0%	9.1%	0%		3.7%	8.3%	0.7%	0%		0.8%	1.6%	0%	0%		1.6%	-
Buses	15	9	0		24	10	0	0		10	1	12	0		13	-
Buses %	93.8%	81.8%	0%		88.9%	83.3%	0%	0%		1.1%	0.1%	100%	0%		1%	-
Articulated Trucks	0	0	0		0	0	4	0		4	3	0	0		3	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.4%	0%		0.4%	0.2%	0%	0%		0.2%	-
Pedestrians	-	-	-	7	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	1	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Overcast (5.7 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	3
E	0	1
W	0	0

Peak Hour: 05:00 PM - 06:00 PM Weather: Mostly Cloudy (15.8 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	7
E	0	0
W	0	0

3.1.1 Existing Rutherford GO Station Traffic Volumes

Existing station traffic activity levels are summarized in Table 2.

TABLE 2 EXISTING RUTHERFORD GO STATION PEAK HOUR TRAFFIC ACTIVITY – AUTO ONLY

	Morning Peak Hour[3]			Afternoon Peak Hour[3]		
	In	Out	2-Way	In	Out	2-Way
Westburne Drive North Access	470	75	545	10	185	195
Westburne Drive South Access	260	25	285	40	280	320
Parking Lot Traffic	**730**	**100**	**830**	**50**	**465**	**515**
PUDO / Transit Traffic	**145**	**135**	**280**	**115**	**115**	**230**
Total Site Traffic	**875**	**235**	**1,110**	**165**	**580**	**745**

Notes:
1. Survey count took place on Tuesday September 20th, 2016.
2. Trips Rounded to the nearest 5.
3. Morning peak hour 6:45am – 7:45am. Afternoon peak hour 5:15pm – 6:15pm

3.2 FUTURE BACKGROUND TRAFFIC VOLUMES

As mentioned in Section 2.6.1, the Rutherford/Carrville EA has recommended that Rutherford Road be widened to three lanes in each direction within the vicinity of the site in order to accommodate the introduction of transit priority lanes. Provision of transit lanes has been proposed as a means of servicing increasing future travel demands along the corridor.

As part of the analysis conducted for the EA, an assessment of future traffic volumes on Rutherford Road was carried out and screenline analyses for future scenarios on Rutherford Road was undertaken in Section 4.2 of **Appendix D** of the EA (An excerpt of the relevant part of the EA report is included in **Appendix D** of this report). the EA report contained analysis of increased traffic volumes arising from the expansion of parking at Rutherford GO Station, but did not include that traffic increase within the base traffic volumes.

As indicated in Transportation and Traffic Analysis Report of the Rutherford/Carrville Road EA, forecast traffic volumes on Rutherford Road in the vicinity of the site vary widely given the proposed roadway configuration and differences in total capacity. The preferred design solution for the Rutherford Road/Carville Road corridor indicates that the number of traffic lanes available to general traffic will remain constant (an additional lane will be added as a transit priority lane), so it can be assumed that future traffic volumes on the corridor will remain unchanged compared to the present day.

Assuming no new general purpose traffic lanes will be added in the future, Table 3 summarizes a comparison of existing and future traffic volumes from the EA for Rutherford Road, just east of Keele Street, for a constrained growth case.

Turning Movement Count (4 . YONGE ST & BARRIE SOUTH GO ACCESS)

Start Time	N Approach YONGE ST					E Approach BARRIE SOUTH GO ACCESS					S Approach YONGE ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	U-Turn S:S	Peds S:	Approach Total		
07:30:00	88	3	0	0	91	0	2	0	0	2	4	101	0	0	105	198	
07:45:00	89	1	0	0	90	3	2	0	0	5	1	116	0	0	117	212	
08:00:00	85	2	0	0	87	2	4	0	0	6	4	65	0	0	69	162	
08:15:00	78	2	0	0	80	1	3	0	0	4	2	86	0	0	88	172	744
08:30:00	90	1	0	0	91	0	4	0	0	4	3	82	0	0	85	180	726
08:45:00	85	3	0	0	88	2	2	0	0	4	3	106	0	0	109	201	715
09:00:00	68	3	0	0	71	0	3	0	0	3	1	73	0	0	74	148	701
09:15:00	83	2	0	0	85	6	3	0	0	9	7	82	0	0	89	183	712
BREAK																	
16:00:00	111	1	0	1	112	2	2	0	1	4	3	121	0	0	124	240	
16:15:00	112	3	0	0	115	4	2	0	0	6	4	123	0	0	127	248	
16:30:00	112	4	0	0	116	4	3	0	0	7	6	134	0	0	140	263	
16:45:00	157	4	0	0	161	5	1	0	0	6	12	153	0	0	165	332	1083
17:00:00	113	10	0	1	123	23	37	0	0	60	14	118	0	0	132	315	1158
17:15:00	137	9	0	1	146	23	36	0	1	59	5	137	0	0	142	347	1257
17:30:00	105	5	0	0	110	5	1	0	0	6	13	135	0	0	148	264	1258
17:45:00	99	6	0	0	105	39	51	0	0	90	6	106	0	1	112	307	1233
Grand Total	1612	59	0	3	1671	119	156	0	2	275	88	1738	0	1	1826	**3772**	-
Approach%	96.5%	3.5%	0%		-	43.3%	56.7%	0%		-	4.8%	95.2%	0%		-	-	-
Totals %	42.7%	1.6%	0%		44.3%	3.2%	4.1%	0%		7.3%	2.3%	46.1%	0%		48.4%	-	-
Heavy	57	22	0		-	21	21	0		-	23	43	0		-	-	-
Heavy %	3.5%	37.3%	0%		-	17.6%	13.5%	0%		-	26.1%	2.5%	0%		-	-	-
Bicycles	1	0	0		-	0	0	0		-	0	0	0		-	-	-
Bicycle %	0.1%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	-	-

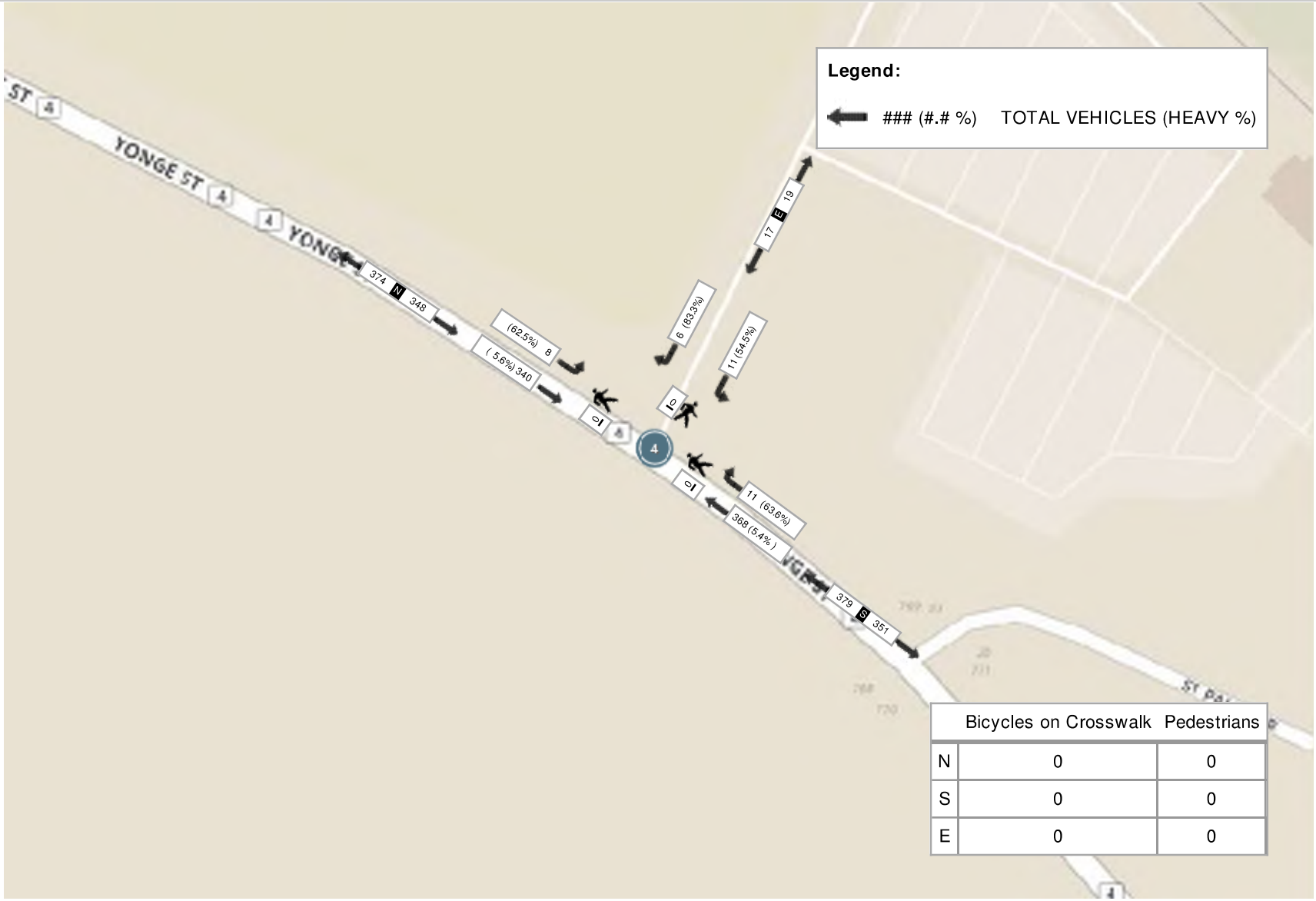
Peak Hour: 07:30 AM - 08:30 AM Weather: Scattered Clouds (10 °C)

Start Time	N Approach YONGE ST					E Approach BARRIE SOUTH GO ACCESS					S Approach YONGE ST					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
07:30:00	88	3	0	0	91	0	2	0	0	2	4	101	0	0	105	198
07:45:00	89	1	0	0	90	3	2	0	0	5	1	116	0	0	117	212
08:00:00	85	2	0	0	87	2	4	0	0	6	4	65	0	0	69	162
08:15:00	78	2	0	0	80	1	3	0	0	4	2	86	0	0	88	172
Grand Total	340	8	0	0	348	6	11	0	0	17	11	368	0	0	379	**744**
Approach%	97.7%	2.3%	0%		-	35.3%	64.7%	0%		-	2.9%	97.1%	0%		-	-
Totals %	45.7%	1.1%	0%		46.8%	0.8%	1.5%	0%		2.3%	1.5%	49.5%	0%		50.9%	-
PHF	0.96	0.67	0		0.96	0.5	0.69	0		0.71	0.69	0.79	0		0.81	-
Heavy	19	5	0		24	5	6	0		11	7	20	0		27	-
Heavy %	5.6%	62.5%	0%		6.9%	83.3%	54.5%	0%		64.7%	63.6%	5.4%	0%		7.1%	-
Lights	321	3	0		324	1	5	0		6	4	348	0		352	-
Lights %	94.4%	37.5%	0%		93.1%	16.7%	45.5%	0%		35.3%	36.4%	94.6%	0%		92.9%	-
Single-Unit Trucks	4	0	0		4	0	0	0		0	1	9	0		10	-
Single-Unit Trucks %	1.2%	0%	0%		1.1%	0%	0%	0%		0%	9.1%	2.4%	0%		2.6%	-
Buses	10	5	0		15	5	5	0		10	6	11	0		17	-
Buses %	2.9%	62.5%	0%		4.3%	83.3%	45.5%	0%		58.8%	54.5%	3%	0%		4.5%	-
Articulated Trucks	5	0	0		5	0	1	0		1	0	0	0		0	-
Articulated Trucks %	1.5%	0%	0%		1.4%	0%	9.1%	0%		5.9%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast (14 °C)

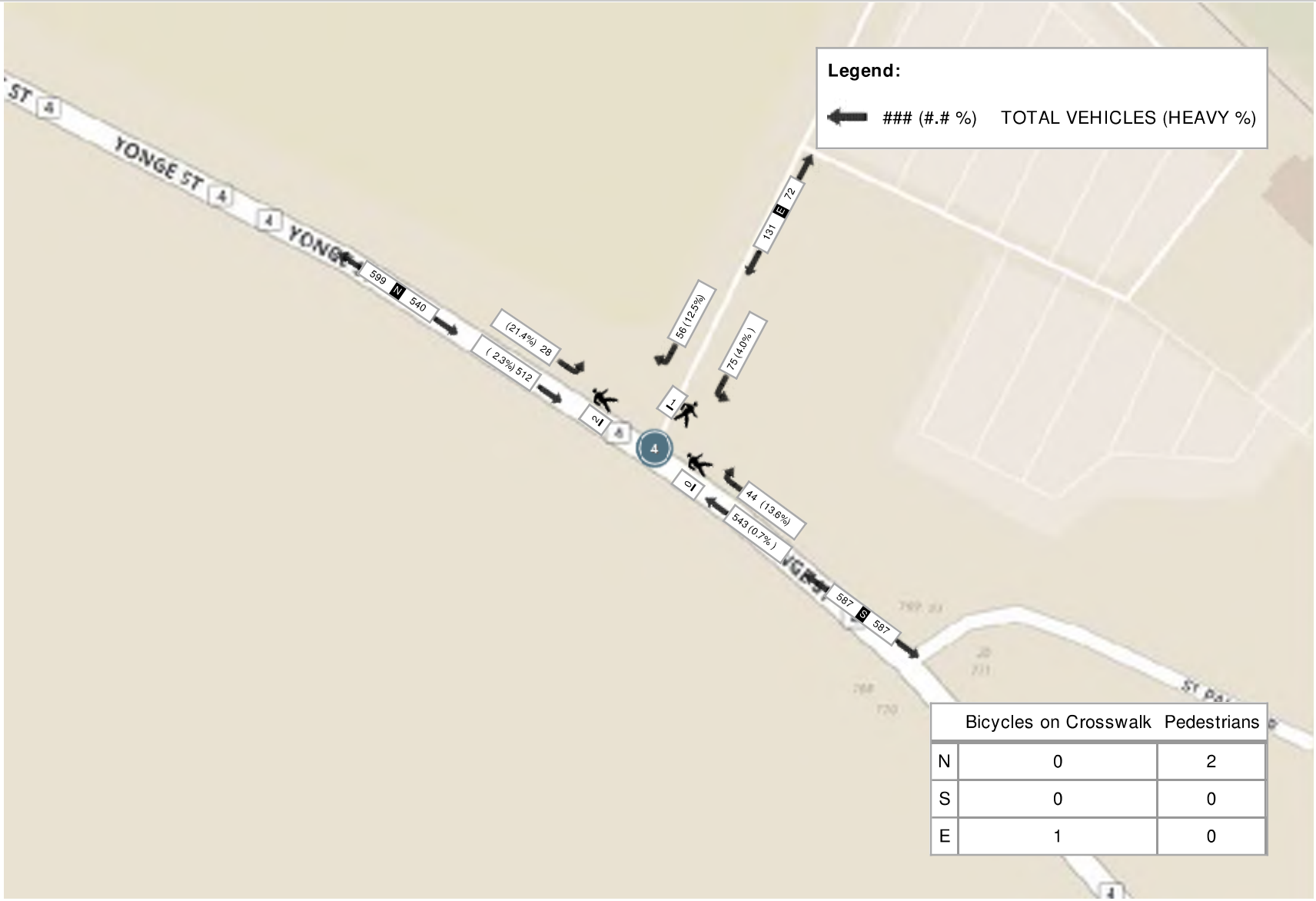
Start Time	N Approach YONGE ST					E Approach BARRIE SOUTH GO ACCESS					S Approach YONGE ST					Int. Total (15 min)
	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	Right	Thru	U-Turn	Peds	Approach Total	
16:45:00	157	4	0	0	161	5	1	0	0	6	12	153	0	0	165	332
17:00:00	113	10	0	1	123	23	37	0	0	60	14	118	0	0	132	315
17:15:00	137	9	0	1	146	23	36	0	1	59	5	137	0	0	142	347
17:30:00	105	5	0	0	110	5	1	0	0	6	13	135	0	0	148	264
Grand Total	512	28	0	2	540	56	75	0	1	131	44	543	0	0	587	**1258**
Approach%	94.8%	5.2%	0%		-	42.7%	57.3%	0%		-	7.5%	92.5%	0%		-	-
Totals %	40.7%	2.2%	0%		42.9%	4.5%	6%	0%		10.4%	3.5%	43.2%	0%		46.7%	-
PHF	0.82	0.7	0		0.84	0.61	0.51	0		0.55	0.79	0.89	0		0.89	-
Heavy	12	6	0		18	7	3	0		10	6	4	0		10	-
Heavy %	2.3%	21.4%	0%		3.3%	12.5%	4%	0%		7.6%	13.6%	0.7%	0%		1.7%	-
Lights	500	22	0		522	49	72	0		121	38	539	0		577	-
Lights %	97.7%	78.6%	0%		96.7%	87.5%	96%	0%		92.4%	86.4%	99.3%	0%		98.3%	-
Single-Unit Trucks	11	0	0		11	0	0	0		0	0	3	0		3	-
Single-Unit Trucks %	2.1%	0%	0%		2%	0%	0%	0%		0%	0%	0.6%	0%		0.5%	-
Buses	0	5	0		5	6	3	0		9	6	1	0		7	-
Buses %	0%	17.9%	0%		0.9%	10.7%	4%	0%		6.9%	13.6%	0.2%	0%		1.2%	-
Articulated Trucks	1	1	0		2	1	0	0		1	0	0	0		0	-
Articulated Trucks %	0.2%	3.6%	0%		0.4%	1.8%	0%	0%		0.8%	0%	0%	0%		0%	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	66.7%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	33.3%		-	-	-	0%		-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:30 AM - 08:30 AM Weather: Scattered Clouds (10 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	0	0

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast (14 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	2
S	0	0
E	1	0

Appendix K:
Synchro Output Sheets

Queues
1: Hurontario Street & Fairview Road West/Fairview Road East

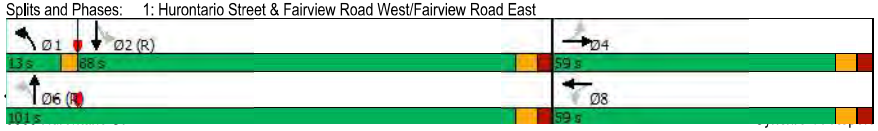
Existing AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	205	75	60	1140	35	1880
Future Volume (vph)	105	100	205	75	60	1140	35	1880
Lane Group Flow (vph)	121	305	236	161	69	1540	40	2218
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases		4		8	1	6		2
Permitted Phases	4		8		6		2	
Detector Phase	4	4	8	8	1	6	2	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	8.0	29.0	29.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	101.0	88.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	63.1%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	2.0	6.0	6.0	6.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.32	0.52	0.96	0.27	0.48	0.55	0.35	0.87
Control Delay	42.2	37.9	98.6	32.8	29.5	36.0	33.5	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	37.9	98.6	32.8	29.5	36.0	33.5	38.9
Queue Length 50th (m)	30.5	68.3	~79.6	32.4	16.7	168.2	7.6	225.9
Queue Length 95th (m)	48.3	96.2	#133.3	50.9	23.7	171.8	18.7	238.0
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	381	586	246	591	163	2872	117	2598
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.52	0.96	0.27	0.42	0.54	0.34	0.85

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Fairview Road West/Fairview Road East

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	165	205	75	65	60	1140	200	35	1880	50
Future Volume (vph)	105	100	165	205	75	65	60	1140	200	35	1880	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		2.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.95		1.00	0.98		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.91		1.00	0.93		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1729	1584		1622	1649		1700	4810		1675	5033	
Flt Permitted	0.60	1.00		0.42	1.00		0.05	1.00		0.13	1.00	
Satd. Flow (perm)	1100	1584		710	1649		86	4810		228	5033	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	190	236	86	75	69	1310	230	40	2161	57
RTOR Reduction (vph)	0	37	0	0	19	0	0	16	0	0	1	0
Lane Group Flow (vph)	121	268	0	236	142	0	69	1524	0	40	2217	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	54.5	54.5		54.5	54.5		91.5	91.5		80.4	80.4	
Effective Green, g (s)	55.5	55.5		55.5	55.5		92.5	92.5		81.4	81.4	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.58	0.58		0.51	0.51	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	381	549		246	571		141	2780		115	2560	
v/s Ratio Prot		0.17			0.09		0.03	c0.32			c0.44	
v/s Ratio Perm	0.11			c0.33			0.25			0.18		
v/c Ratio	0.32	0.49		0.96	0.25		0.49	0.55		0.35	0.87	
Uniform Delay, d1	38.4	41.1		51.1	37.3		29.6	20.8		23.5	34.5	
Progression Factor	1.00	1.00		1.00	1.00		0.98	1.74		1.00	1.00	
Incremental Delay, d2	0.5	0.7		45.5	0.2		2.5	0.7		8.1	4.2	
Delay (s)	38.8	41.8		96.7	37.6		31.4	37.1		31.6	38.7	
Level of Service	D	D		F	D		C	D		C	D	
Approach Delay (s)		40.9			72.7			36.9			38.6	
Approach LOS		D			E			D			D	

Intersection Summary

HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
2: Hurontario Street & John Street

Existing AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	100	10	10	30	215	1100	80	1530	295
Future Volume (vph)	100	10	10	30	215	1100	80	1530	295
Lane Group Flow (vph)	106	38	11	154	229	1186	85	1628	314
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4		6		2		2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	8.0	38.0	8.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	0.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	2.0	6.0	2.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.35	0.08	0.05	0.42	0.72	0.41	0.28	0.63	0.49
Control Delay	43.4	16.5	48.3	18.8	65.1	4.7	7.2	20.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	43.4	16.5	48.3	18.8	65.1	4.8	7.2	20.3	7.8
Queue Length 50th (m)	24.1	2.5	2.9	10.8	38.7	11.1	3.9	188.5	38.2
Queue Length 95th (m)	39.2	11.5	8.7	31.8	#86.4	49.0	m5.1	m197.5	m52.3
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	305	581	297	482	320	2909	392	2627	650
Starvation Cap Reductn	0	0	0	0	0	541	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.07	0.04	0.32	0.72	0.50	0.22	0.62	0.48

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street

HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	25	10	30	115	215	1100	15	80	1530	295
Future Volume (vph)	100	10	25	10	30	115	215	1100	15	80	1530	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		2.0	6.0		2.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1632	1672		1584	1627		1785	4925		1672	4948	1109
Flt Permitted	0.49	1.00		0.73	1.00		0.09	1.00		0.22	1.00	1.00
Satd. Flow (perm)	842	1672		1221	1627		160	4925		380	4948	1109
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	106	11	27	11	32	122	229	1170	16	85	1628	314
RTOR Reduction (vph)	0	20	0	0	94	0	0	1	0	0	0	63
Lane Group Flow (vph)	106	18	0	11	60	0	229	1185	0	85	1628	251
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	40.0	40.0		26.0	26.0		105.0	93.5		90.8	82.3	82.3
Effective Green, g (s)	41.0	41.0		27.0	27.0		106.0	94.5		92.8	83.3	83.3
Actuated g/C Ratio	0.26	0.26		0.17	0.17		0.66	0.59		0.58	0.52	0.52
Clearance Time (s)	3.0	8.0		8.0	8.0		3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	275	428		206	274		316	2908		297	2576	577
v/s Ratio Prot	c0.03	0.01			0.04		c0.09	0.24		0.02	c0.33	
v/s Ratio Perm	0.07			0.01			0.39			0.15		0.23
v/c Ratio	0.39	0.04		0.05	0.22		0.72	0.41		0.29	0.63	0.44
Uniform Delay, d1	47.5	44.7		55.8	57.4		33.9	17.7		14.9	27.4	23.8
Progression Factor	1.00	1.00		1.00	1.00		1.94	0.21		0.51	0.65	0.39
Incremental Delay, d2	0.9	0.0		0.1	0.4		7.2	0.4		0.3	0.6	1.2
Delay (s)	48.4	44.8		55.9	57.8		72.9	4.2		7.9	18.5	10.4
Level of Service	D	D		E	E		E	A		A	B	B
Approach Delay (s)		47.5			57.7			15.3			16.8	
Approach LOS		D			E			B			B	

Intersection Summary

HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	85	130	145	20	140	60	145	1180	30	1295	235
Future Volume (vph)	85	130	145	20	140	60	145	1180	30	1295	235
Lane Group Flow (vph)	88	134	149	21	144	62	149	1242	31	1335	242
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6	5	2	3
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	4	4	4	1	6	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0
Minimum Split (s)	8.0	56.0	56.0	56.0	56.0	56.0	8.0	51.5	8.0	51.5	8.0
Total Split (s)	21.0	85.0	85.0	64.0	64.0	64.0	13.0	62.0	13.0	62.0	21.0
Total Split (%)	13.1%	53.1%	53.1%	40.0%	40.0%	40.0%	8.1%	38.8%	8.1%	38.8%	13.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	0.0	4.0	4.0	4.0	4.0	4.0	0.0	3.5	0.0	3.5	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5	2.0	6.5	2.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	None
v/c Ratio	0.19	0.18	0.24	0.06	0.26	0.13	0.59	0.53	0.14	0.76	0.37
Control Delay	28.6	31.9	5.0	40.0	43.4	6.6	74.0	15.5	17.4	30.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2
Total Delay	28.6	31.9	5.0	40.0	43.4	6.6	74.0	15.5	17.4	31.0	2.0
Queue Length 50th (m)	17.8	29.2	0.0	5.0	36.5	0.0	38.2	39.7	2.2	50.0	0.0
Queue Length 95th (m)	29.3	43.9	14.6	12.5	56.5	9.4	64.2	48.3	m5.5	74.3	0.0
Internal Link Dist (m)		194.0			74.1			66.6		54.3	
Turn Bay Length (m)	50.0			50.0		10.0	75.0		65.0		
Base Capacity (vph)	495	936	729	408	651	556	253	2339	253	1746	711
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	154	118
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.14	0.20	0.05	0.22	0.11	0.59	0.53	0.12	0.84	0.41

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	130	145	20	140	60	145	1180	25	30	1295	235
Future Volume (vph)	85	130	145	20	140	60	145	1180	25	30	1295	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5		2.0	6.5	2.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.88	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.81
Flpb, ped/bikes	0.99	1.00	1.00	0.91	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1579	1921	1339	1622	1830	1432	1341	4961		1725	4948	1161
Flt Permitted	0.60	1.00	1.00	0.67	1.00	1.00	0.08	1.00		0.20	1.00	1.00
Satd. Flow (perm)	1005	1921	1339	1146	1830	1432	113	4961		360	4948	1161
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	134	149	21	144	62	149	1216	26	31	1335	242
RTOR Reduction (vph)	0	0	90	0	0	43	0	1	0	0	0	139
Lane Group Flow (vph)	88	134	59	21	144	19	149	1241	0	31	1335	103
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6		5	2	3
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	62.0	62.0	62.0	48.0	48.0	48.0	82.5	73.8		61.1	55.4	66.4
Effective Green, g (s)	63.0	63.0	63.0	49.0	49.0	49.0	83.5	74.8		63.1	56.4	68.4
Actuated g/C Ratio	0.39	0.39	0.39	0.31	0.31	0.31	0.52	0.47		0.39	0.35	0.43
Clearance Time (s)	3.0	8.0	8.0	8.0	8.0	8.0	3.0	7.5		3.0	7.5	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	438	756	527	350	560	438	251	2319		199	1744	496
v/s Ratio Prot	0.02	0.07			c0.08		c0.09	0.25		0.01	c0.27	c0.02
v/s Ratio Perm	0.06		0.04	0.02		0.01	0.22			0.05		0.07
v/c Ratio	0.20	0.18	0.11	0.06	0.26	0.04	0.59	0.54		0.16	0.77	0.21
Uniform Delay, d1	31.2	31.6	30.8	39.2	41.8	39.0	35.5	30.3		29.9	45.9	28.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.99	0.48		0.89	0.60	0.17
Incremental Delay, d2	0.2	0.1	0.1	0.1	0.2	0.0	3.1	0.7		0.3	2.6	0.2
Delay (s)	31.4	31.7	30.8	39.3	42.0	39.1	73.8	15.3		26.8	30.1	5.2
Level of Service	C	C	C	D	D	D	E	B		C	C	A
Approach Delay (s)		31.3			41.0			21.5			26.3	
Approach LOS		C			D			C			C	

Intersection Summary

HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.51				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.5		
Intersection Capacity Utilization	110.9%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Existing AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1350	5	0	1565
Future Volume (Veh/h)	0	0	1350	5	0	1565
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	1552	6	0	1799
Pedestrians	15					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.86	0.81			0.81	
vC, conflicting volume	2170	535			1573	
vC1, stage 1 conf vol	1570					
vC2, stage 2 conf vol	600					
vCu, unblocked vol	308	0			903	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	594	877			612	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	621	621	316	600	600	600
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	6	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.10	0.37	0.37	0.19	0.35	0.35	0.35
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	0.0	0.0			0.0		
Approach LOS	A						

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		33.6%	ICU Level of Service	A
Analysis Period (min)		15		

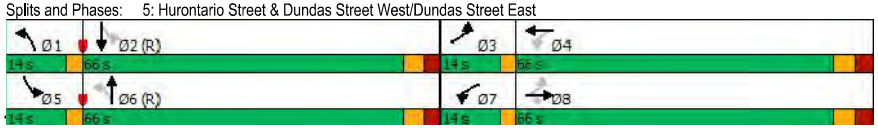
Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	145	1100	120	60	435	115	1090	150	1175
Future Volume (vph)	145	1100	120	60	435	115	1090	150	1175
Lane Group Flow (vph)	156	1183	129	65	656	124	1242	161	1344
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		7	4	1	6	5	2
Permitted Phases	8		8	4		6		2	
Detector Phase	3	8	8	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	45.5	45.5	8.0	45.5	8.0	41.0	8.0	41.0
Total Split (s)	14.0	66.0	66.0	14.0	66.0	14.0	66.0	14.0	66.0
Total Split (%)	8.8%	41.3%	41.3%	8.8%	41.3%	8.8%	41.3%	8.8%	41.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.5	3.5	0.0	3.5	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	2.0	6.5	2.0	6.0	2.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.50	0.90	0.21	0.40	0.61	0.63	0.63	0.71	0.67
Control Delay	30.0	57.9	16.7	49.6	71.3	38.4	41.7	69.0	77.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	57.9	16.7	49.6	71.3	38.4	41.7	69.0	77.4
Queue Length 50th (m)	29.0	192.8	13.1	19.2	113.0	22.6	130.6	49.8	168.3
Queue Length 95th (m)	44.1	228.5	29.8	31.3	134.0	38.8	143.9	m#68.1	180.2
Internal Link Dist (m)		110.1			216.1		99.4		99.2
Turn Bay Length (m)	35.0		25.0	25.0		40.0		65.0	
Base Capacity (vph)	314	1346	620	183	1176	205	2033	231	2049
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.88	0.21	0.36	0.56	0.60	0.61	0.70	0.66

Intersection Summary
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1100	120	60	435	175	115	1090	65	150	1175	75
Future Volume (vph)	145	1100	120	60	435	175	115	1090	65	150	1175	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	6.5	6.5	2.0	6.5		2.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.96		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1704	3544	1521	1767	3087		1683	4989		1716	4972	
Flt Permitted	0.26	1.00	1.00	0.07	1.00		0.10	1.00		0.12	1.00	
Satd. Flow (perm)	460	3544	1521	136	3087		183	4989		215	4972	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	156	1183	129	65	468	188	124	1172	70	161	1263	81
RTOR Reduction (vph)	0	0	43	0	28	0	0	4	0	0	4	0
Lane Group Flow (vph)	156	1183	86	65	628	0	124	1238	0	161	1340	0
Confl. Peds. (#/hr)	90					90	60		20	20		60
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	69.1	58.2	58.2	61.5	53.6		72.1	61.6		74.7	62.9	
Effective Green, g (s)	70.1	59.2	59.2	63.5	54.6		74.1	62.6		76.7	63.9	
Actuated g/C Ratio	0.44	0.37	0.37	0.40	0.34		0.46	0.39		0.48	0.40	
Clearance Time (s)	3.0	7.5	7.5	3.0	7.5		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	306	1311	562	144	1053		192	1951		223	1985	
v/s Ratio Prot	c0.04	c0.33		0.02	0.20		0.05	0.25		c0.06	c0.27	
v/s Ratio Perm	0.18		0.06	0.15			0.25			0.29		
v/c Ratio	0.51	0.90	0.15	0.45	0.60		0.65	0.63		0.72	0.67	
Uniform Delay, d1	29.5	47.7	33.7	36.5	43.6		29.0	39.4		28.2	39.5	
Progression Factor	1.00	1.00	1.00	1.89	1.69		1.00	1.00		2.37	1.88	
Incremental Delay, d2	1.3	8.9	0.1	2.2	0.9		7.3	1.6		9.1	1.5	
Delay (s)	30.8	56.5	33.8	71.2	74.7		36.3	41.0		75.9	75.7	
Level of Service	C	E	C	E	E		D	D		E	E	
Approach Delay (s)		51.8			74.3			40.6			75.8	
Approach LOS		D			E			D			E	

Intersection Summary				
HCM 2000 Control Delay	59.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	92.8%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Existing AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	260	10	5	155	0	5
Future Volume (Veh/h)	260	10	5	155	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	292	11	6	174	0	6
Pedestrians					30	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked			0.96		0.96	0.96
vC, conflicting volume			333		514	328
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		468	273
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1208		517	718

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	303	180	6
Volume Left	0	6	0
Volume Right	11	0	6
cSH	1700	1208	718
Volume to Capacity	0.18	0.00	0.01
Queue Length 95th (m)	0.0	0.1	0.2
Control Delay (s)	0.0	0.3	10.1
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	10.1
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	200	30	10	130	15	20	35	10	20	25	10
Future Volume (vph)	35	200	30	10	130	15	20	35	10	20	25	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	37	213	32	11	138	16	21	37	11	21	27	11

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	250	32	11	154	69	59
Volume Left (vph)	37	0	11	0	21	21
Volume Right (vph)	0	32	0	16	11	11
Hadj (s)	0.19	-0.51	0.65	0.04	0.06	0.10
Departure Headway (s)	5.2	4.5	5.8	5.2	5.1	5.2
Degree Utilization, x	0.36	0.04	0.02	0.22	0.10	0.08
Capacity (veh/h)	667	772	597	673	642	630
Control Delay (s)	9.9	6.5	7.7	8.4	8.7	8.7
Approach Delay (s)	9.5		8.4		8.7	8.7
Approach LOS	A		A		A	A

Intersection Summary					
Delay		9.0			
Level of Service		A			
Intersection Capacity Utilization	40.4%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1295	0	0	625	20	0	0	0	20	0	45
Future Volume (Veh/h)	20	1295	0	0	625	20	0	0	0	20	0	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	1363	0	0	658	21	0	0	0	21	0	47
Pedestrians					5			30			15	
Lane Width (m)					3.7			3.7			3.7	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.91			0.68			0.73	0.73	0.68	0.73	0.73	0.91
vC, conflicting volume	694			1393			1811	2129	716	1412	2118	354
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	466			642			805	1243	0	256	1229	93
tC, single (s)	4.3			4.1			7.5	6.5	6.9	7.8	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	98			100			100	100	100	95	100	94
cM capacity (veh/h)	920			632			177	120	721	438	123	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	21	909	454	439	240	0	68
Volume Left	21	0	0	0	0	0	21
Volume Right	0	0	0	0	21	0	47
cSH	920	1700	1700	1700	1700	1700	653
Volume to Capacity	0.02	0.53	0.27	0.26	0.14	0.08	0.10
Queue Length 95th (m)	0.6	0.0	0.0	0.0	0.0	0.0	2.8
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0	11.2
Lane LOS	A					A	B
Approach Delay (s)	0.1			0.0		0.0	11.2
Approach LOS						A	B

Intersection Summary					
Average Delay		0.4			
Intersection Capacity Utilization	47.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	20	1210	85	55	570	120	50	70	165	75	25
Future Volume (vph)	20	1210	85	55	570	120	50	70	165	75	25
Lane Group Flow (vph)	22	1315	92	60	620	130	54	152	0	261	27
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	custom	NA	Perm
Protected Phases		2			6			4		8	
Permitted Phases	2		2	6		6	4		3		8
Detector Phase	2	2	2	6	6	6	4	4	3	8	8
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	98.0	98.0	98.0	98.0	98.0	98.0	45.0	45.0	17.0	62.0	62.0
Total Split (%)	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	28.1%	28.1%	10.6%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag							Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.07	0.68	0.11	0.50	0.33	0.16	0.16	0.23		0.57	0.05
Control Delay	5.3	10.8	0.6	42.1	21.0	3.4	33.5	27.2		44.6	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	5.3	10.8	0.6	42.1	21.0	3.4	33.5	27.2		44.6	10.0
Queue Length 50th (m)	0.6	82.8	0.0	12.9	62.0	0.5	11.5	26.3		66.3	0.0
Queue Length 95th (m)	m1.6	240.3	m2.9	31.9	73.0	11.0	23.3	45.3		100.5	7.2
Internal Link Dist (m)		212.3			203.9			114.1		69.6	
Turn Bay Length (m)	25.0		40.0	25.0		40.0	40.0				
Base Capacity (vph)	346	2063	877	127	2005	876	332	671		469	562
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.06	0.64	0.10	0.47	0.31	0.15	0.16	0.23		0.56	0.05

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 38 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1210	85	55	570	120	50	70	70	165	75	25
Future Volume (vph)	20	1210	85	55	570	120	50	70	70	165	75	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00			1.00	0.96
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00			0.97	1.00
Satd. Flow (prot)	1534	3544	1474	1785	3444	1415	1722	1734			1775	1422
Flt Permitted	0.37	1.00	1.00	0.12	1.00	1.00	0.49	1.00			0.67	1.00
Satd. Flow (perm)	596	3544	1474	218	3444	1415	887	1734			1222	1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1315	92	60	620	130	54	76	76	179	82	27
RTOR Reduction (vph)	0	0	22	0	0	57	0	19	0	0	0	17
Lane Group Flow (vph)	22	1315	70	60	620	73	54	133	0	0	261	10
Confl. Peds. (#/hr)	15		5	5		15	20					20
Heavy Vehicles (%)	15%	3%	5%	0%	6%	7%	2%	4%	1%	4%	6%	8%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		custom	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			3		8
Actuated Green, G (s)	86.8	86.8	86.8	86.8	86.8	86.8	59.2	59.2			59.2	59.2
Effective Green, g (s)	87.8	87.8	87.8	87.8	87.8	87.8	60.2	60.2			60.2	60.2
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.55	0.55	0.38	0.38			0.38	0.38
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	327	1944	808	119	1889	776	333	652			459	535
v/s Ratio Prot		c0.37			0.18			0.08				
v/s Ratio Perm	0.04		0.05	0.28		0.05	0.06				c0.21	0.01
v/c Ratio	0.07	0.68	0.09	0.50	0.33	0.09	0.16	0.20			0.57	0.02
Uniform Delay, d1	16.9	25.9	17.1	22.5	19.9	17.2	33.1	33.7			39.6	31.3
Progression Factor	0.27	0.36	0.05	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	1.1	0.1	14.4	0.5	0.2	0.2	0.2			1.6	0.0
Delay (s)	4.8	10.5	1.0	37.0	20.3	17.4	33.4	33.9			41.2	31.4
Level of Service	A	B	A	D	C	B	C	C			D	C
Approach Delay (s)		9.8			21.1			33.7			40.3	
Approach LOS		A			C			C			D	

Intersection Summary

HCM 2000 Control Delay	18.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.65				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	89.4%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

Queues

1: Hurontario Street & Fairview Road West/Fairview Road East

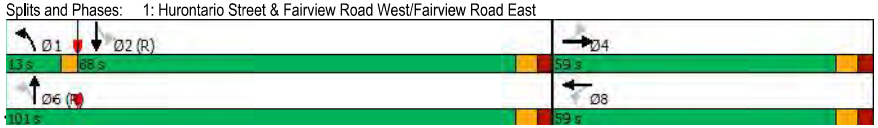
Existing PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	115	90	105	1715	50	1680
Future Volume (vph)	45	70	115	90	105	1715	50	1680
Lane Group Flow (vph)	47	137	121	158	111	2047	53	1879
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases		4		8	1	6		2
Permitted Phases	4		8		6		2	
Detector Phase	4	4	8	8	1	6	2	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	8.0	29.0	29.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	101.0	88.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	63.1%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	2.0	6.0	6.0	6.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
v/c Ratio	0.27	0.39	0.65	0.47	0.49	0.57	0.54	0.57
Control Delay	57.4	46.6	75.3	57.1	14.2	14.8	42.7	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	46.6	75.3	57.1	14.2	14.8	42.7	17.1
Queue Length 50th (m)	13.2	30.9	36.7	42.7	14.8	204.6	9.6	128.1
Queue Length 95th (m)	26.6	52.8	61.0	66.9	m13.2	211.4	#37.2	156.1
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	309	593	331	579	239	3619	99	3312
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.23	0.37	0.27	0.46	0.57	0.54	0.57

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



HCM Signalized Intersection Capacity Analysis

1: Hurontario Street & Fairview Road West/Fairview Road East

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	60	115	90	60	105	1715	230	50	1680	105
Future Volume (vph)	45	70	60	115	90	60	105	1715	230	50	1680	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		2.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1729	1732		1688	1725		1785	4901		1765	5057	
Flt Permitted	0.51	1.00		0.56	1.00		0.08	1.00		0.08	1.00	
Satd. Flow (perm)	936	1732		1003	1725		146	4901		150	5057	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	63	121	95	63	111	1805	242	53	1768	111
RTOR Reduction (vph)	0	24	0	0	10	0	0	7	0	0	3	0
Lane Group Flow (vph)	47	113	0	121	148	0	111	2040	0	53	1876	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		117.0	117.0		103.8	103.8	
Effective Green, g (s)	30.0	30.0		30.0	30.0		118.0	118.0		104.8	104.8	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.74	0.74		0.65	0.65	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	175	324		188	323		222	3614		98	3312	
v/s Ratio Prot		0.07			0.09		0.03	c0.42			0.37	
v/s Ratio Perm	0.05			c0.12			0.33			0.35		
v/c Ratio	0.27	0.35		0.64	0.46		0.50	0.56		0.54	0.57	
Uniform Delay, d1	55.6	56.5		60.1	57.8		12.2	9.4		14.7	15.1	
Progression Factor	1.00	1.00		1.00	1.00		0.85	1.41		1.00	1.00	
Incremental Delay, d2	0.8	0.7		7.3	1.0		1.6	0.6		19.7	0.7	
Delay (s)	56.4	57.2		67.4	58.8		11.9	13.9		34.5	15.8	
Level of Service	E	E		E	E		B	B		C	B	
Approach Delay (s)		57.0			62.5			13.8			16.4	
Approach LOS		E			E			B			B	

Intersection Summary

HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	94.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Queues
2: Hurontario Street & John Street

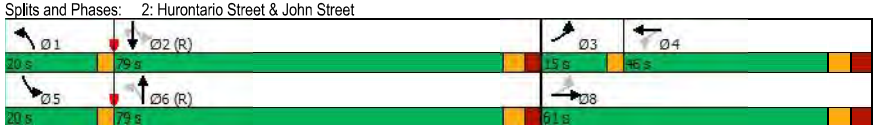
Existing PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	340	30	15	15	55	1320	100	1345	130
Future Volume (vph)	340	30	15	15	55	1320	100	1345	130
Lane Group Flow (vph)	362	117	16	165	59	1431	106	1431	138
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4		6		2		2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	8.0	38.0	8.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	0.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	2.0	6.0	2.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.74	0.20	0.08	0.43	0.28	0.59	0.48	0.56	0.23
Control Delay	46.4	10.1	49.5	12.7	15.2	18.6	16.3	23.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	46.4	10.1	49.5	12.7	15.2	18.6	16.3	23.9	8.9
Queue Length 50th (m)	78.5	6.0	4.2	4.1	4.2	90.4	14.8	150.6	20.7
Queue Length 95th (m)	116.2	20.2	11.2	24.9	m7.6	143.0	21.2	171.7	38.1
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	486	631	284	490	303	2610	291	2696	627
Starvation Cap Reductn	0	0	0	0	0	151	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.19	0.06	0.34	0.19	0.58	0.36	0.53	0.22

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street



HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	30	80	15	15	140	55	1320	25	100	1345	130
Future Volume (vph)	340	30	80	15	15	140	55	1320	25	100	1345	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		2.0	6.0		2.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1683	1465		1627	1550		1783	5110		1784	5142	1129
Flt Permitted	0.46	1.00		0.68	1.00		0.12	1.00		0.10	1.00	1.00
Satd. Flow (perm)	820	1465		1168	1550		222	5110		197	5142	1129
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	362	32	85	16	16	149	59	1404	27	106	1431	138
RTOR Reduction (vph)	0	54	0	0	124	0	0	1	0	0	0	38
Lane Group Flow (vph)	362	63	0	16	41	0	59	1430	0	106	1431	100
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	57.6	57.6		26.0	26.0		81.1	74.3		87.4	77.6	77.6
Effective Green, g (s)	58.6	58.6		27.0	27.0		83.1	75.3		88.4	78.6	78.6
Actuated g/C Ratio	0.37	0.37		0.17	0.17		0.52	0.47		0.55	0.49	0.49
Clearance Time (s)	3.0	8.0		8.0	8.0		3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	459	536		197	261		191	2404		218	2526	554
v/s Ratio Prot	c0.15	0.04			0.03		0.02	c0.28		c0.03	0.28	
v/s Ratio Perm	0.14			0.01			0.14			0.23		0.09
v/c Ratio	0.79	0.12		0.08	0.16		0.31	0.59		0.49	0.57	0.18
Uniform Delay, d1	41.3	33.6		56.0	56.8		21.3	31.1		21.4	28.7	22.7
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.52		0.57	0.74	0.60
Incremental Delay, d2	8.7	0.1		0.2	0.3		0.8	1.0		1.4	0.8	0.6
Delay (s)	50.0	33.7		56.2	57.1		15.2	17.2		13.6	22.0	14.2
Level of Service	D	C		E	E		B	B		B	C	B
Approach Delay (s)		46.0			57.0			17.1			20.9	
Approach LOS		D			E			B			C	

Intersection Summary

HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	96.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	205	150	340	30	260	90	125	1100	65	1260	105
Future Volume (vph)	205	150	340	30	260	90	125	1100	65	1260	105
Lane Group Flow (vph)	207	152	343	30	263	91	126	1146	66	1273	106
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6	5	2	3
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	4	4	4	1	6	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0
Minimum Split (s)	8.0	56.0	56.0	56.0	56.0	56.0	8.0	51.5	8.0	51.5	8.0
Total Split (s)	21.0	85.0	85.0	64.0	64.0	64.0	13.0	62.0	13.0	62.0	21.0
Total Split (%)	13.1%	53.1%	53.1%	40.0%	40.0%	40.0%	8.1%	38.8%	8.1%	38.8%	13.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	0.0	4.0	4.0	4.0	4.0	4.0	0.0	3.5	0.0	3.5	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5	2.0	6.5	2.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	None
v/c Ratio	0.45	0.19	0.46	0.08	0.45	0.18	0.54	0.56	0.28	0.64	0.14
Control Delay	29.5	28.6	17.1	40.5	47.6	13.1	48.1	20.0	12.7	19.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0
Total Delay	29.5	28.6	17.1	40.5	47.6	13.1	48.1	20.1	12.7	19.8	1.0
Queue Length 50th (m)	41.6	31.1	38.7	7.2	71.2	4.5	21.9	51.0	3.2	27.7	0.0
Queue Length 95th (m)	60.4	47.2	67.0	16.3	100.3	19.0	m38.8	51.3	0.0	34.7	0.2
Internal Link Dist (m)		194.0			74.1			66.6		54.3	
Turn Bay Length (m)	50.0			50.0		10.0	75.0		65.0		
Base Capacity (vph)	470	927	826	427	684	569	236	2064	250	1978	789
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	150	0
Spillback Cap Reductn	0	0	0	0	0	1	0	121	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.16	0.42	0.07	0.38	0.16	0.53	0.59	0.26	0.70	0.13

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	150	340	30	260	90	125	1100	35	65	1260	105
Future Volume (vph)	205	150	340	30	260	90	125	1100	35	65	1260	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5		2.0	6.5	2.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.99	1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1712	1902	1515	1727	1921	1469	1748	5001		1762	5092	1380
Flt Permitted	0.43	1.00	1.00	0.66	1.00	1.00	0.11	1.00		0.17	1.00	1.00
Satd. Flow (perm)	781	1902	1515	1201	1921	1469	204	5001		309	5092	1380
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	152	343	30	263	91	126	1111	35	66	1273	106
RTOR Reduction (vph)	0	0	98	0	0	50	0	2	0	0	0	53
Lane Group Flow (vph)	207	152	245	30	263	41	126	1144	0	66	1273	53
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6		5	2	3
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	67.9	67.9	67.9	48.0	48.0	48.0	76.6	65.1		69.7	61.2	78.1
Effective Green, g (s)	68.9	68.9	68.9	49.0	49.0	49.0	77.6	66.1		71.7	62.2	80.1
Actuated g/C Ratio	0.43	0.43	0.43	0.31	0.31	0.31	0.48	0.41		0.45	0.39	0.50
Clearance Time (s)	3.0	8.0	8.0	8.0	8.0	8.0	3.0	7.5		3.0	7.5	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	440	819	652	367	588	449	228	2066		224	1979	690
v/s Ratio Prot	c0.05	0.08			c0.14		c0.05	0.23		0.02	c0.25	0.01
v/s Ratio Perm	0.15		0.16	0.02		0.03	0.22			0.11		0.03
v/c Ratio	0.47	0.19	0.38	0.08	0.45	0.09	0.55	0.55		0.29	0.64	0.08
Uniform Delay, d1	30.3	28.2	30.9	39.5	44.6	39.6	27.0	35.7		26.5	39.9	20.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.97	0.53		0.49	0.45	0.21
Incremental Delay, d2	0.8	0.1	0.4	0.1	0.5	0.1	2.2	0.8		0.6	1.4	0.0
Delay (s)	31.1	28.3	31.3	39.6	45.2	39.7	55.3	19.7		13.5	19.2	4.3
Level of Service	C	C	C	D	D	D	E	B		B	B	A
Approach Delay (s)		30.6			43.4			23.2			17.9	
Approach LOS		C			D			C			B	

Intersection Summary

HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.5	
Intersection Capacity Utilization	107.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Existing PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	45	1215	35	15	1675
Future Volume (Veh/h)	15	45	1215	35	15	1675
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	47	1279	37	16	1763
Pedestrians	60					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	5					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.88	0.84			0.84	
vC, conflicting volume	1977	505			1376	
vC1, stage 1 conf vol	1358					
vC2, stage 2 conf vol	620					
vCu, unblocked vol	416	0			799	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.3	
p0 queue free %	95	95			97	
cM capacity (veh/h)	351	871			633	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	512	512	293	369	705	705
Volume Left	16	0	0	0	16	0	0
Volume Right	47	0	0	37	0	0	0
cSH	633	1700	1700	1700	633	1700	1700
Volume to Capacity	0.10	0.30	0.30	0.17	0.03	0.41	0.41
Queue Length 95th (m)	2.6	0.0	0.0	0.0	0.6	0.0	0.0
Control Delay (s)	11.3	0.0	0.0	0.0	0.8	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	11.3	0.0			0.2		
Approach LOS	B						

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		53.0%	ICU Level of Service	A
Analysis Period (min)		15		

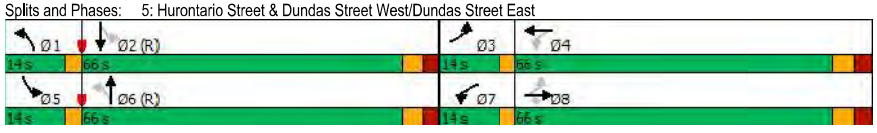
Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	165	725	125	120	915	145	980	170	1200
Future Volume (vph)	165	725	125	120	915	145	980	170	1200
Lane Group Flow (vph)	172	755	130	125	1135	151	1156	177	1479
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		7	4	1	6	5	2
Permitted Phases	8		8	4		6		2	
Detector Phase	3	8	8	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	45.5	45.5	8.0	45.5	8.0	41.0	8.0	41.0
Total Split (s)	14.0	66.0	66.0	14.0	66.0	14.0	66.0	14.0	66.0
Total Split (%)	8.8%	41.3%	41.3%	8.8%	41.3%	8.8%	41.3%	8.8%	41.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.5	3.5	0.0	3.5	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	2.0	6.5	2.0	6.0	2.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.82	0.56	0.20	0.41	0.91	0.82	0.62	0.75	0.80
Control Delay	66.0	41.4	16.9	37.8	76.9	67.6	42.3	70.6	70.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	41.4	16.9	37.8	76.9	67.6	42.3	70.6	70.6
Queue Length 50th (m)	38.2	102.4	13.1	25.9	163.7	34.0	116.9	49.5	162.5
Queue Length 95th (m)	#90.0	127.4	29.9	47.7	204.4	#74.3	129.4	#85.4	191.7
Internal Link Dist (m)		110.1			216.1		99.4		99.2
Turn Bay Length (m)	35.0		25.0	25.0		40.0		65.0	
Base Capacity (vph)	211	1357	642	311	1292	186	1932	236	1918
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.56	0.20	0.40	0.88	0.81	0.60	0.75	0.77

Intersection Summary
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	725	125	120	915	175	145	980	130	170	1200	220
Future Volume (vph)	165	725	125	120	915	175	145	980	130	170	1200	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	6.5	6.5	2.0	6.5		2.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	3579	1581	1767	3448		1750	5032		1766	4983	
Flt Permitted	0.07	1.00	1.00	0.24	1.00		0.07	1.00		0.14	1.00	
Satd. Flow (perm)	127	3579	1581	456	3448		124	5032		251	4983	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	172	755	130	125	953	182	151	1021	135	177	1250	229
RTOR Reduction (vph)	0	0	42	0	10	0	0	11	0	0	16	0
Lane Group Flow (vph)	172	755	88	125	1125	0	151	1145	0	177	1463	0
Confl. Peds. (#/hr)	70					70	80		30	30		80
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	72.7	59.2	59.2	66.9	56.3		69.8	58.3		69.6	58.2	
Effective Green, g (s)	73.8	60.2	60.2	68.9	57.3		71.8	59.3		71.6	59.2	
Actuated g/C Ratio	0.46	0.38	0.38	0.43	0.36		0.45	0.37		0.45	0.37	
Clearance Time (s)	3.0	7.5	7.5	3.0	7.5		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	1346	594	291	1234		182	1864		229	1843	
v/s Ratio Prot	c0.07	0.21		0.03	c0.33		c0.06	0.23		0.06	c0.29	
v/s Ratio Perm	0.31		0.06	0.15			0.31			0.28		
v/c Ratio	0.83	0.56	0.15	0.43	0.91		0.83	0.61		0.77	0.79	
Uniform Delay, d1	44.3	39.5	33.0	29.3	48.9		40.6	41.0		30.4	45.0	
Progression Factor	1.00	1.00	1.00	1.51	1.38		1.00	1.00		2.20	1.51	
Incremental Delay, d2	22.8	0.5	0.1	0.9	9.6		25.7	1.5		12.9	3.1	
Delay (s)	67.1	40.0	33.1	45.1	76.8		66.3	42.6		79.8	71.1	
Level of Service	E	D	C	D	E		E	D		E	E	
Approach Delay (s)		43.6			73.7			45.3			72.0	
Approach LOS		D			E			D			E	

Intersection Summary				
HCM 2000 Control Delay	60.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	95.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Existing PM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	230	20	25	355	25	15
Future Volume (Veh/h)	230	20	25	355	25	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	258	22	28	399	28	17
Pedestrians	5				20	
Lane Width (m)	3.7				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			300		749	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			217		697	206
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		92	98
cM capacity (veh/h)			1256		367	773

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	280	427	45
Volume Left	0	28	28
Volume Right	22	0	17
cSH	1700	1256	458
Volume to Capacity	0.16	0.02	0.10
Queue Length 95th (m)	0.0	0.5	2.6
Control Delay (s)	0.0	0.7	13.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	13.7
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	170	40	20	290	30	60	40	20	30	40	30
Future Volume (vph)	35	170	40	20	290	30	60	40	20	30	40	30
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	191	45	22	326	34	67	45	22	34	45	34

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	230	45	22	360	134	113
Volume Left (vph)	39	0	22	0	67	34
Volume Right (vph)	0	45	0	34	22	34
Hadj (s)	0.08	-0.70	0.50	-0.07	0.05	-0.11
Departure Headway (s)	5.8	5.0	6.1	5.5	5.9	5.8
Degree Utilization, x	0.37	0.06	0.04	0.55	0.22	0.18
Capacity (veh/h)	586	675	562	630	543	551
Control Delay (s)	11.0	7.2	8.1	14.0	10.5	10.0
Approach Delay (s)	10.4		13.7		10.5	10.0
Approach LOS	B		B		B	B

Intersection Summary					
Delay	11.7				
Level of Service	B				
Intersection Capacity Utilization	50.8%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	960	10	25	1150	40	5	0	25	10	5	55
Future Volume (Veh/h)	55	960	10	25	1150	40	5	0	25	10	5	55
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	58	1011	11	26	1211	42	5	0	26	11	5	58
Pedestrians		5			5			60			50	
Lane Width (m)		3.6			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			5			4	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.83			0.84			0.91	0.91	0.84	0.91	0.91	0.83
vC, conflicting volume	1303			1082			1916	2548	576	1986	2532	682
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	963			712			1018	1709	109	1096	1692	217
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			96			96	100	96	91	93	91
cM capacity (veh/h)	567			713			120	66	727	120	67	630

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	58	674	348	632	648	31	74
Volume Left	58	0	0	26	0	5	11
Volume Right	0	0	11	0	42	26	58
cSH	567	1700	1700	713	1700	401	287
Volume to Capacity	0.10	0.40	0.20	0.04	0.38	0.08	0.26
Queue Length 95th (m)	2.7	0.0	0.0	0.9	0.0	2.0	8.0
Control Delay (s)	12.1	0.0	0.0	1.0	0.0	14.7	21.9
Lane LOS	B			A		B	C
Approach Delay (s)	0.6			0.5		14.7	21.9
Approach LOS						B	C

Intersection Summary					
Average Delay	1.4				
Intersection Capacity Utilization	64.7%	ICU Level of Service		C	
Analysis Period (min)	15				

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	890	55	85	1090	330	85	95	145	70	40
Future Volume (vph)	50	890	55	85	1090	330	85	95	145	70	40
Lane Group Flow (vph)	51	908	56	87	1112	337	87	158	0	219	41
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	custom	NA	Perm
Protected Phases		2		1	6			4		8	
Permitted Phases	2		2	6		6	4		3		8
Detector Phase	2	2	2	1	6	6	4	4	3	8	8
Switch Phase											
Minimum Initial (s)	8.0	8.0	8.0	5.0	8.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	44.0	9.5	44.0	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	85.0	85.0	85.0	17.0	102.0	102.0	45.0	45.0	13.0	58.0	58.0
Total Split (%)	53.1%	53.1%	53.1%	10.6%	63.8%	63.8%	28.1%	28.1%	8.1%	36.3%	36.3%
Yellow Time (s)	3.5	3.5	3.5	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	3.5	0.0	3.5	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	2.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	C-Min	None	C-Max	C-Max	None	None	None	None	None
v/c Ratio	0.21	0.44	0.06	0.23	0.48	0.32	0.36	0.31		0.65	0.09
Control Delay	11.5	9.8	0.1	12.1	16.6	6.6	48.6	39.5		59.0	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	11.5	9.8	0.1	12.1	16.6	6.6	48.6	39.5		59.0	7.8
Queue Length 50th (m)	3.2	30.8	0.0	10.2	102.0	19.0	22.8	35.6		63.1	0.0
Queue Length 95th (m)	m6.6	44.7	m0.0	18.9	128.0	39.2	39.3	54.6		91.2	7.9
Internal Link Dist (m)		212.3			203.9			114.1		69.6	
Turn Bay Length (m)	25.0		40.0	25.0		40.0	40.0				
Base Capacity (vph)	238	2045	894	420	2300	1053	248	534		388	535
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.21	0.44	0.06	0.21	0.48	0.32	0.35	0.30		0.56	0.08

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 26 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	890	55	85	1090	330	85	95	60	145	70	40
Future Volume (vph)	50	890	55	85	1090	330	85	95	60	145	70	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0	6.0	2.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.96	1.00	0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00			0.97	1.00
Satd. Flow (prot)	1743	3579	1514	1748	3579	1531	1678	1790			1852	1547
Flt Permitted	0.23	1.00	1.00	0.24	1.00	1.00	0.48	1.00			0.62	1.00
Satd. Flow (perm)	418	3579	1514	449	3579	1531	856	1790			1195	1547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	51	908	56	87	1112	337	87	97	61	148	71	41
RTOR Reduction (vph)	0	0	24	0	0	69	0	14	0	0	0	29
Lane Group Flow (vph)	51	908	32	87	1112	268	87	144	0	0	219	12
Confl. Peds. (#/hr)	10		15	15		10	15		5	5		15
Heavy Vehicles (%)	2%	2%	0%	2%	2%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		custom	NA	Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2		2	6		6	4			3		8
Actuated Green, G (s)	90.5	90.5	90.5	101.9	101.9	101.9	44.1	44.1			44.1	44.1
Effective Green, g (s)	91.5	91.5	91.5	102.9	102.9	102.9	45.1	45.1			45.1	45.1
Actuated g/C Ratio	0.57	0.57	0.57	0.64	0.64	0.64	0.28	0.28			0.28	0.28
Clearance Time (s)	7.0	7.0	7.0	3.0	7.0	7.0	7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	239	2046	865	365	2301	984	241	504			336	436
v/s Ratio Prot		0.25		0.01	c0.31			0.08				
v/s Ratio Perm	0.12		0.02	0.14		0.17	0.10				c0.18	0.01
v/c Ratio	0.21	0.44	0.04	0.24	0.48	0.27	0.36	0.29			0.65	0.03
Uniform Delay, d1	16.7	19.7	15.0	12.3	14.8	12.4	45.9	44.9			50.5	41.6
Progression Factor	0.48	0.44	0.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	1.7	0.6	0.1	0.3	0.7	0.7	0.9	0.3			4.5	0.0
Delay (s)	9.6	9.2	0.1	12.6	15.5	13.0	46.9	45.2			55.0	41.6
Level of Service	A	A	A	B	B	B	D	D			E	D
Approach Delay (s)		8.7			14.8			45.8			52.9	
Approach LOS		A			B			D			D	

Intersection Summary

HCM 2000 Control Delay	18.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.55				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		17.0	
Intersection Capacity Utilization	88.5%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

Queues

1: Hurontario Street & Fairview Road West/Fairview Road East

Future Background AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	220	75	65	1045	50	1475
Future Volume (vph)	105	100	220	75	65	1045	50	1475
Lane Group Flow (vph)	121	310	253	241	75	1448	57	1752
Turn Type	Perm	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases		4	3	8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	9.5	40.0	9.0	29.0	9.5	29.0
Total Split (s)	40.0	40.0	21.0	61.0	11.0	88.0	11.0	88.0
Total Split (%)	25.0%	25.0%	13.1%	38.1%	6.9%	55.0%	6.9%	55.0%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	0.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.55	0.88	0.95	0.42	0.83	0.81	0.67	0.97
Control Delay	67.0	76.9	84.3	32.3	113.5	41.9	109.6	51.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	76.9	84.3	32.3	113.5	41.9	109.6	51.6
Queue Length 50th (m)	36.2	86.1	63.6	45.5	24.8	259.2	19.1	295.7
Queue Length 95th (m)	57.4	#126.8	#108.5	68.5	m#52.4	248.0	#40.6	#322.6
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	235	373	266	583	90	1788	85	1814
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.83	0.95	0.41	0.83	0.81	0.67	0.97

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East

HCM Signalized Intersection Capacity Analysis

1: Hurontario Street & Fairview Road West/Fairview Road East

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	170	220	75	135	65	1045	215	50	1475	50
Future Volume (vph)	105	100	170	220	75	135	65	1045	215	50	1475	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		2.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.90		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1730	1581		1582	1577		1700	3320		1700	3492	
Flt Permitted	0.61	1.00		0.19	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1109	1581		316	1577		1700	3320		1700	3492	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	195	253	86	155	75	1201	247	57	1695	57
RTOR Reduction (vph)	0	38	0	0	41	0	0	10	0	0	1	0
Lane Group Flow (vph)	121	272	0	253	200	0	75	1438	0	57	1751	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases		4		3	8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.9	30.9		52.4	52.4		7.5	84.0		5.6	82.1	
Effective Green, g (s)	31.9	31.9		53.4	53.4		8.5	85.0		6.6	83.1	
Actuated g/C Ratio	0.20	0.20		0.33	0.33		0.05	0.53		0.04	0.52	
Clearance Time (s)	7.0	7.0		3.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	221	315		259	526		90	1763		70	1813	
v/s Ratio Prot		c0.17		c0.12	0.13		c0.04	0.43		0.03	c0.50	
v/s Ratio Perm	0.11			0.21								
v/c Ratio	0.55	0.86		0.98	0.38		0.83	0.82		0.81	0.97	
Uniform Delay, d1	57.6	61.9		45.3	40.7		75.0	31.0		76.1	37.1	
Progression Factor	1.00	1.00		1.00	1.00		0.83	1.22		1.00	1.00	
Incremental Delay, d2	2.8	20.8		49.0	0.5		41.7	3.8		49.3	14.4	
Delay (s)	60.3	82.7		94.2	41.1		103.6	41.5		125.4	51.5	
Level of Service	E	F		F	D		F	D		F	D	
Approach Delay (s)		76.4			68.3			44.6			53.8	
Approach LOS		E			E			D			D	

Intersection Summary

HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
2: Hurontario Street & John Street

Future Background AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	230	10	10	20	175	910	80	1145	300
Future Volume (vph)	230	10	10	20	175	910	80	1145	300
Lane Group Flow (vph)	245	144	11	143	186	984	85	1218	319
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	8	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	46.0	46.0	46.0	46.0	9.0	38.0	9.0	38.0	38.0
Total Split (s)	48.0	48.0	48.0	48.0	25.0	94.0	18.0	87.0	87.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.6%	58.8%	11.3%	54.4%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.86	0.27	0.04	0.27	0.81	0.53	0.62	0.71	0.51
Control Delay	82.6	9.4	42.2	11.3	104.0	14.8	93.2	21.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	82.6	9.4	42.2	11.3	104.0	15.0	93.2	21.0	6.3
Queue Length 50th (m)	75.6	2.6	2.6	5.0	61.0	77.7	28.2	161.6	16.6
Queue Length 95th (m)	#130.8	21.0	8.4	23.7	#95.1	83.0	m27.8	m188.7	m33.4
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	291	542	288	536	248	1937	157	1794	642
Starvation Cap Reductn	0	0	0	0	0	235	0	0	0
Spillback Cap Reductn	0	1	0	0	0	0	0	27	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.27	0.04	0.27	0.75	0.58	0.54	0.69	0.50

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street

HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	10	125	10	20	115	175	910	15	80	1145	300
Future Volume (vph)	230	10	125	10	20	115	175	910	15	80	1145	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.97	1.00		0.98	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1603	1599		1590	1605		1785	3424		1684	3444	1109
Flt Permitted	0.62	1.00		0.62	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1045	1599		1034	1605		1785	3424		1684	3444	1109
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	245	11	133	11	21	122	186	968	16	85	1218	319
RTOR Reduction (vph)	0	97	0	0	89	0	0	1	0	0	0	68
Lane Group Flow (vph)	245	47	0	11	54	0	186	983	0	85	1218	251
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	42.5	42.5		42.5	42.5		19.8	86.3		12.2	78.7	78.7
Effective Green, g (s)	43.5	43.5		43.5	43.5		20.8	87.3		13.2	79.7	79.7
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.13	0.55		0.08	0.50	0.50
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	284	434		281	436		232	1868		138	1715	552
v/s Ratio Prot		0.03			0.03		c0.10	0.29		0.05	c0.35	
v/s Ratio Perm	c0.23			0.01								0.23
v/c Ratio	0.86	0.11		0.04	0.12		0.80	0.53		0.62	0.71	0.45
Uniform Delay, d1	55.4	43.7		42.9	43.9		67.6	23.2		70.9	31.2	26.0
Progression Factor	1.00	1.00		1.00	1.00		1.20	0.58		1.22	0.62	0.34
Incremental Delay, d2	22.6	0.1		0.1	0.1		16.7	1.0		2.6	0.8	0.9
Delay (s)	78.0	43.8		42.9	44.0		97.8	14.3		89.5	20.2	9.7
Level of Service	E	D		D	D		F	B		F	C	A
Approach Delay (s)		65.4			43.9			27.6			21.8	
Approach LOS		E			D			C			C	

Intersection Summary

HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	98.0%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Background AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	120	20	140	215	870	35	995
Future Volume (vph)	85	120	20	140	215	870	35	995
Lane Group Flow (vph)	88	304	21	221	222	923	36	1284
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	56.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	56.0	56.0	56.0	56.0	29.0	94.0	10.0	75.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	18.1%	58.8%	6.3%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.29	0.29	0.08	0.21	0.95	0.48	0.48	0.95
Control Delay	45.4	17.4	40.5	29.5	124.5	12.7	103.4	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	17.4	40.5	29.5	124.5	12.7	103.4	30.1
Queue Length 50th (m)	22.5	15.8	5.0	20.2	~79.9	39.8	12.6	19.3
Queue Length 95th (m)	39.6	29.1	12.6	31.8	m#111.8	50.2	m19.3	#79.2
Internal Link Dist (m)		194.0		74.1		66.6		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	306	1043	279	1032	233	1928	76	1390
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	17	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.29	0.08	0.21	0.95	0.48	0.47	0.92

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	120	175	20	140	75	215	870	25	35	995	250
Future Volume (vph)	85	120	175	20	140	75	215	870	25	35	995	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	0.99	1.00		0.93	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1570	3001		1661	3226		1342	3445		1733	3215	
Flt Permitted	0.61	1.00		0.52	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1001	3001		913	3226		1342	3445		1733	3215	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	124	180	21	144	77	222	897	26	36	1026	258
RTOR Reduction (vph)	0	125	0	0	44	0	0	1	0	0	14	0
Lane Group Flow (vph)	88	179	0	21	177	0	222	922	0	36	1270	0
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	48.0	48.0		48.0	48.0		26.8	87.6		4.9	65.7	
Effective Green, g (s)	49.0	49.0		49.0	49.0		27.8	88.6		5.9	66.7	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.17	0.55		0.04	0.42	
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	306	919		279	987		233	1907		63	1340	
v/s Ratio Prot		0.06			0.05		c0.17	0.27		0.02	c0.40	
v/s Ratio Perm	c0.09			0.02								
v/c Ratio	0.29	0.19		0.08	0.18		0.95	0.48		0.57	0.95	
Uniform Delay, d1	42.2	40.9		39.4	40.7		65.5	21.8		75.8	45.0	
Progression Factor	1.00	1.00		1.00	1.00		1.43	0.56		1.16	0.39	
Incremental Delay, d2	0.5	0.1		0.1	0.1		33.9	0.5		9.3	12.3	
Delay (s)	42.7	41.1		39.5	40.8		127.8	12.7		97.4	29.9	
Level of Service	D	D		D	D		F	B		F	C	
Approach Delay (s)		41.4			40.7			35.0			31.8	
Approach LOS		D			D			C			C	

Intersection Summary

HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	115.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Future Background AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1110	5	0	1295
Future Volume (Veh/h)	0	0	1110	5	0	1295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	1276	6	0	1489
Pedestrians	15					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.74	0.78			0.78	
vC, conflicting volume	2038	656			1297	
vC1, stage 1 conf vol	1294					
vC2, stage 2 conf vol	744					
vCu, unblocked vol	347	0			814	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	412	840			632	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	851	431	744	744
Volume Left	0	0	0	0	0
Volume Right	0	0	6	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.50	0.25	0.44	0.44
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		39.1%	ICU Level of Service	A
Analysis Period (min)		15		

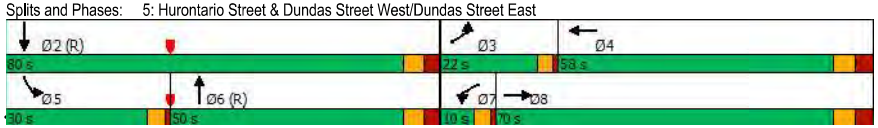
Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Background AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	185	1210	90	575	755	295	765
Future Volume (vph)	185	1210	90	575	755	295	765
Lane Group Flow (vph)	185	1365	90	805	855	295	930
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	22.0	70.0	10.0	58.0	50.0	30.0	80.0
Total Split (%)	13.8%	43.8%	6.3%	36.3%	31.3%	18.8%	50.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	5.5	2.0	5.5	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.84	0.97	0.85	0.75	0.90	0.94	0.59
Control Delay	98.3	64.1	123.3	61.5	68.7	85.7	53.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.3	64.1	123.3	61.5	68.7	85.7	53.3
Queue Length 50th (m)	61.4	233.3	31.8	107.0	143.5	103.3	159.4
Queue Length 95th (m)	#103.4	#285.5	#72.2	131.8	#172.9	m#128.5	m177.4
Internal Link Dist (m)		110.1		216.1	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	226	1407	106	1070	971	316	1588
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.97	0.85	0.75	0.88	0.93	0.59

Intersection Summary
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	1210	155	90	575	230	0	755	100	295	765	165
Future Volume (vph)	185	1210	155	90	575	230	0	755	100	295	765	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	5.5		2.0	5.5			5.0		2.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.96			1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96			0.98		1.00	0.97	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1807	3476		1860	3088			3432		1807	3364	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1807	3476		1860	3088			3432		1807	3364	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	185	1210	155	90	575	230	0	755	100	295	765	165
RTOR Reduction (vph)	0	6	0	0	26	0	0	7	0	0	12	0
Lane Group Flow (vph)	185	1359	0	90	779	0	0	848	0	295	918	0
Confl. Peds. (#/hr)	90					90	60		20	20		60
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	17.6	62.5		7.2	52.1			41.8		26.0	71.8	
Effective Green, g (s)	19.6	64.5		9.2	54.1			43.8		28.0	73.8	
Actuated g/C Ratio	0.12	0.40		0.06	0.34			0.27		0.18	0.46	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	221	1401		106	1044			939		316	1551	
v/s Ratio Prot	c0.10	c0.39		c0.05	0.25			c0.25		c0.16	0.27	
v/s Ratio Perm												
v/c Ratio	0.84	0.97		0.85	0.75			0.90		0.93	0.59	
Uniform Delay, d1	68.6	46.8		74.7	46.9			56.1		65.1	31.9	
Progression Factor	1.00	1.00		0.99	1.25			1.00		0.86	1.67	
Incremental Delay, d2	23.2	17.3		41.8	2.8			13.7		27.2	1.2	
Delay (s)	91.8	64.1		115.9	61.5			69.7		83.2	54.5	
Level of Service	F	E		F	E			E		F	D	
Approach Delay (s)		67.4			67.0			69.7			61.4	
Approach LOS		E			E			E			E	

Intersection Summary				
HCM 2000 Control Delay	66.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	103.5%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Future Background AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	245	10	5	170	0	5
Future Volume (Veh/h)	245	10	5	170	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	275	11	6	191	0	6
Pedestrians					30	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			316		514	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			247		456	241
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1227		519	740

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	286	197	6
Volume Left	0	6	0
Volume Right	11	0	6
cSH	1700	1227	740
Volume to Capacity	0.17	0.00	0.01
Queue Length 95th (m)	0.0	0.1	0.2
Control Delay (s)	0.0	0.3	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	0.3	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	190	25	10	145	15	20	35	10	20	25	10
Future Volume (vph)	35	190	25	10	145	15	20	35	10	20	25	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	37	202	27	11	154	16	21	37	11	21	27	11

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	239	27	11	170	69	59
Volume Left (vph)	37	0	11	0	21	21
Volume Right (vph)	0	27	0	16	11	11
Hadj (s)	0.19	-0.51	0.65	0.05	0.06	0.10
Departure Headway (s)	5.2	4.5	5.8	5.1	5.1	5.2
Degree Utilization, x	0.35	0.03	0.02	0.24	0.10	0.09
Capacity (veh/h)	664	769	599	675	641	629
Control Delay (s)	9.7	6.5	7.7	8.6	8.7	8.7
Approach Delay (s)	9.4		8.5		8.7	8.7
Approach LOS	A		A		A	A

Intersection Summary					
Delay	9.0				
Level of Service	A				
Intersection Capacity Utilization	40.7%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1495	70	20	725	20	80	5	35	20	5	45
Future Volume (Veh/h)	20	1495	70	20	725	20	80	5	35	20	5	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	1574	74	21	763	21	84	5	37	21	5	47
Pedestrians					5			30			15	
Lane Width (m)					3.7			3.7			3.7	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.87			0.63			0.69	0.69	0.63	0.69	0.69	0.87
vC, conflicting volume	799			1678			2156	2524	859	1704	2550	407
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	473			889			938	1470	0	283	1509	23
tC, single (s)	4.3			4.1			7.5	6.5	6.9	7.8	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	98			96			32	94	94	94	93	95
cM capacity (veh/h)	875			470			124	80	663	346	75	888

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	21	1049	599	402	402	126	73
Volume Left	21	0	0	21	0	84	21
Volume Right	0	0	74	0	21	37	47
cSH	875	1700	1700	470	1700	158	406
Volume to Capacity	0.02	0.62	0.35	0.04	0.24	0.80	0.18
Queue Length 95th (m)	0.6	0.0	0.0	1.1	0.0	41.2	5.2
Control Delay (s)	9.2	0.0	0.0	1.4	0.0	83.1	15.8
Lane LOS	A			A		F	C
Approach Delay (s)	0.1			0.7		83.1	15.8
Approach LOS						F	C

Intersection Summary					
Average Delay	4.6				
Intersection Capacity Utilization	64.0%	ICU Level of Service		B	
Analysis Period (min)	15				

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Background AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	1445	55	675	50	70	175	75	35
Future Volume (vph)	20	1445	55	675	50	70	175	75	35
Lane Group Flow (vph)	22	1663	60	870	54	152	0	272	38
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	custom	NA	Perm
Protected Phases		2	1	6		4		8	
Permitted Phases	2		6		4		3		8
Detector Phase	2	2	1	6	4	4	3	8	8
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	9.5	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	88.2	88.2	9.8	98.0	54.0	54.0	8.0	62.0	62.0
Total Split (%)	55.1%	55.1%	6.1%	61.3%	33.8%	33.8%	5.0%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	1.0	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	None	C-Min	Max	Max	Min	Min	Min
v/c Ratio	0.09	0.93	0.51	0.46	0.17	0.27		0.74	0.07
Control Delay	13.2	26.2	33.5	21.0	43.2	34.5		58.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	13.2	26.2	33.5	21.0	43.2	34.5		58.5	3.3
Queue Length 50th (m)	1.7	231.6	8.2	83.0	13.5	30.5		81.0	0.0
Queue Length 95th (m)	m2.2	m285.6	19.4	99.7	26.2	51.1		#127.3	4.2
Internal Link Dist (m)		212.3		203.9		114.1		69.6	
Turn Bay Length (m)	25.0		25.0		40.0				
Base Capacity (vph)	239	1803	117	1925	310	566		370	556
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.09	0.92	0.51	0.45	0.17	0.27		0.74	0.07

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Background AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1445	85	55	675	125	50	70	70	175	75	35
Future Volume (vph)	20	1445	85	55	675	125	50	70	70	175	75	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		3.5	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00			1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.98	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1539	3505		1785	3331		1720	1734			1775	1422
Flt Permitted	0.29	1.00		0.05	1.00		0.55	1.00			0.55	1.00
Satd. Flow (perm)	467	3505		89	3331		989	1734			1013	1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1571	92	60	734	136	54	76	76	190	82	38
RTOR Reduction (vph)	0	2	0	0	10	0	0	22	0	0	0	24
Lane Group Flow (vph)	22	1661	0	60	860	0	54	130	0	0	272	14
Confl. Peds. (#/hr)	15		5	5		15	20					20
Heavy Vehicles (%)	15%	3%	5%	0%	6%	7%	2%	4%	1%	4%	6%	8%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		custom	NA	Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2			6			4			3		8
Actuated Green, G (s)	79.9	79.9		88.6	88.6		49.2	49.2			57.4	57.4
Effective Green, g (s)	80.9	80.9		89.6	89.6		50.2	50.2			58.4	58.4
Actuated g/C Ratio	0.51	0.51		0.56	0.56		0.31	0.31			0.36	0.36
Clearance Time (s)	7.0	7.0		4.5	7.0		7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	236	1772		104	1865		310	544			369	519
v/s Ratio Prot		c0.47		c0.02	0.26			0.08				
v/s Ratio Perm	0.05			0.30			0.05				c0.27	0.01
v/c Ratio	0.09	0.94		0.58	0.46		0.17	0.24			0.74	0.03
Uniform Delay, d1	20.5	37.2		34.1	20.9		39.9	40.7			44.1	32.6
Progression Factor	0.63	0.56		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	6.0		7.5	0.8		1.2	1.0			7.5	0.0
Delay (s)	13.2	27.0		41.7	21.7		41.1	41.8			51.6	32.6
Level of Service	B	C		D	C		D	D			D	C
Approach Delay (s)		26.8			23.0			41.6			49.3	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	90.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Queues

1: Hurontario Street & Fairview Road West/Fairview Road East

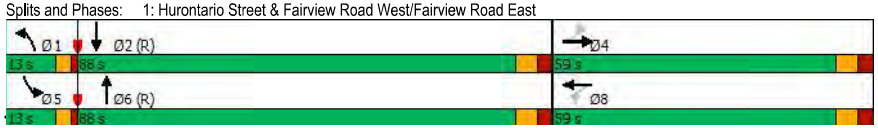
Future Background PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	125	90	110	1410	115	1395
Future Volume (vph)	45	70	125	90	110	1410	115	1395
Lane Group Flow (vph)	47	142	132	200	116	1747	121	1579
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	8	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	4.5	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	88.0	13.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	55.0%	8.1%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.31	0.40	0.73	0.57	0.52	0.89	0.51	0.77
Control Delay	58.7	45.5	82.5	52.6	67.1	44.4	73.0	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	45.5	82.5	52.6	67.1	44.4	73.0	29.3
Queue Length 50th (m)	13.4	31.8	41.0	48.9	32.0	309.4	38.6	210.0
Queue Length 95th (m)	26.4	53.1	66.0	74.8	m50.2	#355.7	60.5	263.5
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	257	591	309	576	222	1961	235	2058
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.24	0.43	0.35	0.52	0.89	0.51	0.77

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



HCM Signalized Intersection Capacity Analysis

1: Hurontario Street & Fairview Road West/Fairview Road East

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	65	125	90	100	110	1410	250	115	1395	105
Future Volume (vph)	45	70	65	125	90	100	110	1410	250	115	1395	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.92		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1735	1724		1594	1666		1785	3366		1785	3502	
Flt Permitted	0.43	1.00		0.56	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	777	1724		936	1666		1785	3366		1785	3502	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	68	132	95	105	116	1484	263	121	1468	111
RTOR Reduction (vph)	0	25	0	0	30	0	0	8	0	0	3	0
Lane Group Flow (vph)	47	117	0	132	170	0	116	1739	0	121	1576	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.0	30.0		30.0	30.0		19.0	91.9		20.1	93.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0		20.0	92.9		21.1	94.0	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.12	0.58		0.13	0.59	
Clearance Time (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	150	334		181	322		223	1954		235	2057	
v/s Ratio Prot		0.07			0.10		0.06	c0.52		c0.07	0.45	
v/s Ratio Perm	0.06			c0.14								
v/c Ratio	0.31	0.35		0.73	0.53		0.52	0.89		0.51	0.77	
Uniform Delay, d1	55.4	55.8		60.6	57.9		65.5	29.1		64.7	24.8	
Progression Factor	1.00	1.00		1.00	1.00		0.91	1.30		1.00	1.00	
Incremental Delay, d2	1.2	0.6		13.7	1.6		1.8	5.5		1.9	2.8	
Delay (s)	56.6	56.4		74.2	59.5		61.6	43.3		66.6	27.6	
Level of Service	E	E		E	E		E	D		E	C	
Approach Delay (s)		56.5			65.4			44.4			30.3	
Approach LOS		E			E			D			C	

Intersection Summary

HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
2: Hurontario Street & John Street

Future Background PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	400	20	15	10	75	985	100	1010	205
Future Volume (vph)	400	20	15	10	75	985	100	1010	205
Lane Group Flow (vph)	426	154	16	160	80	1075	106	1074	218
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	9.0	44.0	9.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.81	0.25	0.08	0.42	0.54	0.72	0.65	0.70	0.40
Control Delay	51.3	8.0	49.6	11.8	109.8	30.1	92.8	26.8	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	51.3	8.0	49.6	11.8	109.8	30.3	92.8	26.8	8.7
Queue Length 50th (m)	100.7	4.0	4.2	2.8	28.3	175.1	31.2	178.7	31.9
Queue Length 95th (m)	#199.2	21.3	11.2	23.0	47.8	185.7	m44.1	186.1	m37.7
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	525	617	275	487	189	1630	189	1658	574
Starvation Cap Reductn	0	0	0	0	0	96	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.25	0.06	0.33	0.42	0.70	0.56	0.65	0.38

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street

HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	400	20	125	15	10	140	75	985	25	100	1010	205
Future Volume (vph)	400	20	125	15	10	140	75	985	25	100	1010	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.95		1.00	0.93		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1682	1391		1631	1539		1785	3549		1785	3579	1129
Flt Permitted	0.48	1.00		0.66	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	841	1391		1131	1539		1785	3549		1785	3579	1129
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	426	21	133	16	11	149	80	1048	27	106	1074	218
RTOR Reduction (vph)	0	82	0	0	124	0	0	1	0	0	0	55
Lane Group Flow (vph)	426	72	0	16	36	0	80	1074	0	106	1074	163
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	60.7	60.7		26.0	26.0		12.2	66.6		13.7	68.1	68.1
Effective Green, g (s)	61.7	61.7		27.0	27.0		13.2	67.6		14.7	69.1	69.1
Actuated g/C Ratio	0.39	0.39		0.17	0.17		0.08	0.42		0.09	0.43	0.43
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	496	536		190	259		147	1499		163	1545	487
v/s Ratio Prot	c0.18	0.05			0.02		0.04	c0.30		c0.06	0.30	
v/s Ratio Perm	0.16			0.01								0.14
v/c Ratio	0.86	0.13		0.08	0.14		0.54	0.72		0.65	0.70	0.34
Uniform Delay, d1	40.9	31.9		56.1	56.6		70.5	38.3		70.2	36.9	30.2
Progression Factor	1.00	1.00		1.00	1.00		1.40	0.70		1.14	0.66	0.40
Incremental Delay, d2	13.8	0.1		0.2	0.2		3.6	2.6		6.2	1.8	1.3
Delay (s)	54.7	32.0		56.3	56.9		102.2	29.4		86.5	26.1	13.5
Level of Service	D	C		E	E		F	C		F	C	B
Approach Delay (s)		48.7			56.8			34.5			28.7	
Approach LOS		D			E			C			C	

Intersection Summary

HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

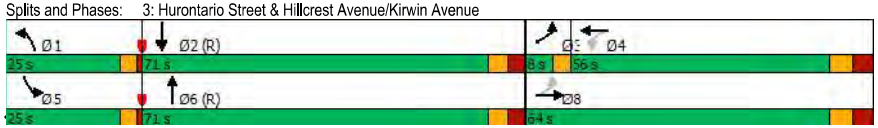
Future Background PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	205	140	30	250	235	780	80	920
Future Volume (vph)	205	140	30	250	235	780	80	920
Lane Group Flow (vph)	207	515	30	354	237	823	81	1081
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	3	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	8.0	64.0	56.0	56.0	25.0	71.0	25.0	71.0
Total Split (%)	5.0%	40.0%	35.0%	35.0%	15.6%	44.4%	15.6%	44.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.51	0.37	0.12	0.33	0.93	0.56	0.54	0.86
Control Delay	38.3	15.5	41.6	38.9	109.1	26.8	107.8	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.3
Total Delay	38.3	15.5	41.6	38.9	109.1	27.9	107.8	25.1
Queue Length 50th (m)	44.9	25.8	7.3	42.8	84.0	60.8	28.6	31.6
Queue Length 95th (m)	70.3	44.3	16.7	58.0	m#94.9	m59.7	m44.9	57.2
Internal Link Dist (m)		194.0		74.1		66.6		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	404	1392	260	1071	255	1468	242	1391
Starvation Cap Reductn	0	0	0	0	0	0	0	43
Spillback Cap Reductn	0	0	0	2	0	388	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.37	0.12	0.33	0.93	0.76	0.33	0.80

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	140	370	30	250	100	235	780	35	80	920	150
Future Volume (vph)	205	140	370	30	250	100	235	780	35	80	920	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1712	3123		1750	3413		1750	3469		1767	3430	
Flt Permitted	0.46	1.00		0.46	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	824	3123		851	3413		1750	3469		1767	3430	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	141	374	30	253	101	237	788	35	81	929	152
RTOR Reduction (vph)	0	178	0	0	27	0	0	2	0	0	9	0
Lane Group Flow (vph)	207	337	0	30	327	0	237	821	0	81	1072	0
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	61.2	61.2		48.0	48.0		22.3	66.6		12.7	57.0	
Effective Green, g (s)	62.2	62.2		49.0	49.0		23.3	67.6		13.7	58.0	
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.15	0.42		0.09	0.36	
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	1214		260	1045		254	1465		151	1243	
v/s Ratio Prot	c0.04	0.11			c0.10		c0.14	0.24		0.05	c0.31	
v/s Ratio Perm	0.17			0.04								
v/c Ratio	0.54	0.28		0.12	0.31		0.93	0.56		0.54	0.86	
Uniform Delay, d1	35.4	33.5		39.9	42.6		67.6	35.0		70.1	47.3	
Progression Factor	1.00	1.00		1.00	1.00		1.34	0.75		1.40	0.39	
Incremental Delay, d2	1.6	0.1		0.2	0.2		20.9	0.6		2.9	6.6	
Delay (s)	36.9	33.6		40.1	42.8		111.7	26.8		101.2	25.2	
Level of Service	D	C		D	D		F	C		F	C	
Approach Delay (s)		34.6			42.5			45.8			30.5	
Approach LOS		C			D			D			C	

Intersection Summary

HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	113.5%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Future Background PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	45	1005	35	15	1365
Future Volume (Veh/h)	15	45	1005	35	15	1365
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	47	1058	37	16	1437
Pedestrians	60					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	5					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.79	0.84			0.84	
vC, conflicting volume	1887	608			1155	
vC1, stage 1 conf vol	1136					
vC2, stage 2 conf vol	750					
vCu, unblocked vol	704	163			812	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.3	
p0 queue free %	95	93			97	
cM capacity (veh/h)	322	684			625	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	705	390	495	958
Volume Left	16	0	0	16	0
Volume Right	47	0	37	0	0
cSH	532	1700	1700	625	1700
Volume to Capacity	0.12	0.41	0.23	0.03	0.56
Queue Length 95th (m)	3.2	0.0	0.0	0.6	0.0
Control Delay (s)	12.7	0.0	0.0	0.7	0.0
Lane LOS	B			A	
Approach Delay (s)	12.7	0.0		0.2	
Approach LOS	B				

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

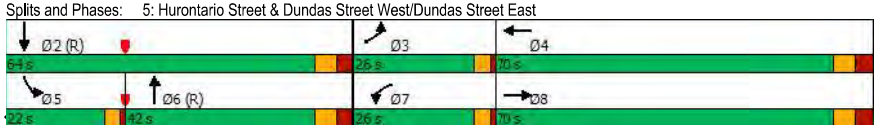
Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Background PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	265	890	140	1055	555	230	735
Future Volume (vph)	265	890	140	1055	555	230	735
Lane Group Flow (vph)	265	1050	140	1365	755	230	1030
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	26.0	70.0	26.0	70.0	42.0	22.0	64.0
Total Split (%)	16.3%	43.8%	16.3%	43.8%	26.3%	13.8%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	5.5	2.0	5.5	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.94	0.68	0.63	0.99	0.94	0.99	0.82
Control Delay	105.2	39.2	64.1	78.6	77.3	111.1	65.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	39.2	64.1	78.6	77.3	111.1	65.5
Queue Length 50th (m)	89.1	146.5	45.5	230.3	127.2	80.5	181.0
Queue Length 95th (m)	#147.1	182.2	m61.7	#284.4	#166.4	m#131.0	207.0
Internal Link Dist (m)		110.1		216.1	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	283	1533	279	1385	810	232	1261
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.68	0.50	0.99	0.93	0.99	0.82

Intersection Summary
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	890	160	140	1055	310	0	555	200	230	735	295
Future Volume (vph)	265	890	160	140	1055	310	0	555	200	230	735	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	5.5		2.0	5.5			5.0		2.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.99		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97			0.96		1.00	0.96	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1879	3502		1860	3394			3405		1860	3347	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1879	3502		1860	3394			3405		1860	3347	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	890	160	140	1055	310	0	555	200	230	735	295
RTOR Reduction (vph)	0	8	0	0	17	0	0	23	0	0	27	0
Lane Group Flow (vph)	265	1042	0	140	1348	0	0	732	0	230	1003	0
Confl. Peds. (#/hr)	70					70	80		30	30		80
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	22.2	67.7		17.0	62.5			34.8		18.0	56.8	
Effective Green, g (s)	24.2	69.7		19.0	64.5			36.8		20.0	58.8	
Actuated g/C Ratio	0.15	0.44		0.12	0.40			0.23		0.12	0.37	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	284	1525		220	1368			783		232	1230	
v/s Ratio Prot	c0.14	0.30		0.08	c0.40			c0.21		c0.12	0.30	
v/s Ratio Perm												
v/c Ratio	0.93	0.68		0.64	0.99			0.93		0.99	0.82	
Uniform Delay, d1	67.1	36.3		67.2	47.3			60.4		69.9	45.7	
Progression Factor	1.00	1.00		0.81	1.34			1.00		0.87	1.37	
Incremental Delay, d2	35.8	1.3		4.6	17.7			19.7		50.7	5.0	
Delay (s)	102.9	37.6		59.0	81.1			80.1		111.3	67.5	
Level of Service	F	D		E	F			F		F	E	
Approach Delay (s)		50.7			79.0			80.1			75.5	
Approach LOS		D			E			F			E	

Intersection Summary				
HCM 2000 Control Delay	70.6	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	111.4%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Future Background PM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	225	20	25	355	25	15
Future Volume (Veh/h)	225	20	25	355	25	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	253	22	28	399	28	17
Pedestrians	5				20	
Lane Width (m)	3.7				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked						
vC, conflicting volume			295		744	284
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			295		744	284
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		92	98
cM capacity (veh/h)			1257		369	747

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	275	427	45
Volume Left	0	28	28
Volume Right	22	0	17
cSH	1700	1257	456
Volume to Capacity	0.16	0.02	0.10
Queue Length 95th (m)	0.0	0.5	2.6
Control Delay (s)	0.0	0.7	13.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	13.8
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	170	35	20	300	30	60	40	20	30	40	30
Future Volume (vph)	35	170	35	20	300	30	60	40	20	30	40	30
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	191	39	22	337	34	67	45	22	34	45	34

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	230	39	22	371	134	113
Volume Left (vph)	39	0	22	0	67	34
Volume Right (vph)	0	39	0	34	22	34
Hadj (s)	0.08	-0.70	0.50	-0.06	0.05	-0.11
Departure Headway (s)	5.8	5.0	6.1	5.5	5.9	5.8
Degree Utilization, x	0.37	0.05	0.04	0.57	0.22	0.18
Capacity (veh/h)	584	670	563	631	541	548
Control Delay (s)	11.1	7.1	8.1	14.4	10.5	10.1
Approach Delay (s)	10.5		14.1		10.5	10.1
Approach LOS	B		B		B	B

Intersection Summary					
Delay	12.0				
Level of Service	B				
Intersection Capacity Utilization	51.3%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1050	150	65	1340	40	75	5	60	10	15	55
Future Volume (Veh/h)	55	1050	150	65	1340	40	75	5	60	10	15	55
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	58	1105	158	68	1411	42	79	5	63	11	16	58
Pedestrians		5			5			60			50	
Lane Width (m)		3.6			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			5			4	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.67			0.78			0.78	0.78	0.78	0.78	0.78	0.67
vC, conflicting volume	1503			1323			2272	2999	696	2357	3057	782
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	753			848			784	1719	44	893	1794	0
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			88			29	90	92	91	65	92
cM capacity (veh/h)	544			590			111	50	744	118	45	693

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	58	737	526	774	748	147	85
Volume Left	58	0	0	68	0	79	11
Volume Right	0	0	158	0	42	63	58
cSH	544	1700	1700	590	1700	165	160
Volume to Capacity	0.11	0.43	0.31	0.12	0.44	0.89	0.53
Queue Length 95th (m)	2.8	0.0	0.0	3.1	0.0	51.3	21.1
Control Delay (s)	12.4	0.0	0.0	3.2	0.0	99.7	50.2
Lane LOS	B			A		F	F
Approach Delay (s)	0.5			1.6		99.7	50.2
Approach LOS						F	F

Intersection Summary					
Average Delay	7.2				
Intersection Capacity Utilization	99.7%	ICU Level of Service		F	
Analysis Period (min)	15				

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Background PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	55	1010	85	1315	85	95	150	70	45
Future Volume (vph)	55	1010	85	1315	85	95	150	70	45
Lane Group Flow (vph)	56	1087	87	1699	87	158	0	224	46
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	custom	NA	Perm
Protected Phases		2	1	6		4		8	
Permitted Phases	2		6		4		3		8
Detector Phase	2	2	1	6	4	4	3	8	8
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	8.0	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	85.0	85.0	17.0	102.0	45.0	45.0	13.0	58.0	58.0
Total Split (%)	53.1%	53.1%	10.6%	63.8%	28.1%	28.1%	8.1%	36.3%	36.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	0.0	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.67	0.54	0.29	0.77	0.36	0.30		0.65	0.10
Control Delay	50.9	14.7	13.2	24.2	48.1	39.1		58.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	50.9	14.7	13.2	24.2	48.1	39.1		58.7	9.1
Queue Length 50th (m)	14.8	105.4	10.5	212.0	22.6	35.2		64.1	0.0
Queue Length 95th (m)	m#26.0	m104.7	18.9	255.4	39.3	54.6		93.6	9.5
Internal Link Dist (m)		212.3		203.9		114.1		69.6	
Turn Bay Length (m)	25.0		25.0		40.0				
Base Capacity (vph)	83	2009	354	2213	249	539		389	535
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.67	0.54	0.25	0.77	0.35	0.29		0.58	0.09

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 22.5 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Background PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1010	55	85	1315	350	85	95	60	150	70	45
Future Volume (vph)	55	1010	55	85	1315	350	85	95	60	150	70	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		2.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1750	3545		1749	3450		1679	1790			1851	1547
Flt Permitted	0.08	1.00		0.18	1.00		0.48	1.00			0.62	1.00
Satd. Flow (perm)	147	3545		336	3450		850	1790			1196	1547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	56	1031	56	87	1342	357	87	97	61	153	71	46
RTOR Reduction (vph)	0	2	0	0	13	0	0	14	0	0	0	33
Lane Group Flow (vph)	56	1085	0	87	1686	0	87	144	0	0	224	13
Confl. Peds. (#/hr)	10		15	15		10	15		5	5		15
Heavy Vehicles (%)	2%	2%	0%	2%	2%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		custom	NA	Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2			6			4			3		8
Actuated Green, G (s)	89.6	89.6		101.1	101.1		44.9	44.9			44.9	44.9
Effective Green, g (s)	90.6	90.6		102.1	102.1		45.9	45.9			45.9	45.9
Actuated g/C Ratio	0.57	0.57		0.64	0.64		0.29	0.29			0.29	0.29
Clearance Time (s)	7.0	7.0		3.0	7.0		7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	83	2007		298	2201		243	513			343	443
v/s Ratio Prot		0.31		0.02	c0.49			0.08				
v/s Ratio Perm	0.38			0.17			0.10				c0.19	0.01
v/c Ratio	0.67	0.54		0.29	0.77		0.36	0.28			0.65	0.03
Uniform Delay, d1	24.4	21.7		14.1	20.5		45.3	44.3			50.1	41.0
Progression Factor	0.68	0.61		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	25.7	0.7		0.5	2.6		0.9	0.3			4.4	0.0
Delay (s)	42.1	13.9		14.6	23.1		46.2	44.6			54.5	41.1
Level of Service	D	B		B	C		D	D			D	D
Approach Delay (s)		15.3			22.7			45.2			52.2	
Approach LOS		B			C			D			D	

Intersection Summary

HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
1: Hurontario Street & Fairview Road West/Fairview Road East

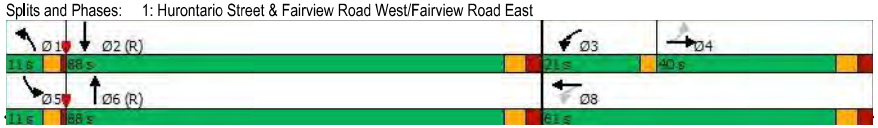
Future Total AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	220	75	65	1190	50	1485
Future Volume (vph)	105	100	220	75	65	1190	50	1485
Lane Group Flow (vph)	121	310	253	241	75	1615	57	1764
Turn Type	Perm	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases		4	3	8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	9.5	40.0	9.0	29.0	9.5	29.0
Total Split (s)	40.0	40.0	21.0	61.0	11.0	88.0	11.0	88.0
Total Split (%)	25.0%	25.0%	13.1%	38.1%	6.9%	55.0%	6.9%	55.0%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	0.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.55	0.88	0.95	0.42	0.83	0.90	0.67	0.97
Control Delay	67.0	76.9	83.8	32.3	110.2	48.8	109.6	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	76.9	83.8	32.3	110.2	48.8	109.6	53.1
Queue Length 50th (m)	36.2	86.1	63.6	45.5	25.0	295.6	19.1	299.6
Queue Length 95th (m)	57.4	#126.8	#108.5	68.5	m#52.4	294.5	#40.6	#337.3
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	235	373	267	583	90	1799	85	1812
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.83	0.95	0.41	0.83	0.90	0.67	0.97

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Fairview Road West/Fairview Road East

Future Total AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	170	220	75	135	65	1190	215	50	1485	50
Future Volume (vph)	105	100	170	220	75	135	65	1190	215	50	1485	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		2.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.90		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1730	1581		1582	1577		1700	3343		1700	3492	
Flt Permitted	0.61	1.00		0.19	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1109	1581		316	1577		1700	3343		1700	3492	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	195	253	86	155	75	1368	247	57	1707	57
RTOR Reduction (vph)	0	38	0	0	41	0	0	9	0	0	1	0
Lane Group Flow (vph)	121	272	0	253	200	0	75	1606	0	57	1763	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases		4		3	8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.9	30.9		52.5	52.5		7.5	83.9		5.6	82.0	
Effective Green, g (s)	31.9	31.9		53.5	53.5		8.5	84.9		6.6	83.0	
Actuated g/C Ratio	0.20	0.20		0.33	0.33		0.05	0.53		0.04	0.52	
Clearance Time (s)	7.0	7.0		3.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	221	315		260	527		90	1773		70	1811	
v/s Ratio Prot		c0.17		c0.12	0.13		c0.04	0.48		0.03	c0.50	
v/s Ratio Perm	0.11			0.21								
v/c Ratio	0.55	0.86		0.97	0.38		0.83	0.91		0.81	0.97	
Uniform Delay, d1	57.6	61.9		45.1	40.6		75.0	33.9		76.1	37.4	
Progression Factor	1.00	1.00		1.00	1.00		0.80	1.24		1.00	1.00	
Incremental Delay, d2	2.8	20.8		48.0	0.5		40.5	7.2		49.3	15.7	
Delay (s)	60.3	82.7		93.1	41.0		100.4	49.4		125.4	53.1	
Level of Service	E	F		F	D		F	D		F	D	
Approach Delay (s)		76.4			67.7			51.7			55.4	
Approach LOS		E			E			D			E	

Intersection Summary

HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
2: Hurontario Street & John Street

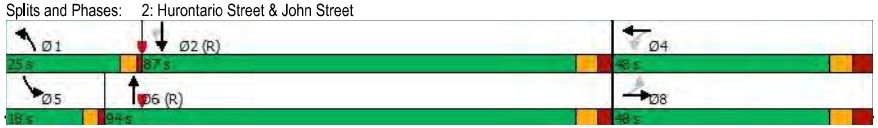
Future Total AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	230	10	10	20	175	1055	80	1155	300
Future Volume (vph)	230	10	10	20	175	1055	80	1155	300
Lane Group Flow (vph)	245	144	11	143	186	1138	85	1229	319
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	8	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	46.0	46.0	46.0	46.0	9.0	38.0	9.0	38.0	38.0
Total Split (s)	48.0	48.0	48.0	48.0	25.0	94.0	18.0	87.0	87.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.6%	58.8%	11.3%	54.4%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.87	0.27	0.04	0.27	0.81	0.61	0.62	0.71	0.51
Control Delay	83.2	9.5	42.4	11.4	102.4	17.9	92.6	21.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	83.2	9.5	42.4	11.4	102.4	18.1	92.6	21.1	6.3
Queue Length 50th (m)	75.6	2.6	2.6	5.0	60.9	97.2	27.9	165.2	17.0
Queue Length 95th (m)	#131.5	21.1	8.4	23.7	#93.6	133.5	m27.5	m189.9	m33.3
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	290	540	287	535	248	1937	157	1794	642
Starvation Cap Reductn	0	0	0	0	0	188	0	0	0
Spillback Cap Reductn	0	1	0	0	0	0	0	30	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.27	0.04	0.27	0.75	0.65	0.54	0.70	0.50

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street



HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Future Total AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	10	125	10	20	115	175	1055	15	80	1155	300
Future Volume (vph)	230	10	125	10	20	115	175	1055	15	80	1155	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.97	1.00		0.98	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1603	1599		1591	1605		1785	3427		1684	3444	1109
Flt Permitted	0.62	1.00		0.62	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1045	1599		1033	1605		1785	3427		1684	3444	1109
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	245	11	133	11	21	122	186	1122	16	85	1229	319
RTOR Reduction (vph)	0	97	0	0	89	0	0	0	0	0	0	68
Lane Group Flow (vph)	245	47	0	11	54	0	186	1138	0	85	1229	251
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	42.4	42.4		42.4	42.4		19.8	86.4		12.2	78.8	78.8
Effective Green, g (s)	43.4	43.4		43.4	43.4		20.8	87.4		13.2	79.8	79.8
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.13	0.55		0.08	0.50	0.50
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	283	433		280	435		232	1871		138	1717	553
v/s Ratio Prot		0.03			0.03		c0.10	0.33		0.05	c0.36	
v/s Ratio Perm	c0.23			0.01								0.23
v/c Ratio	0.87	0.11		0.04	0.12		0.80	0.61		0.62	0.72	0.45
Uniform Delay, d1	55.5	43.8		42.9	44.0		67.6	24.7		70.9	31.3	26.0
Progression Factor	1.00	1.00		1.00	1.00		1.18	0.65		1.22	0.62	0.34
Incremental Delay, d2	23.0	0.1		0.1	0.1		16.4	1.3		2.5	0.8	0.8
Delay (s)	78.6	43.9		43.0	44.1		96.3	17.3		89.0	20.3	9.6
Level of Service	E	D		D	D		F	B		F	C	A
Approach Delay (s)		65.7			44.0			28.4			21.8	
Approach LOS		E			D			C			C	

Intersection Summary

HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

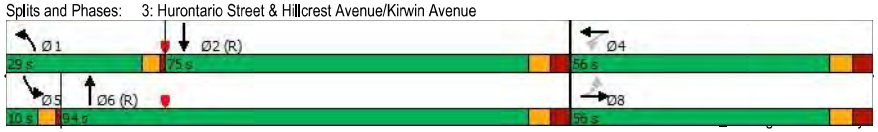
Future Total AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	120	130	215	215	945	45	995
Future Volume (vph)	85	120	130	215	215	945	45	995
Lane Group Flow (vph)	88	304	134	371	222	1000	46	1284
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	56.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	56.0	56.0	56.0	56.0	29.0	94.0	10.0	75.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	18.1%	58.8%	6.3%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.38	0.29	0.48	0.35	0.95	0.52	0.60	0.95
Control Delay	49.3	17.4	52.1	31.4	125.0	13.4	111.0	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	17.4	52.1	31.4	125.0	13.4	111.0	30.0
Queue Length 50th (m)	23.2	15.8	36.6	36.1	~80.1	46.2	16.0	20.1
Queue Length 95th (m)	41.8	29.1	60.5	51.5	m#113.5	57.3	m25.0	#80.4
Internal Link Dist (m)		194.0		74.1		66.6		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	234	1043	279	1049	233	1929	77	1390
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	1	0	81	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.29	0.48	0.35	0.95	0.54	0.60	0.92

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Total AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	120	175	130	215	145	215	945	25	45	995	250
Future Volume (vph)	85	120	175	130	215	145	215	945	25	45	995	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	0.99	1.00		0.93	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.94		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	3001		1661	3189		1342	3447		1733	3215	
Flt Permitted	0.46	1.00		0.52	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	764	3001		913	3189		1342	3447		1733	3215	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	124	180	134	222	149	222	974	26	46	1026	258
RTOR Reduction (vph)	0	125	0	0	73	0	0	1	0	0	14	0
Lane Group Flow (vph)	88	179	0	134	298	0	222	999	0	46	1270	0
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	48.0	48.0		48.0	48.0		26.8	87.6		4.9	65.7	
Effective Green, g (s)	49.0	49.0		49.0	49.0		27.8	88.6		5.9	66.7	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.17	0.55		0.04	0.42	
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	233	919		279	976		233	1908		63	1340	
v/s Ratio Prot		0.06			0.09		c0.17	0.29		0.03	c0.40	
v/s Ratio Perm	0.12			c0.15								
v/c Ratio	0.38	0.19		0.48	0.31		0.95	0.52		0.73	0.95	
Uniform Delay, d1	43.5	40.9		45.1	42.5		65.5	22.4		76.3	45.0	
Progression Factor	1.00	1.00		1.00	1.00		1.41	0.57		1.17	0.39	
Incremental Delay, d2	1.0	0.1		1.3	0.2		35.8	0.7		28.0	12.3	
Delay (s)	44.6	41.1		46.4	42.7		127.9	13.4		117.6	29.8	
Level of Service	D	D		D	D		F	B		F	C	
Approach Delay (s)		41.8			43.7			34.2			32.8	
Approach LOS		D			D			C			C	

Intersection Summary

HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Future Total AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	75	1110	10	0	1405
Future Volume (Veh/h)	0	75	1110	10	0	1405
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	86	1276	11	0	1615
Pedestrians	15					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.74	0.78			0.78	
vC, conflicting volume	2104	658			1302	
vC1, stage 1 conf vol	1296					
vC2, stage 2 conf vol	808					
vCu, unblocked vol	429	0			817	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	90			100	
cM capacity (veh/h)	324	838			630	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	86	851	436	808	808
Volume Left	0	0	0	0	0
Volume Right	86	0	11	0	0
cSH	838	1700	1700	1700	1700
Volume to Capacity	0.10	0.50	0.26	0.47	0.47
Queue Length 95th (m)	2.7	0.0	0.0	0.0	0.0
Control Delay (s)	9.8	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.8	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		42.3%	ICU Level of Service	A
Analysis Period (min)		15		

Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

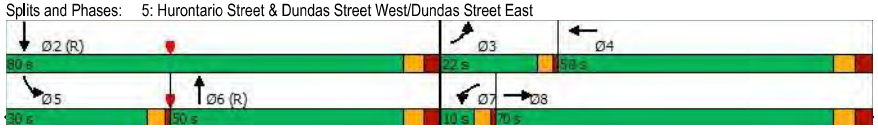
Future Total AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	185	1210	90	575	760	295	855
Future Volume (vph)	185	1210	90	575	760	295	855
Lane Group Flow (vph)	185	1365	90	805	860	295	1040
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	22.0	70.0	10.0	58.0	50.0	30.0	80.0
Total Split (%)	13.8%	43.8%	6.3%	36.3%	31.3%	18.8%	50.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	5.5	2.0	5.5	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.84	0.97	0.86	0.75	0.90	0.94	0.66
Control Delay	98.6	64.1	125.8	61.5	68.9	84.0	52.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.6	64.1	125.8	61.5	68.9	84.0	52.8
Queue Length 50th (m)	61.4	233.3	31.8	107.0	144.6	102.3	180.1
Queue Length 95th (m)	#103.4	#285.5	#72.2	131.8	#175.2	m#130.8	m201.0
Internal Link Dist (m)		110.1		216.1	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	226	1407	105	1068	972	316	1588
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.97	0.86	0.75	0.88	0.93	0.65

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Total AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	1210	155	90	575	230	0	760	100	295	855	185
Future Volume (vph)	185	1210	155	90	575	230	0	760	100	295	855	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	5.5		2.0	5.5			5.0		2.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.96			1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96			0.98		1.00	0.97	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1807	3476		1860	3088			3433		1807	3364	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1807	3476		1860	3088			3433		1807	3364	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	185	1210	155	90	575	230	0	760	100	295	855	185
RTOR Reduction (vph)	0	6	0	0	27	0	0	7	0	0	12	0
Lane Group Flow (vph)	185	1359	0	90	779	0	0	853	0	295	1028	0
Confl. Peds. (#/hr)	90					90	60		20	20		60
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	17.5	62.5		7.0	52.0			42.0		26.0	72.0	
Effective Green, g (s)	19.5	64.5		9.0	54.0			44.0		28.0	74.0	
Actuated g/C Ratio	0.12	0.40		0.06	0.34			0.28		0.18	0.46	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	220	1401		104	1042			944		316	1555	
v/s Ratio Prot	c0.10	c0.39		c0.05	0.25			c0.25		c0.16	0.31	
v/s Ratio Perm												
v/c Ratio	0.84	0.97		0.87	0.75			0.90		0.93	0.66	
Uniform Delay, d1	68.7	46.8		74.9	47.0			56.0		65.1	33.3	
Progression Factor	1.00	1.00		0.99	1.25			1.00		0.83	1.56	
Incremental Delay, d2	24.1	17.3		46.5	2.8			13.7		27.6	1.7	
Delay (s)	92.8	64.1		120.7	61.6			69.6		81.3	53.7	
Level of Service	F	E		F	E			E		F	D	
Approach Delay (s)		67.6			67.5			69.6			59.8	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	65.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Future Total AM Peak Hour

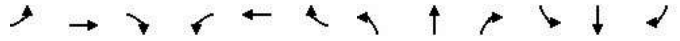
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	245	20	5	170	255	35
Future Volume (Veh/h)	245	20	5	170	255	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	275	22	6	191	287	39
Pedestrians					30	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			327		519	316
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			259		462	247
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		44	95
cM capacity (veh/h)			1215		515	735

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	297	197	326
Volume Left	0	6	287
Volume Right	22	0	39
cSH	1700	1215	534
Volume to Capacity	0.17	0.00	0.61
Queue Length 95th (m)	0.0	0.1	32.5
Control Delay (s)	0.0	0.3	21.7
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	21.7
Approach LOS			C

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Future Total AM Peak Hour



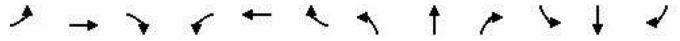
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	220	25	10	145	15	20	35	10	20	25	10
Future Volume (vph)	35	220	25	10	145	15	20	35	10	20	25	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	37	234	27	11	154	16	21	37	11	21	27	11

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	271	27	11	170	69	59
Volume Left (vph)	37	0	11	0	21	21
Volume Right (vph)	0	27	0	16	11	11
Hadj (s)	0.18	-0.51	0.65	0.05	0.06	0.10
Departure Headway (s)	5.2	4.5	5.8	5.2	5.2	5.3
Degree Utilization, x	0.39	0.03	0.02	0.24	0.10	0.09
Capacity (veh/h)	666	769	595	670	628	617
Control Delay (s)	10.3	6.5	7.7	8.7	8.8	8.8
Approach Delay (s)	10.0		8.6		8.8	8.8
Approach LOS	A		A		A	A

Intersection Summary				
Delay	9.3			
Level of Service	A			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Future Total AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1495	70	20	725	20	80	5	35	20	5	45
Future Volume (Veh/h)	20	1495	70	20	725	20	80	5	35	20	5	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	1574	74	21	763	21	84	5	37	21	5	47
Pedestrians					5			30			15	
Lane Width (m)					3.7			3.7			3.7	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.87			0.63			0.69	0.69	0.63	0.69	0.69	0.87
vC, conflicting volume	799			1678			2156	2524	859	1704	2550	407
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	473			889			938	1470	0	283	1509	23
tC, single (s)	4.3			4.1			7.5	6.5	6.9	7.8	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	98			96			32	94	94	94	93	95
cM capacity (veh/h)	875			470			124	80	663	346	75	888

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	21	1049	599	402	402	126	73
Volume Left	21	0	0	21	0	84	21
Volume Right	0	0	74	0	21	37	47
cSH	875	1700	1700	470	1700	158	406
Volume to Capacity	0.02	0.62	0.35	0.04	0.24	0.80	0.18
Queue Length 95th (m)	0.6	0.0	0.0	1.1	0.0	41.2	5.2
Control Delay (s)	9.2	0.0	0.0	1.4	0.0	83.1	15.8
Lane LOS	A			A		F	C
Approach Delay (s)	0.1			0.7		83.1	15.8
Approach LOS						F	C

Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	64.0%	ICU Level of Service	B	
Analysis Period (min)	15			

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Total AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	1445	55	675	50	70	210	75	35
Future Volume (vph)	20	1445	55	675	50	70	210	75	35
Lane Group Flow (vph)	22	1663	60	870	54	152	0	310	38
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	custom	NA	Perm
Protected Phases		2	1	6		4		8	
Permitted Phases	2		6		4		3		8
Detector Phase	2	2	1	6	4	4	3	8	8
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	9.5	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	88.2	88.2	9.8	98.0	54.0	54.0	8.0	62.0	62.0
Total Split (%)	55.1%	55.1%	6.1%	61.3%	33.8%	33.8%	5.0%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	1.0	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	None	C-Min	Max	Max	Min	Min	Min
v/c Ratio	0.09	0.93	0.51	0.46	0.19	0.27		0.85	0.07
Control Delay	13.2	26.2	33.5	21.0	43.9	34.5		69.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	13.2	26.2	33.5	21.0	43.9	34.5		69.7	3.3
Queue Length 50th (m)	1.8	229.3	8.2	83.0	13.5	30.5		97.9	0.0
Queue Length 95th (m)	m2.2	m285.7	19.4	99.7	26.6	51.1		#157.7	4.2
Internal Link Dist (m)		212.3		203.9		114.1		69.6	
Turn Bay Length (m)	25.0		25.0		40.0				
Base Capacity (vph)	239	1803	117	1925	280	566		364	556
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.09	0.92	0.51	0.45	0.19	0.27		0.85	0.07

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Total AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	1445	85	55	675	125	50	70	70	210	75	35
Future Volume (vph)	20	1445	85	55	675	125	50	70	70	210	75	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		3.5	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00			1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.98	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1539	3505		1785	3331		1723	1734			1773	1422
Flt Permitted	0.29	1.00		0.05	1.00		0.49	1.00			0.54	1.00
Satd. Flow (perm)	467	3505		89	3331		893	1734			998	1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1571	92	60	734	136	54	76	76	228	82	38
RTOR Reduction (vph)	0	2	0	0	10	0	0	22	0	0	0	24
Lane Group Flow (vph)	22	1661	0	60	860	0	54	130	0	0	310	14
Confl. Peds. (#/hr)	15		5	5		15	20					20
Heavy Vehicles (%)	15%	3%	5%	0%	6%	7%	2%	4%	1%	4%	6%	8%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		custom	NA	Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2			6			4			3		8
Actuated Green, G (s)	79.9	79.9		88.6	88.6		49.2	49.2			57.4	57.4
Effective Green, g (s)	80.9	80.9		89.6	89.6		50.2	50.2			58.4	58.4
Actuated g/C Ratio	0.51	0.51		0.56	0.56		0.31	0.31			0.36	0.36
Clearance Time (s)	7.0	7.0		4.5	7.0		7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	236	1772		104	1865		280	544			364	519
v/s Ratio Prot		c0.47		c0.02	0.26			0.08				
v/s Ratio Perm	0.05			0.30			0.06				c0.31	0.01
v/c Ratio	0.09	0.94		0.58	0.46		0.19	0.24			0.85	0.03
Uniform Delay, d1	20.5	37.2		34.1	20.9		40.1	40.7			46.8	32.6
Progression Factor	0.63	0.56		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	6.0		7.5	0.8		1.5	1.0			17.2	0.0
Delay (s)	13.2	27.0		41.7	21.7		41.6	41.8			64.0	32.6
Level of Service	B	C		D	C		D	D			E	C
Approach Delay (s)		26.8			23.0			41.7			60.5	
Approach LOS		C			C			D			E	

Intersection Summary

HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	91.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Queues
1: Hurontario Street & Fairview Road West/Fairview Road East

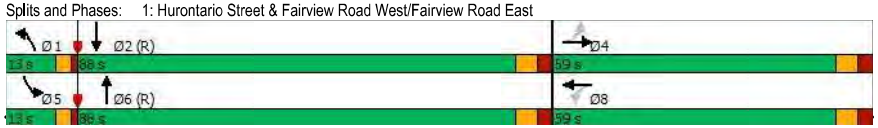
Future Total PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	125	90	110	1415	115	1480
Future Volume (vph)	45	70	125	90	110	1415	115	1480
Lane Group Flow (vph)	47	142	132	200	116	1752	121	1669
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	8	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	4.5	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	88.0	13.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	55.0%	8.1%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.31	0.40	0.73	0.57	0.52	0.89	0.51	0.81
Control Delay	58.7	45.5	82.5	52.6	66.2	44.0	73.0	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	45.5	82.5	52.6	66.2	44.0	73.0	31.2
Queue Length 50th (m)	13.4	31.8	41.0	48.9	32.0	310.8	38.6	232.4
Queue Length 95th (m)	26.4	53.1	66.0	74.8	m49.5	#357.3	60.5	291.3
Internal Link Dist (m)		78.1		66.2		577.8		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	257	591	309	576	222	1961	235	2063
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.24	0.43	0.35	0.52	0.89	0.51	0.81

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Fairview Road West/Fairview Road East

Future Total PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	65	125	90	100	110	1415	250	115	1480	105
Future Volume (vph)	45	70	65	125	90	100	110	1415	250	115	1480	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.92		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1735	1724		1594	1666		1785	3366		1785	3508	
Flt Permitted	0.43	1.00		0.56	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	777	1724		936	1666		1785	3366		1785	3508	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	68	132	95	105	116	1489	263	121	1558	111
RTOR Reduction (vph)	0	25	0	0	30	0	0	8	0	0	3	0
Lane Group Flow (vph)	47	117	0	132	170	0	116	1744	0	121	1666	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.0	30.0		30.0	30.0		19.0	91.9		20.1	93.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0		20.0	92.9		21.1	94.0	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.12	0.58		0.13	0.59	
Clearance Time (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	150	334		181	322		223	1954		235	2060	
v/s Ratio Prot		0.07			0.10		0.06	c0.52		c0.07	0.47	
v/s Ratio Perm	0.06			c0.14								
v/c Ratio	0.31	0.35		0.73	0.53		0.52	0.89		0.51	0.81	
Uniform Delay, d1	55.4	55.8		60.6	57.9		65.5	29.2		64.7	25.9	
Progression Factor	1.00	1.00		1.00	1.00		0.90	1.28		1.00	1.00	
Incremental Delay, d2	1.2	0.6		13.7	1.6		1.8	5.6		1.9	3.5	
Delay (s)	56.6	56.4		74.2	59.5		60.8	42.9		66.6	29.5	
Level of Service	E	E		E	E		E	D		E	C	
Approach Delay (s)		56.5			65.4			44.0			32.0	
Approach LOS		E			E			D			C	

Intersection Summary

HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
2: Hurontario Street & John Street

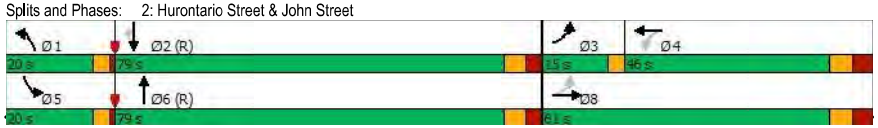
Future Total PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	400	20	15	10	75	990	100	1095	205
Future Volume (vph)	400	20	15	10	75	990	100	1095	205
Lane Group Flow (vph)	426	154	16	160	80	1080	106	1165	218
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	9.0	44.0	9.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.86	0.26	0.08	0.42	0.54	0.69	0.65	0.72	0.39
Control Delay	59.2	8.6	49.6	11.8	106.9	28.1	92.9	25.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	59.2	8.6	49.6	11.8	106.9	28.4	92.9	25.2	8.0
Queue Length 50th (m)	105.2	4.2	4.2	2.8	28.2	170.5	31.7	195.4	30.0
Queue Length 95th (m)	#224.9	22.2	11.2	23.0	47.8	188.0	m41.8	200.0	m34.1
Internal Link Dist (m)		151.9		56.1		37.7		577.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	493	596	275	487	189	1647	189	1676	575
Starvation Cap Reductn	0	0	0	0	0	149	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.26	0.06	0.33	0.42	0.72	0.56	0.70	0.38

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hurontario Street & John Street



HCM Signalized Intersection Capacity Analysis
2: Hurontario Street & John Street

Future Total PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	400	20	125	15	10	140	75	990	25	100	1095	205
Future Volume (vph)	400	20	125	15	10	140	75	990	25	100	1095	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.95		1.00	0.93		1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1682	1391		1631	1539		1785	3549		1785	3579	1129
Flt Permitted	0.48	1.00		0.66	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	841	1391		1131	1539		1785	3549		1785	3579	1129
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	426	21	133	16	11	149	80	1053	27	106	1165	218
RTOR Reduction (vph)	0	84	0	0	124	0	0	1	0	0	0	48
Lane Group Flow (vph)	426	70	0	16	36	0	80	1079	0	106	1165	170
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	57.8	57.8		26.0	26.0		12.2	69.5		13.7	71.0	71.0
Effective Green, g (s)	58.8	58.8		27.0	27.0		13.2	70.5		14.7	72.0	72.0
Actuated g/C Ratio	0.37	0.37		0.17	0.17		0.08	0.44		0.09	0.45	0.45
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	465	511		190	259		147	1563		163	1610	508
v/s Ratio Prot	c0.17	0.05			0.02		0.04	0.30		c0.06	c0.33	
v/s Ratio Perm	0.17			0.01								0.15
v/c Ratio	0.92	0.14		0.08	0.14		0.54	0.69		0.65	0.72	0.33
Uniform Delay, d1	44.4	33.7		56.1	56.6		70.5	36.0		70.2	35.9	28.5
Progression Factor	1.00	1.00		1.00	1.00		1.36	0.70		1.16	0.63	0.38
Incremental Delay, d2	22.6	0.1		0.2	0.2		3.5	2.2		5.7	1.8	1.1
Delay (s)	67.0	33.8		56.3	56.9		99.4	27.5		87.0	24.6	11.9
Level of Service	E	C		E	E		F	C		F	C	B
Approach Delay (s)		58.2			56.8			32.5			27.2	
Approach LOS		E			E			C			C	

Intersection Summary

HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Total PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	205	185	60	275	235	765	180	905
Future Volume (vph)	205	185	60	275	235	765	180	905
Lane Group Flow (vph)	207	561	61	399	237	808	182	1066
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	3	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	8.0	64.0	56.0	56.0	25.0	71.0	25.0	71.0
Total Split (%)	5.0%	40.0%	35.0%	35.0%	15.6%	44.4%	15.6%	44.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.54	0.40	0.24	0.37	0.93	0.61	0.81	0.86
Control Delay	39.2	17.2	44.9	39.6	106.6	31.0	116.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
Total Delay	39.2	17.2	44.9	39.6	106.6	31.5	116.6	28.8
Queue Length 50th (m)	44.6	31.9	15.4	49.0	84.0	82.7	64.4	45.3
Queue Length 95th (m)	70.3	51.8	29.7	65.3	m#90.5	m68.1	#96.8	67.2
Internal Link Dist (m)		194.0		74.1		66.6		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	384	1412	249	1071	256	1400	242	1391
Starvation Cap Reductn	0	0	0	0	0	0	0	90
Spillback Cap Reductn	0	0	0	1	0	251	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.40	0.24	0.37	0.93	0.70	0.75	0.82

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

HCM Signalized Intersection Capacity Analysis
3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue

Future Total PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	185	370	60	275	120	235	765	35	180	905	150
Future Volume (vph)	205	185	370	60	275	120	235	765	35	180	905	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1716	3162		1752	3398		1750	3468		1767	3429	
Flt Permitted	0.42	1.00		0.44	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	757	3162		815	3398		1750	3468		1767	3429	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	187	374	61	278	121	237	773	35	182	914	152
RTOR Reduction (vph)	0	179	0	0	31	0	0	2	0	0	9	0
Lane Group Flow (vph)	207	382	0	61	368	0	237	806	0	182	1057	0
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	61.4	61.4		48.0	48.0		22.4	59.7		19.4	56.7	
Effective Green, g (s)	62.4	62.4		49.0	49.0		23.4	60.7		20.4	57.7	
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.15	0.38		0.13	0.36	
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	363	1233		249	1040		255	1315		225	1236	
v/s Ratio Prot	c0.04	0.12			c0.11		c0.14	c0.23		0.10	c0.31	
v/s Ratio Perm	0.18			0.07								
v/c Ratio	0.57	0.31		0.24	0.35		0.93	0.61		0.81	0.86	
Uniform Delay, d1	35.5	33.9		41.6	43.2		67.5	40.2		67.9	47.3	
Progression Factor	1.00	1.00		1.00	1.00		1.35	0.75		1.42	0.48	
Incremental Delay, d2	2.2	0.1		0.5	0.2		18.1	0.8		14.9	6.0	
Delay (s)	37.6	34.0		42.1	43.4		108.9	31.0		111.6	28.6	
Level of Service	D	C		D	D		F	C		F	C	
Approach Delay (s)		35.0			43.2			48.6			40.7	
Approach LOS		C			D			D			D	

Intersection Summary

HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	113.8%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Hurontario Street & 3085 Hurontario South Access

Future Total PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	30	1005	65	0	1395
Future Volume (Veh/h)	0	30	1005	65	0	1395
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	32	1058	68	0	1468
Pedestrians	60					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	5					
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)			334			91
pX, platoon unblocked	0.80	0.84			0.84	
vC, conflicting volume	1886	623			1186	
vC1, stage 1 conf vol	1152					
vC2, stage 2 conf vol	734					
vCu, unblocked vol	691	160			833	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	95			100	
cM capacity (veh/h)	320	682			609	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	32	705	421	734	734
Volume Left	0	0	0	0	0
Volume Right	32	0	68	0	0
cSH	682	1700	1700	1700	1700
Volume to Capacity	0.05	0.41	0.25	0.43	0.43
Queue Length 95th (m)	1.2	0.0	0.0	0.0	0.0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.5	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay		0.1		
Intersection Capacity Utilization		41.9%	ICU Level of Service	A
Analysis Period (min)		15		

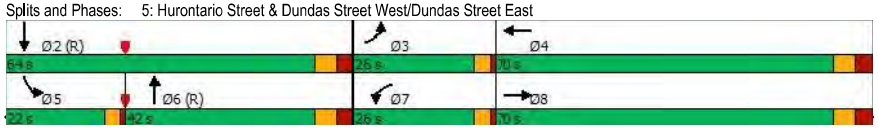
Queues
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Total PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	270	890	140	1055	570	230	750
Future Volume (vph)	270	890	140	1055	570	230	750
Lane Group Flow (vph)	270	1050	140	1375	770	230	1045
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	26.0	70.0	26.0	70.0	42.0	22.0	64.0
Total Split (%)	16.3%	43.8%	16.3%	43.8%	26.3%	13.8%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	5.5	2.0	5.5	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.96	0.69	0.63	0.99	0.95	0.99	0.83
Control Delay	110.3	39.4	62.3	82.2	79.7	110.5	65.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.3	39.4	62.3	82.2	79.7	110.5	65.6
Queue Length 50th (m)	91.1	146.5	45.5	239.5	130.7	80.9	184.7
Queue Length 95th (m)	#150.6	182.2	m60.2	#288.3	#172.3 m	#133.5	211.0
Internal Link Dist (m)		110.1		216.1	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	282	1530	279	1384	810	232	1261
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.69	0.50	0.99	0.95	0.99	0.83

Intersection Summary
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Hurontario Street & Dundas Street West/Dundas Street East



HCM Signalized Intersection Capacity Analysis
5: Hurontario Street & Dundas Street West/Dundas Street East

Future Total PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	890	160	140	1055	320	0	570	200	230	750	295
Future Volume (vph)	270	890	160	140	1055	320	0	570	200	230	750	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	2.0	5.5		2.0	5.5			5.0		2.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97			0.96		1.00	0.96	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1879	3502		1860	3390			3409		1860	3350	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1879	3502		1860	3390			3409		1860	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	890	160	140	1055	320	0	570	200	230	750	295
RTOR Reduction (vph)	0	8	0	0	18	0	0	22	0	0	26	0
Lane Group Flow (vph)	270	1042	0	140	1357	0	0	748	0	230	1019	0
Confl. Peds. (#/hr)	70					70	80		30	30		80
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	22.0	67.5		17.0	62.5			35.0		18.0	57.0	
Effective Green, g (s)	24.0	69.5		19.0	64.5			37.0		20.0	59.0	
Actuated g/C Ratio	0.15	0.43		0.12	0.40			0.23		0.12	0.37	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	281	1521		220	1366			788		232	1235	
v/s Ratio Prot	c0.14	0.30		0.08	c0.40			c0.22		c0.12	0.30	
v/s Ratio Perm												
v/c Ratio	0.96	0.68		0.64	0.99			0.95		0.99	0.83	
Uniform Delay, d1	67.5	36.4		67.2	47.5			60.6		69.9	45.8	
Progression Factor	1.00	1.00		0.78	1.39			1.00		0.86	1.36	
Incremental Delay, d2	42.9	1.3		4.5	19.4			21.8		50.7	5.2	
Delay (s)	110.4	37.7		57.2	85.4			82.3		110.7	67.5	
Level of Service	F	D		E	F			F		F	E	
Approach Delay (s)		52.6			82.8			82.3			75.3	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	72.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
6: 3085 Hurontario North Access & Kirwin Avenue

Future Total PM Peak Hour

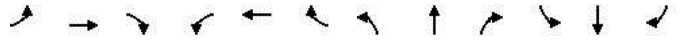
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	225	165	25	355	100	15
Future Volume (Veh/h)	225	165	25	355	100	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	253	185	28	399	112	17
Pedestrians	5				20	
Lane Width (m)	3.7				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	98					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			458		826	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			360		762	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		66	98
cM capacity (veh/h)			1088		328	706

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	438	427	129
Volume Left	0	28	112
Volume Right	185	0	17
cSH	1700	1088	353
Volume to Capacity	0.26	0.03	0.37
Queue Length 95th (m)	0.0	0.6	13.1
Control Delay (s)	0.0	0.8	21.0
Lane LOS		A	C
Approach Delay (s)	0.0	0.8	21.0
Approach LOS			C

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Jaguar Valley Dr & Kirwin Avenue

Future Total PM Peak Hour



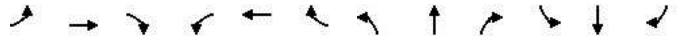
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	170	35	20	300	30	60	40	20	30	40	30
Future Volume (vph)	35	170	35	20	300	30	60	40	20	30	40	30
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	39	191	39	22	337	34	67	45	22	34	45	34

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	230	39	22	371	134	113
Volume Left (vph)	39	0	22	0	67	34
Volume Right (vph)	0	39	0	34	22	34
Hadj (s)	0.08	-0.70	0.50	-0.06	0.05	-0.11
Departure Headway (s)	5.8	5.0	6.1	5.5	5.9	5.8
Degree Utilization, x	0.37	0.05	0.04	0.57	0.22	0.18
Capacity (veh/h)	584	670	563	631	541	548
Control Delay (s)	11.1	7.1	8.1	14.4	10.5	10.1
Approach Delay (s)	10.5		14.1		10.5	10.1
Approach LOS	B		B		B	B

Intersection Summary					
Delay	12.0				
Level of Service	B				
Intersection Capacity Utilization	51.3%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: 60 Dundas St E Access/Jaguar Valley Dr & Dundas Street East

Future Total PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1050	150	65	1350	40	75	5	60	10	15	55
Future Volume (Veh/h)	55	1050	150	65	1350	40	75	5	60	10	15	55
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	58	1105	158	68	1421	42	79	5	63	11	16	58
Pedestrians		5			5			60			50	
Lane Width (m)		3.6			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			5			4	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		240			236							
pX, platoon unblocked	0.65			0.78			0.76	0.76	0.78	0.76	0.76	0.65
vC, conflicting volume	1513			1323			2278	3009	696	2367	3067	786
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	708			846			737	1700	42	855	1777	0
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			88			33	90	92	91	65	91
cM capacity (veh/h)	550			591			118	51	746	123	46	675

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	58	737	526	778	752	147	85
Volume Left	58	0	0	68	0	79	11
Volume Right	0	0	158	0	42	63	58
cSH	550	1700	1700	591	1700	172	161
Volume to Capacity	0.11	0.43	0.31	0.12	0.44	0.85	0.53
Queue Length 95th (m)	2.8	0.0	0.0	3.1	0.0	48.2	21.0
Control Delay (s)	12.3	0.0	0.0	3.2	0.0	88.7	49.8
Lane LOS	B			A		F	E
Approach Delay (s)	0.5			1.6		88.7	49.8
Approach LOS						F	E

Intersection Summary					
Average Delay	6.6				
Intersection Capacity Utilization	99.9%	ICU Level of Service		F	
Analysis Period (min)	15				

Queues
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Total PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	55	1010	85	1325	85	95	165	70	45
Future Volume (vph)	55	1010	85	1325	85	95	165	70	45
Lane Group Flow (vph)	56	1087	87	1709	87	158	0	239	46
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	custom	NA	Perm
Protected Phases		2	1	6		4		8	
Permitted Phases	2		6		4		3		8
Detector Phase	2	2	1	6	4	4	3	8	8
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	44.0	44.0	8.0	44.0	43.0	43.0	8.0	43.0	43.0
Total Split (s)	85.0	85.0	17.0	102.0	45.0	45.0	13.0	58.0	58.0
Total Split (%)	53.1%	53.1%	10.6%	63.8%	28.1%	28.1%	8.1%	36.3%	36.3%
Yellow Time (s)	3.5	3.5	3.0	3.5	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.5	3.5	0.0	3.5	4.0	4.0	0.0	4.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.77	0.56	0.29	0.79	0.35	0.29		0.66	0.09
Control Delay	66.2	15.6	13.9	25.9	46.9	37.9		57.9	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	66.2	15.6	13.9	25.9	46.9	37.9		57.9	9.1
Queue Length 50th (m)	15.7	128.3	11.0	224.2	22.0	34.3		67.6	0.0
Queue Length 95th (m)	m#14.7	m103.7	18.9	258.1	39.6	54.6		100.6	9.5
Internal Link Dist (m)		212.3		203.9		114.1		69.6	
Turn Bay Length (m)	25.0		25.0		40.0				
Base Capacity (vph)	73	1958	344	2169	250	555		389	535
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.77	0.56	0.25	0.79	0.35	0.28		0.61	0.09

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 22.5 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Kirwin Ave/Camilla Rd & Dundas Street East

HCM Signalized Intersection Capacity Analysis
9: Kirwin Ave/Camilla Rd & Dundas Street East

Future Total PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1010	55	85	1325	350	85	95	60	165	70	45
Future Volume (vph)	55	1010	55	85	1325	350	85	95	60	165	70	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		2.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99			1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.97		1.00	0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1750	3545		1749	3451		1679	1790			1849	1547
Flt Permitted	0.07	1.00		0.18	1.00		0.47	1.00			0.63	1.00
Satd. Flow (perm)	134	3545		327	3451		829	1790			1198	1547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	56	1031	56	87	1352	357	87	97	61	168	71	46
RTOR Reduction (vph)	0	2	0	0	14	0	0	13	0	0	0	32
Lane Group Flow (vph)	56	1085	0	87	1695	0	87	145	0	0	239	14
Confl. Peds. (#/hr)	10		15	15		10	15		5	5		15
Heavy Vehicles (%)	2%	2%	0%	2%	2%	0%	5%	0%	1%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		custom	NA	Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2			6			4			3		8
Actuated Green, G (s)	87.4	87.4		98.9	98.9		47.1	47.1			47.1	47.1
Effective Green, g (s)	88.4	88.4		99.9	99.9		48.1	48.1			48.1	48.1
Actuated g/C Ratio	0.55	0.55		0.62	0.62		0.30	0.30			0.30	0.30
Clearance Time (s)	7.0	7.0		3.0	7.0		7.0	7.0			7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	74	1958		288	2154		249	538			360	465
v/s Ratio Prot		0.31		0.02	c0.49			0.08				
v/s Ratio Perm	0.42			0.17			0.10				c0.20	0.01
v/c Ratio	0.76	0.55		0.30	0.79		0.35	0.27			0.66	0.03
Uniform Delay, d1	27.5	23.1		15.2	22.2		43.7	42.6			48.9	39.5
Progression Factor	0.68	0.61		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	37.5	0.8		0.6	3.0		0.9	0.3			4.6	0.0
Delay (s)	56.3	14.9		15.8	25.2		44.6	42.8			53.5	39.5
Level of Service	E	B		B	C		D	D			D	D
Approach Delay (s)		17.0			24.7			43.5			51.2	
Approach LOS		B			C			D			D	

Intersection Summary

HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group