70 PARK STREET EAST
PROPOSED MIXED-USE DEVELOPMENT

Urban Transportation Considerations
Official Plan Amendment & Zoning By-law Amendment
City of Mississauga

Prepared For: MPCT DIF 70 PARK STREET EAST LP

January 2023

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I. INTRODUCTION

BA Group has been retained by MPCT DIF 70 PARK STREET EAST LP to provide transportation consulting services in relation to the proposed redevelopment of the lands with the municipal addresses of 23, 25, 27, 29 and 31 Helene Street North, 53 Queen Street East, and 70 Park Street East (referred to herein as the "Site"). The Site is located across the street from Port Credit GO Station and less than 150 metres from the future Hurontario LRT stop at the northwest corner of Hurontario Street and Park Street East. The Site is bounded by Queen Street East to the north, a mixed-use development site under construction to the east, Park Street East to the south, and Helene Street North to the west.

This Report forms part of an Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) applications being submitted to the City of Mississauga to permit the construction of the proposed development as described in the report that follows.

THIS STUDY

BA Group has undertaken a review of the key transportation-related aspects of the proposed OPA and ZBA applications being submitted to the City of Mississauga to permit the project as planned. Key transportation-related aspects reviewed in this report include the following:

Transportation Context

- A description of the Site's existing transportation context considering the area road network, transit system, car-share options within the area, and other non-automobile dependent travel options.
- A description of any future transportation-related changes/improvements to the area context (i.e., transit improvements, other non-automobile dependent travel options, etc.).

Development Plan

- An overview of the integrated on-Site and area physical and operational transportation elements and strategies that enable the minimization of automobile-dependent travel for prospective residents and visitors while meeting the practical and operational needs of the Project.
- A review of the transportation elements of the Project including vehicular access and circulation, loading and parking facilities.

Site Planning

- A review of the adequacy of the vehicular parking supply provisions for the Project.
- A review of the bicycle parking supply provisions for the Project.
- A review of the adequacy of the loading space provisions for the Project.

Travel Demand Forecasting

- Assessment of the existing traffic activity patterns and volumes in the study area during the key weekday morning and afternoon peak periods.
- A review of traffic changes that may occur in the area in the future with the construction of other area development projects.
- An assessment of the trip generation characteristics of the Project.

Traffic Operations Review

- A review of traffic operations at intersections in the area under existing and future conditions including an assessment of the operational impacts of the Project.

EXISTING SITE

The existing Site consists of an apartment building within the southern portion of the Site and a supportive three-level parking garage with ground floor retail uses within the northern portion of the Site. Vehicular access to the existing parking garage is provided off Queen Street East, loading and short-term parking access is provided off Helene Street North, and vehicular pick-up/drop-off access to the existing apartment building is provided off Park Street East.

The apartment building will be retained as part of this application and contains 210 residential units; during the study period for this transportation assessment, 204 units were leased. The parking garage and surface parking area, which collectively contain 273 parking spaces (256 resident parking spaces and 17 visitor parking spaces) and will be demolished and replaced with a proposed mixed-use building as part of this application.

The Site location is illustrated in **Figure 1**.

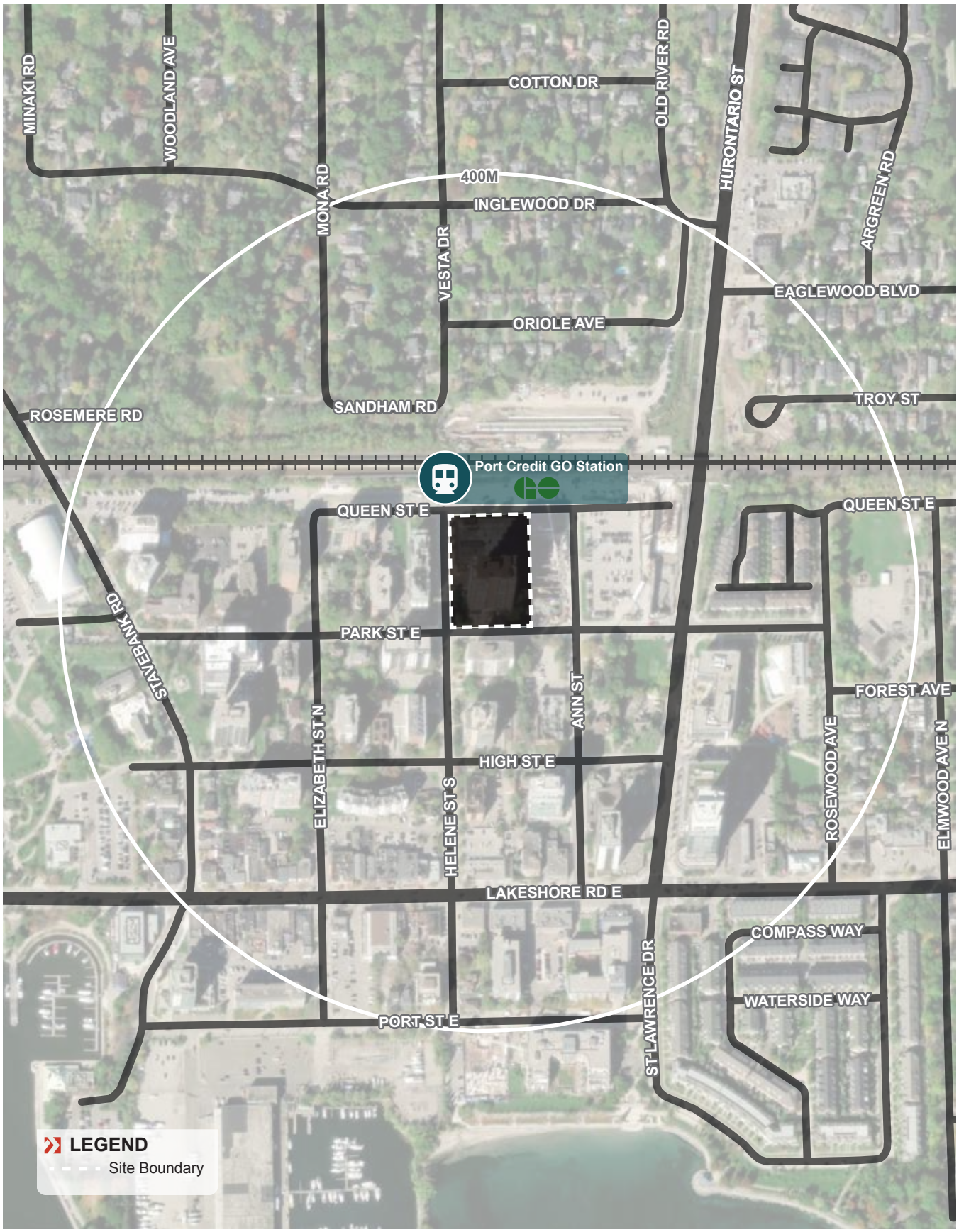
PROJECT SUMMARY

The Proposed Development would transform the block with the addition of a high-rise residential building with at-grade retail space and a day-care while retaining the existing apartment building within the southern portion of the Site.

The existing 3-storey parking garage and at-grade retail space will be removed to construct the proposed mixed-use building, situated within the northern portion of the Site. The mixed-use building will accommodate 530 residential units, 463 m^2 GFA of retail space, and 401 m^2 GFA of daycare space. The existing apartment building within the southern portion of the Site will be retained with approximately 210 residential units. Parking will be provided within an underground parking garage that serves both buildings.

A total of 610 parking spaces are provided on-site. In a below grade parking garage within the proposed mixed-use building, 495 resident parking spaces and 111 visitor parking spaces will be provided to serve the residents and visitors of the proposed mixed-use and existing apartment building on Site. In addition, 4 surface parking spaces will be provided for pick-up and drop-off and short-term parking usage, located adjacent to the proposed daycare facility.

The development program is summarized in **Table 1**. Reduced scale architectural plans are provided in **Appendix A**; the Site plan is illustrated in **Figure 2**.



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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 1 SITE LOCATION

TABLE 1 DEVELOPMENT PROGRAM

Use/Aspect	Type	Units / GFA / Description
Development		
Residential (Existing to be Maintained)	Studio	1 unit
	1-bedroom	106 units
	2-bedroom	102 units
	3-bedroom	1 unit
	Total	**210 units**
Residential (Proposed New Development)	Studio	86 units
	1-bedroom	230 units
	2-bedroom	214 units
	Total	**530 units**
Residential TOTAL (Site-wide)	Studio	87 units
	1-bedroom	336 units
	2-bedroom	316 units
	3-bedroom	1 unit
	Total	**740 units**
Retail (new)		463 m^2 GFA
Daycare (new)		401 m^2 GFA
Site Plan / Facilities		
Vehicular Parking	Resident Parking	495 parking spaces
	Visitor Parking	111 parking spaces
	Short-Term Parking *(to facilitate pick-up / drop-off activity during peak daycare hours and to accommodate couriers and deliveries during off-peak times)*	4 parking spaces
	Total	**610 parking spaces**
Bicycle Parking	Proposed Building – Long-Term	320 bicycle parking spaces
	Proposed Building – Short-Term	30 bicycle parking spaces
	Total	**350 bicycle parking spaces**
Loading	• Loading area provided adjacent existing building to replace existing loading area • 1 loading space provided at base of proposed building to facilitate residential waste collection	
Site Vehicle Access	• All vehicle access taken form Park Street East, east of the existing residential building. Site driveway provides access to both loading facilities, pick-up / drop-off parking spaces, and the ramp to the underground parking garage.	

Notes:
1. Site plan statistics provided by Arcadis IBI Group, dated January 25, 2023.

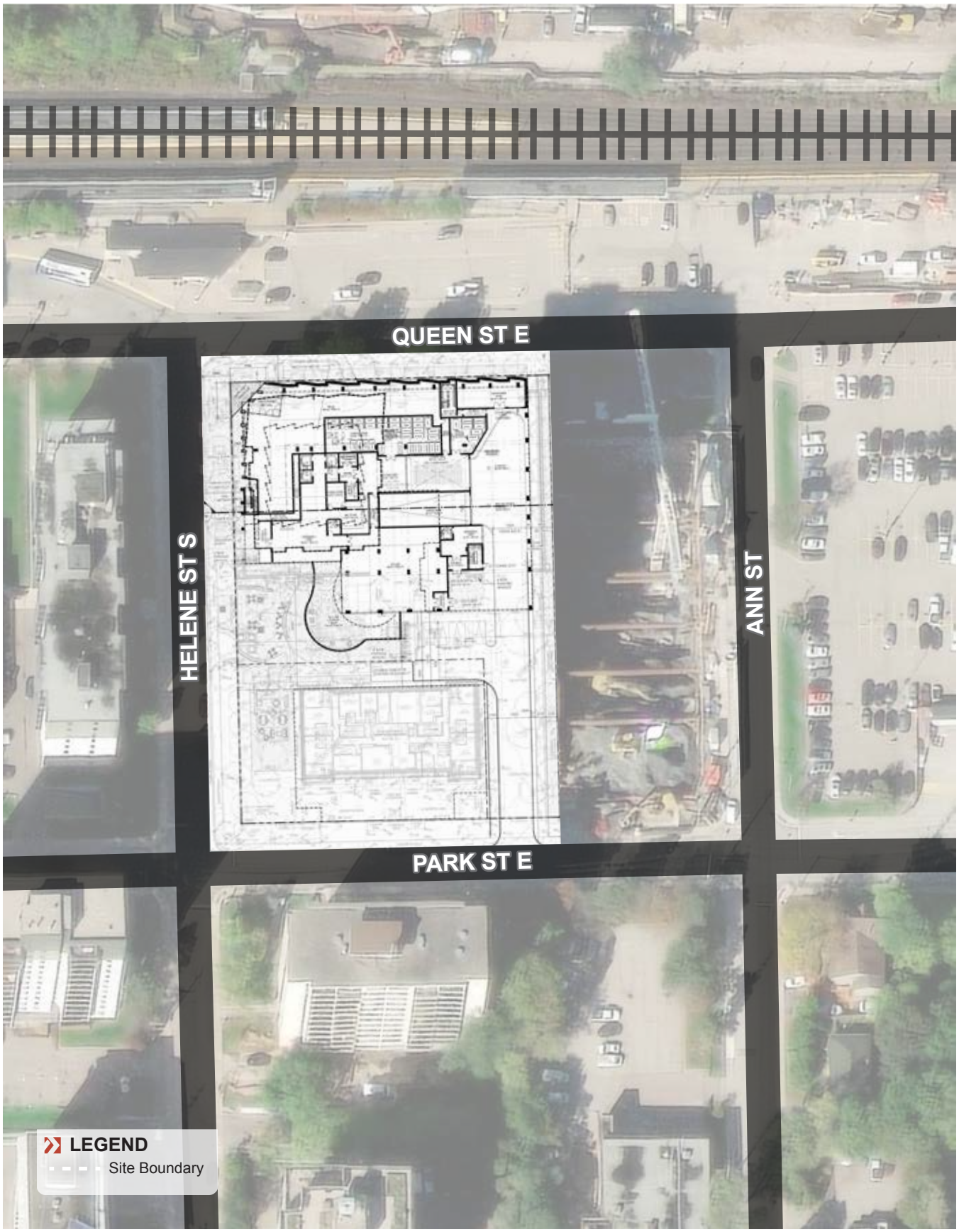

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FIGURE 2 SITE PLAN

II. RECOMMENDATIONS & CONCLUSIONS

BA Group has been retained by MPCT DIF 70 PARK STREET EAST LP to provide transportation consulting services in relation to the proposed redevelopment of the lands with the municipal addresses of 23, 25, 27, 29 and 31 Helene Street North, 53 Queen Street East, and 70 Park Street East. This Report forms part of an Official Plan Amendment and Zoning By-law Amendment being submitted to the city to permit the construction of the proposed development.

The existing 3-storey parking garage and at-grade retail space will be removed to construct the proposed mixed-use building, situated within the northern portion of the Site. The mixed-use building will accommodate 530 residential units, 463 m^2 GFA of retail space, and 401 m^2 GFA of daycare space. The existing apartment building within the southern portion of the Site will be retained with approximately 210 residential units. Parking will be provided within an underground parking garage that serves both buildings.

Transportation Context

1. The Site is located directly across the street from Port Credit GO Station, on the Lakeshore West GO rail line. Further, the Hurontario LRT, under construction and planned to open, will have its southern terminus stop at Port Credit be located 150 metres from the site, to its east.

2. GO Expansion is anticipated to significantly improve GO Rail service across the network, which will benefit the Site due to its proximity. A bus rapid transit (BRT) is planned across the southern extent of the City of Mississauga facilitating rapid local access along the waterfront.

3. Within proximity of the Site is the Waterfront Trail and the “Trail-to-GO” cycling route that primarily travels along Elizabeth Street in the area. Planned separated cycling infrastructure will be located on Hurontario Street and Lakeshore Road East in vicinity of the Site.

4. The local area experiences high pedestrian activity due to density and Port Credit being a tourist destination. The local area has many destinations in walking distance including residential, office, retail, parks, community centres, places of worship, and the Port Credit GO Station.

Transportation Demand Management Plan

5. 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.

6. Intersection improvements are proposed at the Ann Street / Park Street East intersection (signalization) and the Queen Street East / Helene Street North (all-way STOP control) which are intended to improve pedestrian safety, and therefore, to accommodate more walking activity. Other hard TDM measures include improved sidewalk conditions at Site frontages, provision of bicycle parking, and consideration of a bicycle repair station.

7. Proposed soft TDM measures include transit screen, provision of a transit pass, travel information brochures, unbundled vehicular parking, and consideration of a car-share program for building residents.

Vehicle Parking Considerations

8. The existing residential apartment building on-site is serviced by an above-ground parking garage and an adjacent surface parking area; 273 parking spaces are provided on-Site (256 resident parking spaces and 17 visitor parking spaces, shared with retail use). Given that the existing apartment building will remain but its parking garage will be demolished, parking supply servicing the existing building is a consideration for the proposed parking garage.

9. The proposed development is located within the City of Mississauga and is subject to 'Parking Precinct 1' requirements within Zoning By-Law 0225-2007. A total of 765 parking spaces are required, as per the provisions of Section 3.1.2.4 of the Zoning By-law. This includes 592 resident parking spaces and 170 non-resident parking spaces.

10. It is proposed to provide vehicular parking on-site at supply rates that are lower than those stipulated by City of Mississauga Zoning By-law 0225-2007, which are outlined below.
    - Residents: 0.65 parking spaces per unit
    - Residential Visitors: 0.15 parking spaces per unit, to be provided on a shared, non-exclusive basis with non-residential parking
    - Retail: None, but retail employees/visitors can use non-resident parking supply as permitted by By-law 0225-2007
    - Daycare: 4 short-term / pick-up/drop-off (PUDO) parking spaces at grade and daycare employees/visitors can share residential visitor supply as permitted by By-law 0225-2007

11. In total, the site plan includes 610 parking spaces, including 495 resident parking spaces, 111 residential visitor parking spaces (to be provided on a shared non-exclusive basis and shared with retail and daycare use), and 4 short-term / PUDO parking spaces.

12. Adoption of the proposed reduced parking standards is, given the above, considered to be appropriate based upon the following considerations:
    - Parking demand observed on-Site by BA Group contextualized by on-site parking space leasing behaviour which indicates true resident parking demand of 0.64 spaces per unit;
    - Numerous transportation planning principles that support reduced parking supplies;
    - The Site is adjacent to significant existing and planned transit services (Port Credit GO Station, planned Hurontario LRT, and Lakeshore Road Rapid Transit) and bicycle route facilities that provide non-automobile dependent travel connections across the City;
    - TDM measures proposed on-site;
    - Future area travel characteristics (planned Hurontario LRT forecasts a reduction in auto driver mode split to 52-55%);
    - Range of approvals for reductions in resident parking supply ratios for developments with less proximate access to a GO Station; and
    - Consistency with the recently approved parking rates for the neighbouring residential development at 78 Park Street East and 22 – 28 Ann Street.

13. The provision of a reduced visitor parking standard for the Site is considered appropriate based upon the following considerations:
    - Numerous transportation planning principles that support reduced parking supplies;
    - The Site adjacent to significant existing and planned transit services (Port Credit GO Station and planned Hurontario LRT and Lakeshore Road Rapid Transit) and bicycle route facilities that provide non-automobile dependent travel connections across the City;
    - Visitor parking supply is provided on-site today for the existing building to be retained at 0.08 parking spaces per unit and, as per parking utilization study conducted in October 2022, peak demand was observed at 0.05 parking spaces per unit on-Site.
    - The range of recent reduced residential visitor parking supply ratio approvals with less proximate access to a GO Station;
    - Consideration of the recently approved parking rates for the neighbouring residential development at 78 Park Street East and 22 – 28 Ann Street; and
    - Consideration of observed visitor parking rates for neighbouring proxy residential developments.

14. The retail use proposed as part of the application is considered to be ancillary and, as such, no parking has been proposed to be required for these uses. From a practical perspective, in the unlikely event that the ancillary non residential uses generate a greater than nominal vehicle need, these uses can be accommodated within the proposed residential visitor spaces which is appropriate for a mixed-use urban area.

Bicycle Parking Considerations

15. Bicycle parking requirements are specified in the City's Zoning By-law 225-2007. Application of these rates to the proposed development results in a bicycle parking requirement of 345 spaces, of which 318 are long-term spaces (called "Class A" in the By-law) and 27 are short-term spaces (called "Class B" in the By-law).

16. The current concept plan for Site illustrates the provision of 350 parking spaces including 320 long-term (resident) spaces and 30 short-term (visitor) spaces. This proposed bicycle parking supply meets and slightly exceeds the minimum requirements as per City-wide Zoning By-law 225-2007.

Loading Considerations

17. Waste collection / loading activity for the existing apartment building currently occurs on-site, outdoors, within the surface parking area accessed from Helene Street North.

18. The application of the minimum Zoning By-law loading requirements requires a total of two (2) loading spaces to be provided for the proposed new building.

19. It is proposed to provide two (2) loading spaces on-Site; both are accessed from the site driveway which is accessed from Park Street East.
    - One (1) outdoor loading space located adjacent the existing building to replace the existing outdoor loading area.
    - One (1) loading space, consistent with the requirements set out in the Mississauga Zoning By-law and Peel Waste Collection design standards (3.5 m width, 9.0 m length, and 7.5 m height), located within the base of the proposed building.

20. The proposed loading arrangements are appropriate and will facilitate the manoeuvring needs of the vehicles that will make deliveries to the proposed development.

Pick-Up and Drop-Off Considerations

21. To accommodate short-term and pick-up / drop-off (PUDO) demand at the site, primarily associated with the daycare use (capacity: 30 children), four (4) at-grade parking spaces are provided, located adjacent to the proposed daycare facility.

22. Based upon a range of survey data, an average peak accumulation rate of 0.10 vehicles per child was calculated. Applying this rate to the proposed daycare facility (which has a planned capacity of 30 children) results in an anticipated peak accumulation of approximately 3 vehicles. Based on this assessment, the proposed daycare PUDO parking supply of 4 spaces will adequately accommodate daycare PUDO demand.

23. Short-term and PUDO parking demand associated with the planned daycare use is expected to occur at the beginning and end of daytime periods when drop-off and pick-up typically occur at the daycare. Outside of these time periods, it is anticipated that daycare PUDO demand will be minimal, and the parking spaces can be used for other purposes, including couriers and food deliveries.

Traffic Forecasting and Analysis

24. Baseline existing traffic volumes for intersections within the study area for vehicles, cyclists, and pedestrians were established for the weekday morning and afternoon peak hour periods on the area street network based on intersection traffic information collected by Spectrum Traffic Data Inc. on behalf of BA Group, and additional data provided by the City of Mississauga.

25. Due to construction of the LRT ongoing at the intersection of Hurontario Street and Park Street East, pre-construction traffic counts (dated 2015) were utilized for this intersection. Existing turning movement counts at other area intersections were reviewed for consistency with the ‘main’ intersection at Hurontario Street and Park Street East. Through traffic volumes at intersections along Park Street East were conservatively balanced up to match the pre-construction volumes.

26. Corridor growth rates have been provided by the City and were obtained using the City’s Travel Demand Model and supporting traffic count data.

27. Following a review of area developments within the City of Mississauga, specific allowances have been made to account for new traffic generated by nine other area development proposals in the vicinity of the site.

28. Vehicular trip generation adopted for the proposed residential component of the development was based upon existing site trip generation characteristics for the residential component of the site. For the planned daycare use, trip generation is based on proxy sites from the Toronto area – given the advantageous transit context of the development lands. New retail use on the site is considered to be ancillary in nature (no external vehicle trips generated), given its relatively small floor area and the mixed-use nature of the site.

29. The site is expected to generate a total of **125** and **130** new vehicular trips in the weekday morning and afternoon peak hours, respectively.

30. Residential traffic distribution patterns are based upon a review of information from the 2016 Transportation Tomorrow Survey (TTS) and observations of existing traffic patterns in the area.

31. An analysis of the study area intersections was undertaken using Synchro version 11 and the *Highway Capacity Manual (HCM)* methodologies.

32. The intersection of Park Street East / Ann Street is currently operating under two-way STOP control and is proposed to be converted to a signalized intersection in future. This change would ensure that queueing activity along Park Street East can be contained and not spillback onto Hurontario Street during peak hours.

33. Site traffic volumes can be appropriately accommodated at the network signalized intersections with the Hurontario LRT through basic signal timing adjustments.

34. All unsignalized intersections will operate at acceptable levels of service (LOS B or better) under all analysis scenarios.

TECHNICAL ASSESSMENT

1.0 TRANSPORTATION PLANNING & POLICY CONTEXT

Urban transportation policies from the provincial, regional, municipal, and local levels have been identified, and the key transportation-related elements are summarized below.

1.1 PROVINCIAL POLICIES

The **Provincial Policy Statement (PPS)** is issued under the authority of Section 3 of the Planning Act. With respect to transportation systems, Part V of the PPS, through the Policies in Section 1.6.7, promote maintaining and improving connectivity within and among transportation systems and modes (1.6.7.3) as well as a land use pattern, density and mix of uses that minimize the length and number of vehicle trips and support current and future use of transit and active transportation (1.6.7.4). The proposed density, integration of residential and retail uses and reduced parking standards for the Site support this policy direction.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020) provides a framework for implementing the Government of Ontario's vision for building stronger, prosperous communities within the Greater Golden Horseshoe area. The Plan supports a transportation system that exhibits connectivity amongst modes, a balance of modal choices for users of the system with priority given to walking, cycling, transit and, sustainability (i.e. economical and environmentally appropriate). The Plan identifies priority transit corridors and major transit station areas (MTSA) – the Site is located within an MTSA and adjacent to two priority transit corridors – whereby growth and planning are prioritized. It is further noted that within MTSAs, development is to be supported by alternative development standards including reduced parking standards. Furthermore, the Growth Plan directs municipalities to adopt Transportation Demand Management policies aimed to reduce trip distance and time and increase modal share to alternatives other than the automobile.

The proposed development fulfills a number of transportation related policy directions, by intensifying land use at the intersection of two priority transit corridors and mixing commercial and residential land uses to permit and encourage the uptake of active transportation options and ensure the viability of planned transit.

The **Metrolinx 2041 Regional Transportation Plan (RTP)**, an update to The Big Move (2008), specifies a series of planned higher order public transit projects, including the Hurontario LRT. A key strategy of the plan is the integration of transit and land use by focusing development at mobility hubs and major transit station areas. The RTP identifies the Port Credit GO Station (including the Site area) as a Mobility Hub and additional framework was developed to help guide development in these areas (see below for information on the Mobility Hub Guidelines). The RTP also speaks to embedding TDM strategies in land use planning and development to prioritize cycling, walking and transit use and encourages best practices in parking management, such as reducing minimum parking standards especially for developments near transit stations.

The **Metrolinx Mobility Hub Guidelines (2011 & currently under review)** built on the strategy of the RTP and provide a framework to help plan development at mobility hubs across the GTHA, ensuring that these areas surrounding key transit stations support more intense development and accommodate strong pedestrian, cycling, and transit facilities. In conjunction with improving non-vehicular transportation infrastructure, the Guideline recommends minimizing auto-use through the implementation of parking maximums to limit excess parking supply and suggests reviewing and possibly removing minimum parking standards in areas that have high accessibility to rapid transit stations.

The proposed parking reduction for the development is consistent with Metrolinx's policies for Site's located within a mobility hub and in close proximity to higher-order transit.

1.2 REGIONAL POLICIES

The **Region of Peel Official Plan (OP)**, recently updated in 2022 and approved by the Ontario Minister of Municipal Affairs and Housing, provides coordinated planning in the Peel region through long-term policies with an intention of promoting sustainable forms of transportation. Regional policies include Regional Intensification Corridors and major transit station areas (in alignment with the 2020 Ontario Growth Plan), which intend to achieve higher density mixed-use development oriented to higher order transit.

Notable policies in the Region OP that have influenced the proposed development include:

> *5.6.17.15 Encourage the local municipalities to adopt alternative development standards and policies within Strategic Growth Areas to promote the use of active transportation and public transit, such as reduced parking standards.*
> *5.6.19.4 Develop and enhance active transportation connections and infrastructure (including sidewalks and multi-use paths) to transit stations and stops to support complete communities, improve multi-modal station access, and to support the Region's modal split target by increasing transit ridership in Peel.*
> *5.6.19.10 The local municipalities shall undertake comprehensive planning for Primary and Secondary Major Transit Station Areas to address the following matters to the satisfaction of the Region:*
>
> > *p) alternative development standards to support development within all Major Transit Station Areas, such as reduced parking standards and built forms.*
>
> *5.10.34.15 Encourage the local municipalities, relevant agencies and the private sector to develop parking management strategies that make more efficient use of parking resources and that encourage the use of sustainable transportation modes.*
> *5.10.34.16 Encourage the local municipalities to update their parking and zoning by-laws to support and facilitate transportation demand management measures.*
> *5.10.34.48 Encourage efficient fuel use and conservation by promoting transportation demand management programs, linked trips, the use of Intelligent Transportation Systems and the use of public transit and active transportation.*

The **Peel Region Sustainable Transportation Strategy (STS)**, approved by Peel Region Council in February 2018, is a framework outlining policies, programs and infrastructure in order to enable and grow the sustainable transportation modes in Peel Region. Most notably, the STS sets a goal for 50% of the morning peak period trips in the Region to be made by sustainable transportation modes by 2041, up from the current 37% sustainable mode share. The STS identifies sustainable transportation modes as trips made by walking, cycling, transit, and carpool as well as trips avoided through teleworking.

Overall, the purpose of the STS is to ensure future growth in the Region prioritizes environmental, societal and economic sustainability through encouraging a Regional transportation system that is safe, convenient, efficient, multi-modal, well-integrated and sustainable.

Over fifty actions items are identified in the STS, consisting of both short-term and long-term recommendations. The short-term priorities of the STS are supported by two accompanying five-year implementation plans, the 2018-2022 Active Transportation Implementation Plan (ATIP) and the 2018-2022 Transportation Demand Management Implementation Plans (TDMIP). Examples of short-term priorities include encouraging and supporting cycling and walking from transit hub and other community destinations as well as identifying the locations of new and upgraded walking and cycling infrastructure.

1.3 MUNICIPAL POLICIES

The **City of Mississauga Official Plan (OP)** contains direction and policies which link land use and transportation stressing multi-modal accessibility to support the daily needs of residents and businesses. The Official Plan puts an emphasis on directing growth towards higher order transit such as Hurontario Street and also identifies Port Credit Community Node as an Intensification Area. Policies in the Official Plan set out development criteria for Intensification Areas. Among these are provisions for promoting multi-modal transportation and avoiding excessive car-traffic on the road system within the intensification area. The Site is located within the Intensification Area and adjacent to Hurontario Street and, as such, the policies related to transportation provide relevant guidance for the development of the Site. The development proposes a reduced parking rate which is supportive of the City of Mississauga OP's vision.

The City is currently undertaking the process of reviewing and updating the plan to ensure it reflects the changing needs, opportunities and aspiration 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 and Regional Official 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 a MTSA boundary (i.e. centred around Port Credit GO Station / LRT stop). Further planning should be explored to enhance existing conditions at the site level, including encouraging mixed uses and increasing walkability.

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 by January / February 2023.

The **Mississauga Transportation Master Plan (TMP)** is guided by the vision that everyone and everything will have the freedom to move safely, easily, and efficiently to anywhere at any time. The TMP outlines opportunities to re-think transportation priorities, manage public right-of-ways, smart management of traffic and parking, and invest in walking, cycling and transit infrastructure. Key actions of the plan include:

- The creation of Complete Street design guidelines;
- Updating engineering design standards to prioritize the safety of vulnerable road users and remove barriers to accessibility;
- Update City-wide parking provisions policies in line with the Parking Matters study recommendations (discussed below);
- Develop TDM requirements for new developments
- Identify and address gaps in the pedestrian network;
- Complete a comprehensive review of the City's long-term transit network;
- Expand the bicycle parking supply city-wide, in line with the Cycling Master Plan; and
- Establish implementation program for long term Cycling Network, following the Cycling Master Plan.

The Site is located in a Community Node, which the TMP identifies as a focal point for more intense mixed use development, decreasing auto dependency and improving transit, cycling, and pedestrian networks. The proposed development, which includes compact urban form, reduced parking rates, bicycle parking and other TDM measures is in line with the TMP's vision for a Community Node.

The City's **Cycling Master Plan** 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.

The site supports the City's Cycling Master Plan with the provision of both long-term and short-term bicycle parking spaces. This supply can assist in the accommodation of the proposed parking reduction and helps to foster the cycling culture within the City through its close proximity to prominent cycling routes, particularly those proposed along Hurontario Street (multi-use trail / cycle track) and the Park Street East (shared route) frontage of the site. Cycling infrastructure is provided on-site and in its surrounding area.

1.4 LOCAL AREA PLANNING POLICY UPDATE

The Port Credit Local Area Plan outlines a vision for the Port Credit area that includes a mix of uses and building densities, directing growth to support transit, supporting active modes of travel and a significant public realm. The Site is located within the Community Node Area which is intended to be the focal point for the surrounding neighbourhood and contain many of the attributes of a complete community (compact walkable urban form, range of housing options and land uses, access to community amenities). Emphasis is placed on the development of a multi-modal transportation system within Port Credit to serve all users, particularly to support the existing and planned public transit infrastructure in the area (see **Section 2.1.2**).

Site 12 as designated by Section 13.1.12 of the Mississauga OP – Local Area Plan

The Port Credit Local Area Plan designates the lands immediately east of the Site as Special Site 12 and contains further development directives. Examples of transportation-related directives include:

- Demonstrating how transit use, pedestrian circulation, cycling, car and bike sharing, car-pooling, shared parking and other travel demand management measures will be achieved.
- Reduced, transit supportive parking standards are encouraged for future development within the Port Credit GO Station Southeast Area.

Although not directly applicable since the Site is not located within these lands, the proposed development is consistent with many of these transportation-related directives, including reduced transit supportive parking standards and the provision of a series of TDM measures to promote alternative modes of travel.

Port Credit GO Station Southeast Area Master Plan Study (2015) was prepared to support the City of Mississauga's OP and the Port Credit Local Area Plan policy requirements and provides direction on development (land use, built form, transportation). The Master Plan supports a variety of non-vehicular transportation modes and encourages reduced transit-supportive parking standards for lands within the Port Credit GO Station Southeast Area.

The **Lakeshore Connecting Communities Transportation Master Plan (TMP)**, endorsed by City Council in June 2019, sets out a long-term vision for transit and corridor improvements along Lakeshore Road from 2020 to 2041 that will support waterfront development. The TMP envisions the Lakeshore Road corridor as an area that supports all modes of transportation, connects people to places, and moves goods to market. The TMP identifies a preferred rapid transit solution for the Lakeshore Road from the Long Branch GO Station in the east to Mississauga Road in the west, discussed further in **Section 2.1.2**.

2.0 AREA TRANSPORTATION CONTEXT

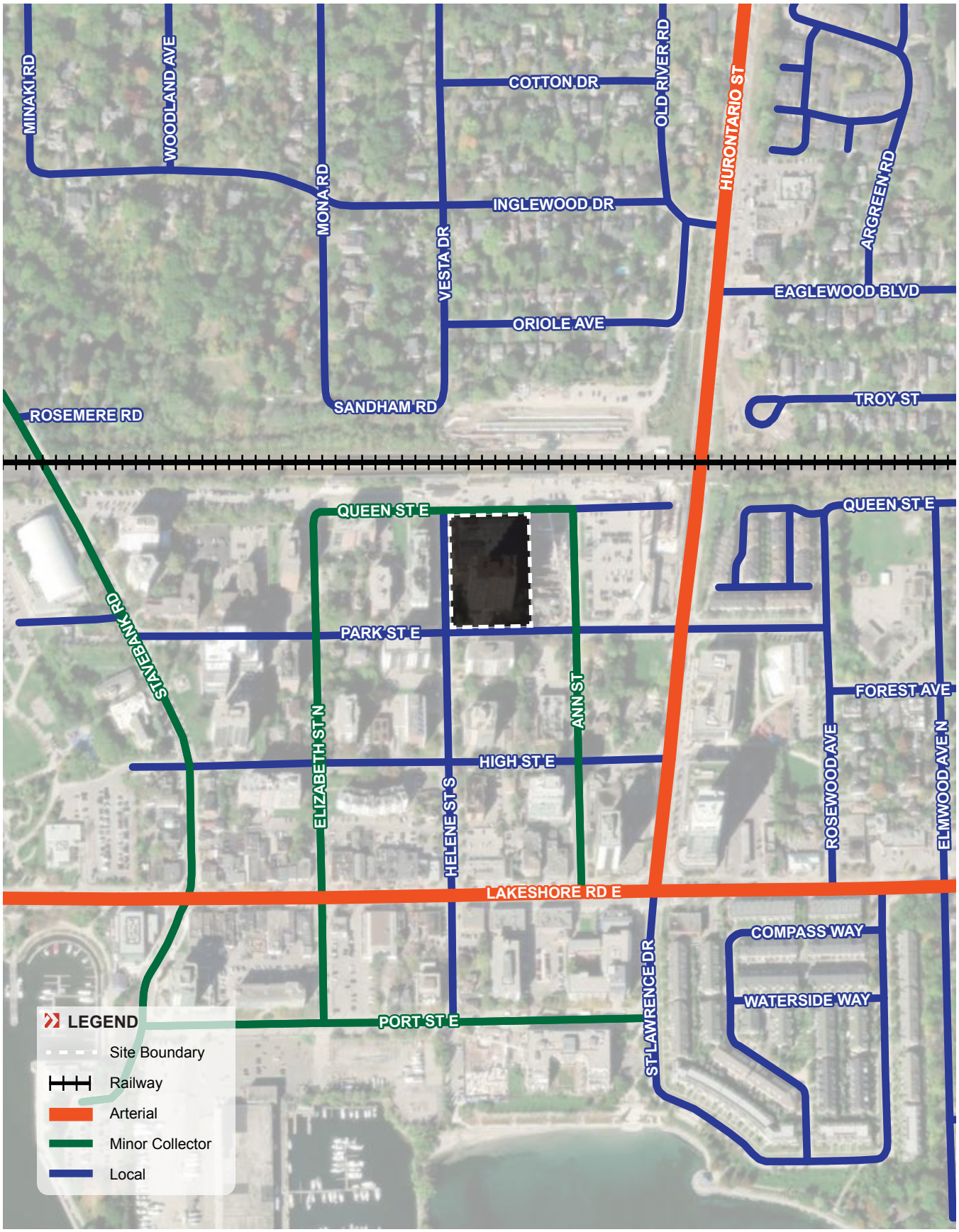
2.1 AREA STREET NETWORK

2.1.1 Existing Street Network

The surrounding public area road network is discussed in **Table 2** and illustrated in **Figure 3**. The area road configuration and traffic control is illustrated in **Figure 4**.

TABLE 2 EXISTING STREET NETWORK

Road Type		Road Name	Road Extents	Road Right-of-Way and Parking Restrictions	Speed Limit
Major Arterial	N-S	Hurontario Street	The roadway extends from Lakeshore Road East in the south to Steeles Avenue East (City of Brampton) in the north, where it continues north as Main Street and Provincial Highway 10.	In the vicinity of the Site, the roadway has a 4-lane cross section (2 lanes in each direction), with auxiliary lanes for left-turns and right-turns. Due to construction of the Hurontario LRT, the roadway has been reduced to a 2-lane cross section at the time of this submission. Parking is not permitted at any time.	Posted: 50 km/h
Minor Collector	N-S	Ann Street	The roadway extends from Lakeshore Road in the south to Queen Street East in the north.	In the vicinity of the Site, the roadway has a 2-lane cross section with 1 lane in each direction. Parking is not permitted at any time on the east side of the street. On the west side, parking is permitted south of Park Street East wherein paid parking is enforced with a 3 hour daily maximum from Monday-Saturday from 10am to 9pm and Sundays from 10am to 6pm.	Assumed: 40 km/h
		Elizabeth Street	The roadway extends from Port Street in the south to Queen Street East in the north.	From Queen Street East to Park Street East, the roadway has a 2-lane cross section and only permits traffic in the south direction. The eastern lane becomes a left turn lane at the Park Street East intersection. South of Park Street East, within the Site vicinity, the roadway has a 2-lane cross section with 1 lane in each direction. Parking is permitted only on the east side of the roadway in the vicinity of the Site.	Assumed: 40 km/h
	E-W	Queen Street East	The roadway extends from Elizabeth Street North in the west to Anne Street in the east.	From Helene Street North in the west to Ann Street in the east, the one-way roadway is without lane markings and only permits traffic in the west direction. From Elizabeth Street North in the west to Helene Street North in the east, north of the roadway is a dedicated bus loop servicing Port Credit GO Station. Parking is not permitted at any time within the roadway.	Assumed: 40 km/h
Local	East-West	Park Street East	The roadway extends from Stavebank Road in the west and Rosewood Avenue in the east.	In the vicinity of the Site, the roadway has a 2-lane cross section with 1 lane in each direction. Parking is not permitted at any time.	Assumed: 40 km/h
		Helene Street North	The roadway extends from Queen Stret East in the north to Port Street East in the south.	In the vicinity of the Site, the roadway has a 2-lane cross section with 1 lane in each direction. In the vicinity of the Site, parking is permitted only on the east side of the roadway wherein paid parking is enforced with a 3 hour daily maximum from Monday-Saturday from 10am to 9pm and Sundays from 10am to 6pm.	Assumed: 40 km/h



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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

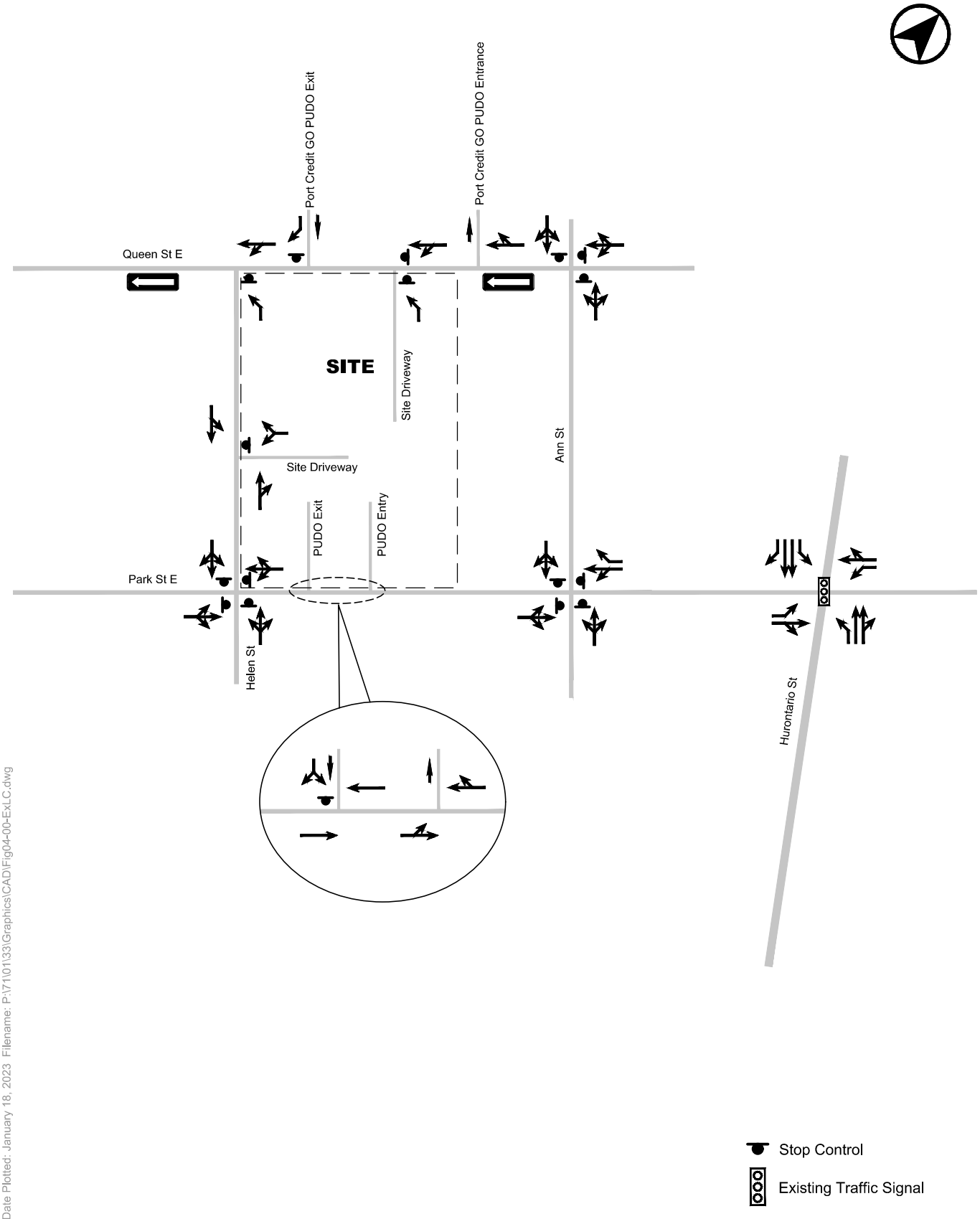

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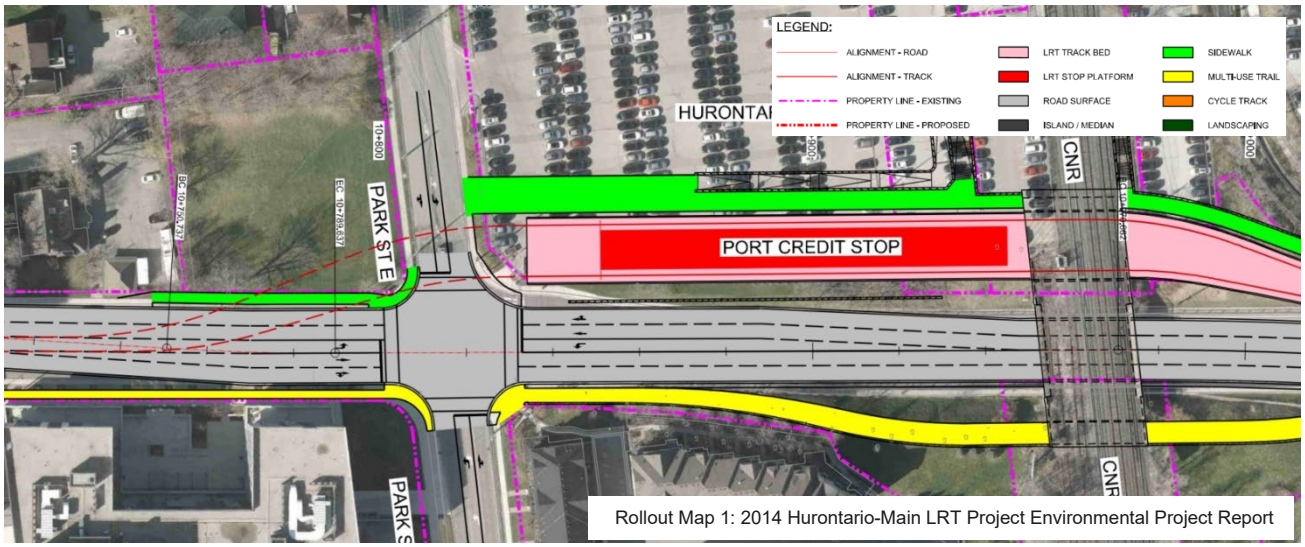
FIGURE 4 EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

2.1.2 Evolving Street Network

Preferred road conditions along Hurontario Street and Lakeshore Road have been identified within the *Hurontario LRT Environmental Project Report (2014)* and the *Lakeshore Connecting Communities Transportation Master Plan (2019)* as part of the proposed Hurontario LRT and the Lakeshore BRT, respectively.

Hurontario Street

Alongside Hurontario Street at the Park Street East intersection, the pre-existing lane configuration (i.e. prior to LRT construction) will be largely maintained, although a dedicated southbound right turn lane will not be re-constructed (the curb lane will be a shared through-right lane). A multi-use trail will be added on the east side of the roadway. A section of the rollout map taken from the *2014 Hurontario-Main LRT Project Environmental Project Report* is provided below, illustrated the intersection under future conditions including the LRT terminus.

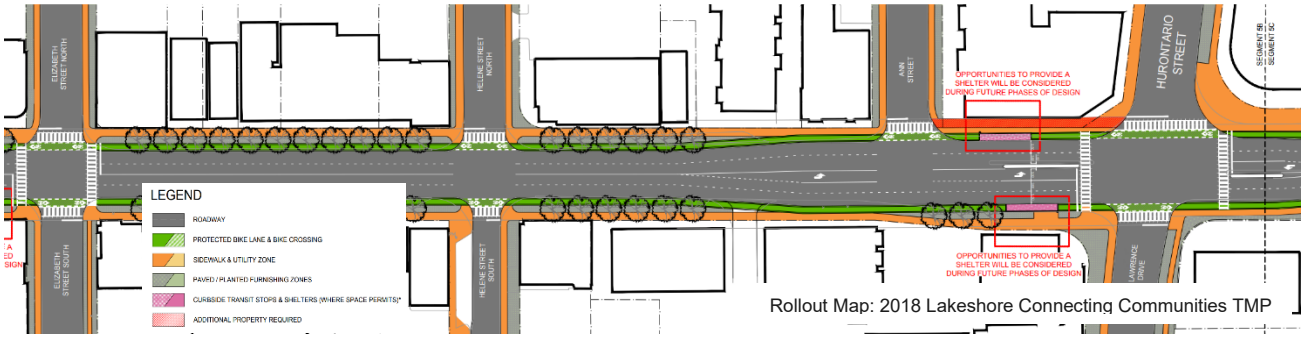


Rollout Map 1: 2014 Hurontario-Main LRT Project Environmental Project Report

EXHIBIT 1: HURONTARIO STREET ROLL PLAN (HURONTARIO LRT)

Lakeshore Road East

As part of the Lakeshore Connecting Communities TMP, the existing lane configuration will be largely maintained, although a dedicated eastbound right turn lane at Hurontario Street / St. Lawrence Drive will be removed. Protected in-boulevard bike lanes and intersection crossings will be implemented.



Rollout Map: 2018 Lakeshore Connecting Communities TMP

EXHIBIT 2: LAKESHORE ROAD EAST ROLL PLAN (LAKESHORE BRT)

2.2 AREA TRANSIT NETWORK

2.2.1 Existing Transit Context

The Site is located in close proximity to Port Credit GO Station and is well served by a number of frequent bus routes that provide transit connections to various regional and local rapid transit lines, as well as retail, employment, and education areas within the GTHA.

2.2.1.1 GO Transit

Port Credit GO Transit station, on the Lakeshore West GO rail line, is located across the street from the Site on its north side. The Lakeshore West GO line runs from Union Station in downtown Toronto to Hamilton with some routes extending further into St. Catharines and Niagara Falls, as shown in **Exhibit 3**. This route includes key destinations across Hamilton, Burlington, Oakville, Mississauga, and Toronto and provides connections to major transit lines provided by HSR, Burlington Transit, Oakville Transit, TTC, and MiWay.

Using the Lakeshore West GO line, a train commuter can travel from Port Credit GO Station to Union Station in downtown Toronto in less than 30 minutes.

Port Credit GO Station currently has several parking areas (reduced due to Hurontario LRT construction) comprising free, car-pool only and rented spaces. Metrolinx has been engaged in a master planning exercise for redevelopment plans for the southeast station area, through which the addition of residential and non-residential development is proposed.

EXHIBIT 3: METROLINX GO TRANSIT SYSTEM MAP

2.2.1.2 MiWay

MiWay is the City of Mississauga's municipal transit provider. The Site is well-served by several MiWay routes that have stops at the Port Credit GO Station bus loop, located within 100 metres of the Site's northern boundary.

The existing area transit context is summarized in **Table 3** and is illustrated in **Figure 5**.

TABLE 3 AREA TRANSIT ROUTES

Route		Headway (Weekday Peaks)	Closest Stop	Route Description
GO Transit	Lake Shore West	15 minutes	Port Credit GO Station (~50 metres / ~1-minute walk)	The Lake Shore West GO Rail Line generally operates between Union Station in the east and the West Harbour GO Station and Hamilton GO Centre in the west. Occasionally, some trips will continue to the St.Catharines GO and Niagara Fall GO.
MiWay	2 Hurontario	~10 minutes	Port Credit GO Station Bus Loop (~100 metres / ~1-minute walk)	The 2 Hurontario bus route primarily runs north-south along Hurontario Street, between Port Credit GO Station in the south and the City Centre Transit Terminal at Square One in the north.
	8 Cawthra	~15-20 minutes	Port Credit GO Station Bus Loop (~100 metres / ~1-minute walk)	The 8 Cawthra bus route primarily runs north-south along Cawthra Road, between Port Credit GO Station in the south and the City Centre Transit Terminal at Square One in the north.
	14 Lorne Park	~30-40 minutes	Port Credit GO Station Bus Loop (~100 metres / ~1-minute walk)	The 14 Lorne Park bus route runs primarily east-west between Clarkson GO Station in the west and Port Credit GO Station in the east, predominantly via Mississauga Road and Indian Road.
	14A Lorne Park	~30-40 minutes	Port Credit GO Station Bus Loop (~100 metres / ~1-minute walk)	The 14A Lorne Park bus route runs primarily east-west and provides service along the 14 Lorne Park route, but also serves the industrial area south of Royal Windsor Drive in the west. It is noted this route still serves the Clarkson GO Station and Port Credit GO Station, predominantly via Mississauga Road and Indian Road.
	23 Lakeshore	~11-17 minutes	Port Credit GO Station Bus Loop (~100 metres / ~1-minute walk)	The 23 Lakeshore bus route runs primarily east-west extending between Clarkson GO Transit station in the west and Long Branch GO Transit Station in the east. This route provides service via Lakeshore Road and also has a stop at the Port Credit GO Transit Station.

2.2.2 Evolving Transit Context

2.2.2.1 MiWay Five-Year Transit Service Plan

The **MiWay Five Year Transit Service Plan (2021-2025)** is intended to help refine and guide the expansion of the City's transit network by improving connectivity and delivering services that are fast, efficient and easy to use. While the MiWay Five Year Transit Service Plan is near completion, it was put on hold due to COVID-19 business impacts. While specific improvements have not been confirmed, the plan is guided by four key principles to build on the changes made over the previous 5-year service plan. The key principles are described below:

- **Public Feedback:** integrating stakeholder and public input to help shape future transit services.

- **Transportation Initiatives in the Community**: Respond to upcoming changes such as:
    - Opening of the new Kipling Bus Terminal,
    - Construction of the Hurontario LRT with anticipated completion in the fall of 2024,
    - GO Transit service improvements, and
    - The development of Pearson Airport as a major transit hub.

- **Examination of New Transportation Options**: evaluating how new transportation services, such as private rideshare companies, can be integrated and how they will impact future transit services.

- **Supporting Growth**: ensuring that future transit services effectively plan for and respond to new policy initiatives, such as the Housing Strategy, Dundas Connects Master Plan, Transportation Master Plan, and Climate Change Project.

These improvements are anticipated to increase the transit mode share and provide an alternative mode of transportation across the City of Mississauga as well as greater connectivity to neighbouring municipalities. Within the Site vicinity, the construction of the Hurontario LRT (which terminates at the Port Credit GO Station) and GO Transit service improvements will significantly enhance the area's transit accessibility.

2.2.2.2 GO Expansion / Regional Express Rail Program

GO Expansion, previously known as the GO Regional Express Rail (RER) program (originally announced in 2011), is anticipated to fundamentally change regional transit travel in the Greater Toronto Area. As part of the GO Expansion program, frequent two-way, all-day, 15-minute service will be provided along corridors that have been traditionally commuter oriented, including the Lake Shore West Line, overall providing better connectivity to existing (and future) regional transit infrastructure. This will significantly improving the Site's regional transit access and enable a 20-min door-to-door trip or better to Union Station at any time of day.

On April 19, 2022, Metrolinx and Infrastructure Ontario (IO) executed an agreement with ONxpress Transportation Partners (ONxpress) to enter the two-year Development Phase of the On-Corridor Works project, the largest project within the GO Expansion project. The On-Corridor Works project includes all works that facilitate train service, such as track, civil infrastructure, signalling, electrification infrastructure and electric vehicles, as well as the operations and maintenance of the GO rail network.

As part of the GO Expansion program, a new GO station, the Confederation GO Station, will be constructed in Hamilton, near the intersection of the Queen Elizabeth Way (QEW) and Centennial Parkway North. This expansion will further improve the transit accessibility afforded to Site residents and visitors within the GTHA.

2.2.2.3 Metrolinx Regional Transit Plan

As discussed in **Section 1.1**, Metrolinx's RTP outlines several transit improvement programs within the Site vicinity which will further enhance the area's transit access and will provide excellent and efficient access between Port Credit and Downtown Mississauga and other areas in the GTHA. Key improvements include the Hurontario-Main Light Rail Transit and higher-order transit along Lakeshore Road, discussed in detail below.

Hurontario-Main Light Rail Transit
In addition to GO Expansion, the Hurontario-Main Light Rail Transit (The Hurontario LRT) will be one of the most significant transit improvement to the proposed development Site area. A new LRT line will be provided along the Hurontario Street corridor connecting Brampton's Gateway Terminal in the north and Port Credit GO Station in the south. The Hurontario LRT will run generally at grade in a segregated lane, separate from other road traffic and will use grade-separated crossings at rail lines and highways as required.

The Hurontario LRT is planned to open in 2024, and will add 18 kilometres of higher-order transit and 19 stops along the Hurontario corridor, starting from Brampton Gateway Terminal extending southwards to the Port Credit GO Station, with connections to the Milton GO Line at Cooksville GO Station and the Lakeshore West GO Line at Port Credit GO Station.

As the Site is located less than 150 metres from the planned Port Credit LRT Stop, the Site is afforded rapid transit connections through Hurontario Street, connecting to a number of MiWay bus lines and providing convenient access to employment, school, and retail options throughout the City.

The *Hurontario LRT Benefits Case Analysis*, prepared by Steer Davies Gleave (March 2016), considers the impact of the LRT line from a travel mode share perspective. The forecast for future transit mode share along the Hurontario – Main corridor anticipates a substantial shift in mode share from 24% to 49% with the introduction of the LRT, approximately doubling the transit mode share along the corridor. Applying the same percentage shift in mode split to the Site's existing transit mode split results in an increase from 14% to 29%.

Lakeshore Road Rapid Transit

The Lakeshore Connecting Communities Transportation Master Plan (TMP), endorsed by City Council in June 2019, sets out a long-term vision for transit and corridor improvements along Lakeshore Road from 2020 to 2041 that will support waterfront development.

Of the transit network alternatives considered in the TMP, the preferred transit solution for the 2041 horizon year is express bus / bus rapid transit (BRT) along Lakeshore Road from the Long Branch GO Station in the east to Mississauga Road in the west. Between East Avenue and Mississauga Road, where the Site is located, the BRT will operate in mixed traffic. The closest stop to the Site will be located at Hurontario Street, within a 5-minute walk from the Site. The preferred Right-of-Way along Lakeshore Road, as illustrated in the TMP, is shown below in **Exhibit 4**.

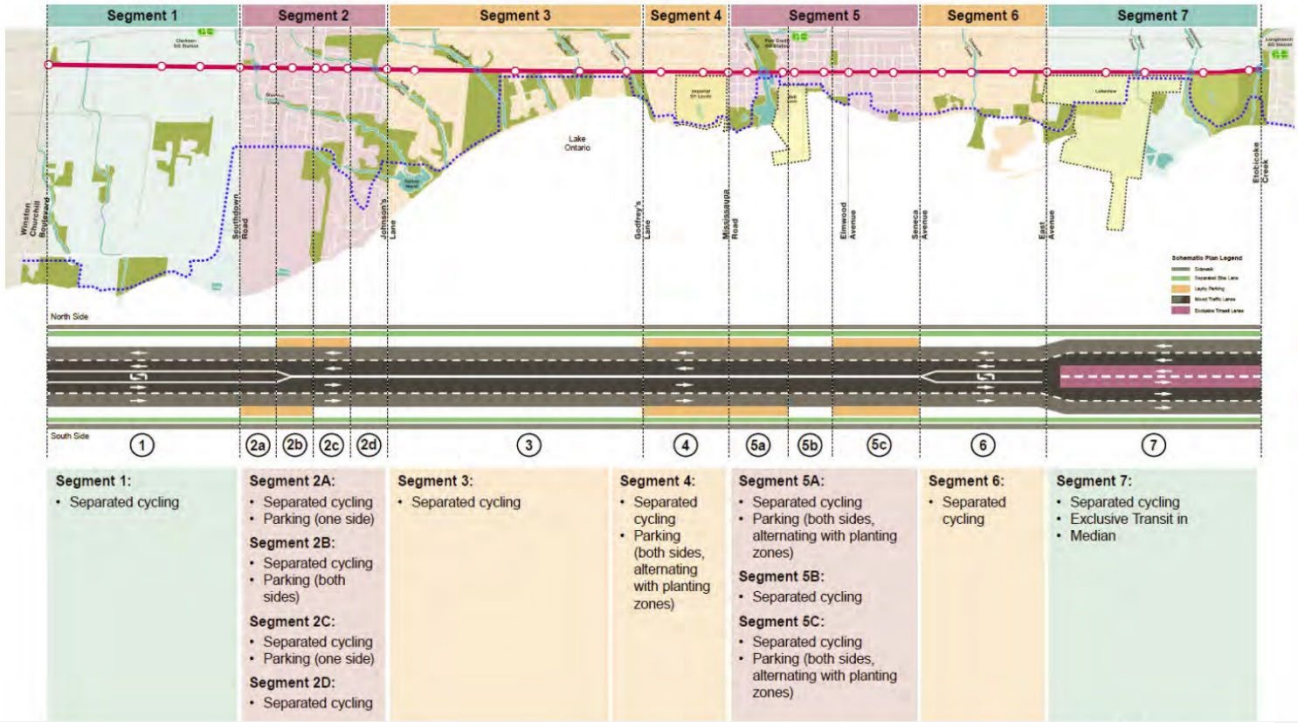
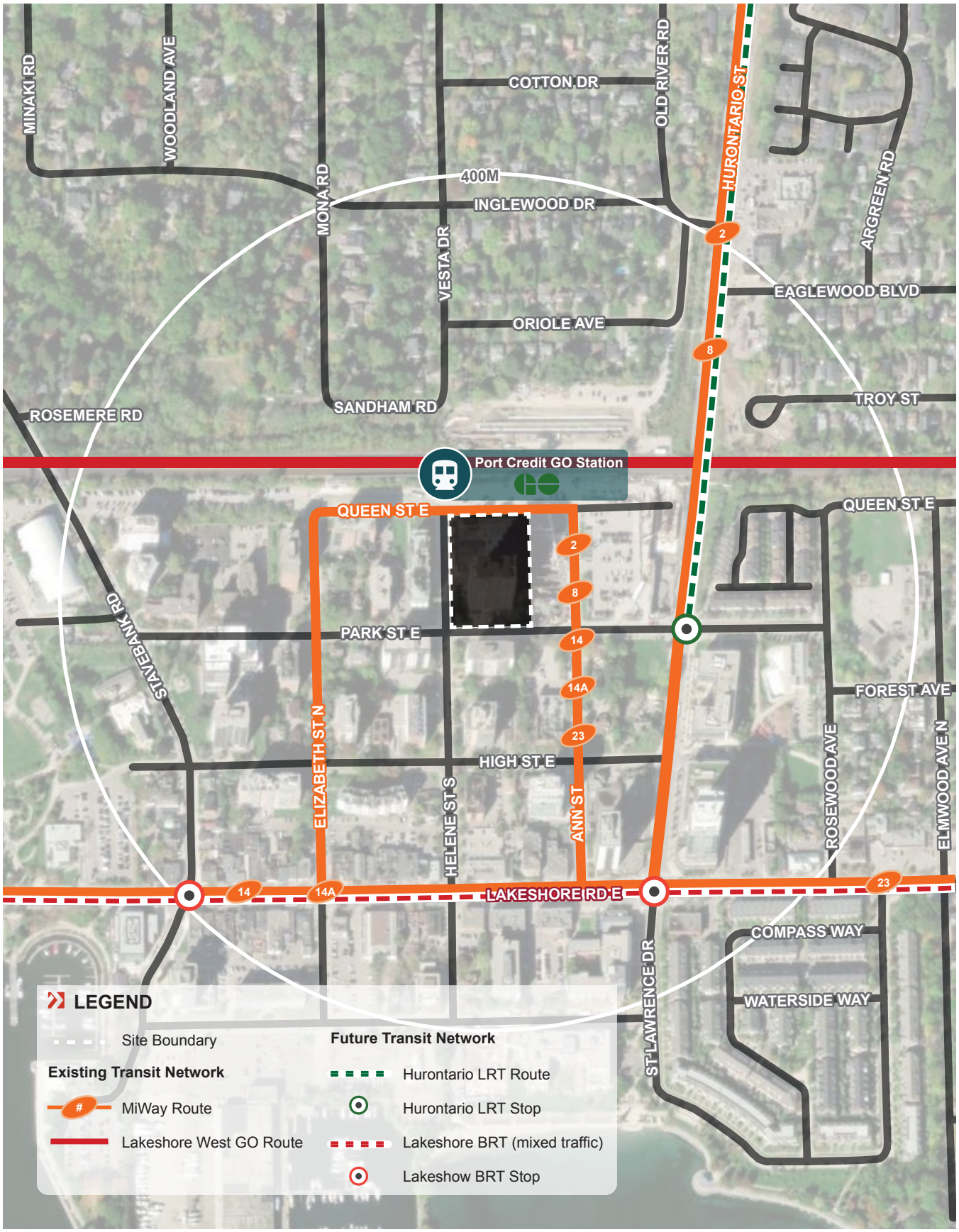


EXHIBIT 4: LAKESHORE BRT PREFERRED RIGHT-OF-WAY

The planned rapid transit service along Lakeshore Road will provide frequent and reliable connections within the City of Mississauga and to TTC lines at Long Branch GO Station, providing additional transit options to and from the City of Toronto. In January 2021, it was announced that the City of Mississauga would receive federal and provincial funding for transit infrastructure through the Investing in Canada Infrastructure Program (ICIP) to fund projects including the Lakeshore BRT. At this time, completion of the Lakeshore BRT is targeted for 2027.

It is noted that the preferred transit solution beyond the 2041 horizon year, also known as the “ultimate solution” is an extension of the Toronto Transit Commission (TTC) Waterfront West LRT (or “streetcar”). The streetcar would be extended from Long Branch GO Station to Mississauga Road following a similar alignment (i.e. dedicated ROW to East Avenue; operating in mixed traffic west of East Avenue).



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.

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FIGURE 5 EXISTING AND FUTURE TRANSIT CONTEXT

2.3 CYCLING CONTEXT

2.3.1 Existing Cycling Context

Under existing conditions, there is limited dedicated cycling infrastructure in place within the Site vicinity.

Within a 400-metre radius of the Site, the following trails and signed bike routes are within reach:

- A portion of the 3,600-kilometre Great Lakes Waterfront Trail can be accessed along Port Street East, consisting of multi-use trails and signed bike routes that extends along the entirety of Mississauga's waterfront and throughout southern Ontario;
- A signed bike route, known as a "Trail-to-GO" route, connects the Waterfront Trail in the south to the Port Credit GO Station. This route predominantly travels along Elizabeth Street; and
- A multi-use trail along Hurontario Street which extends from a point approximately 125 metres north of Eaglewood Boulevard in the south to Harborn Road / North Service Road in the north.

2.3.2 Future Cycling Context

Within the Site vicinity, there are plans to considerably improve and enhance the formal cycling facilities to provide safe and convenient linkages for cyclists and encourage non-automobile travel. The City of Mississauga's Cycling Master Plan, supported by the City's recently released Transportation Master Plan and the Lakeshore Connecting Communities Transportation Master Plan, includes a number of planned improvements to the area's cycling network including the following:

- Cycle track / separated bike lane along Lakeshore Road advanced as part of the Lakeshore Connecting Communities TMP, extending from the City's western limits at Winston Churchill Boulevard to the City's eastern limits at the Etobicoke Creek;
- Multi-use trail and cycle track / separated bike lane along Hurontario Street advanced as part of the Hurontario LRT, providing a continuous cycling route from the City's northern limits to Lakeshore Road East in the south. South of Lakeshore Road East, the path will continue as a bike lane to connect to the Great Lakes Waterfront Trail;
- Shared route along the extent of Park Street, continuing east along Forest Avenue and then south on Hiawatha Parkway to terminate at Cumberland Drive;
- Bike lane / shared route along Stavebank Road, extending from Port Street East in the south to Pinetree Way / Pinetree Crescent in the north;
- Multi-use trail south of the Lakeshore West GO Rail corridor, extending from Stavebank Road in the west to Helene Street North in the east, where it continues northwards to Sandham Road. This route continues as a shared route along Vesta Drive / Inglewood Drive / Oriole Avenue / Inglewood Drive where it connects to an existing multi-use trail at Minaki Road; and
- Shared route along Troy Street from Hurontario Street in the west to Spruce Park in the east.

Additionally, an active transportation bridge, supporting cyclists and pedestrians, is proposed over the Port Credit River, located approximately 650 metres to the south-west of the Site. The bridge will connect to the proposed cycle track along Mississauga Road and the proposed multi-use trail, south of the Lakeshore West GO rail corridor, at Stavebank Road.

These new north-south and east-west routes will substantially improve the area's cycling context and provide greater connections to the City's wider cycling network.

The area's existing and proposed cycling context is illustrated in **Figure 6**.

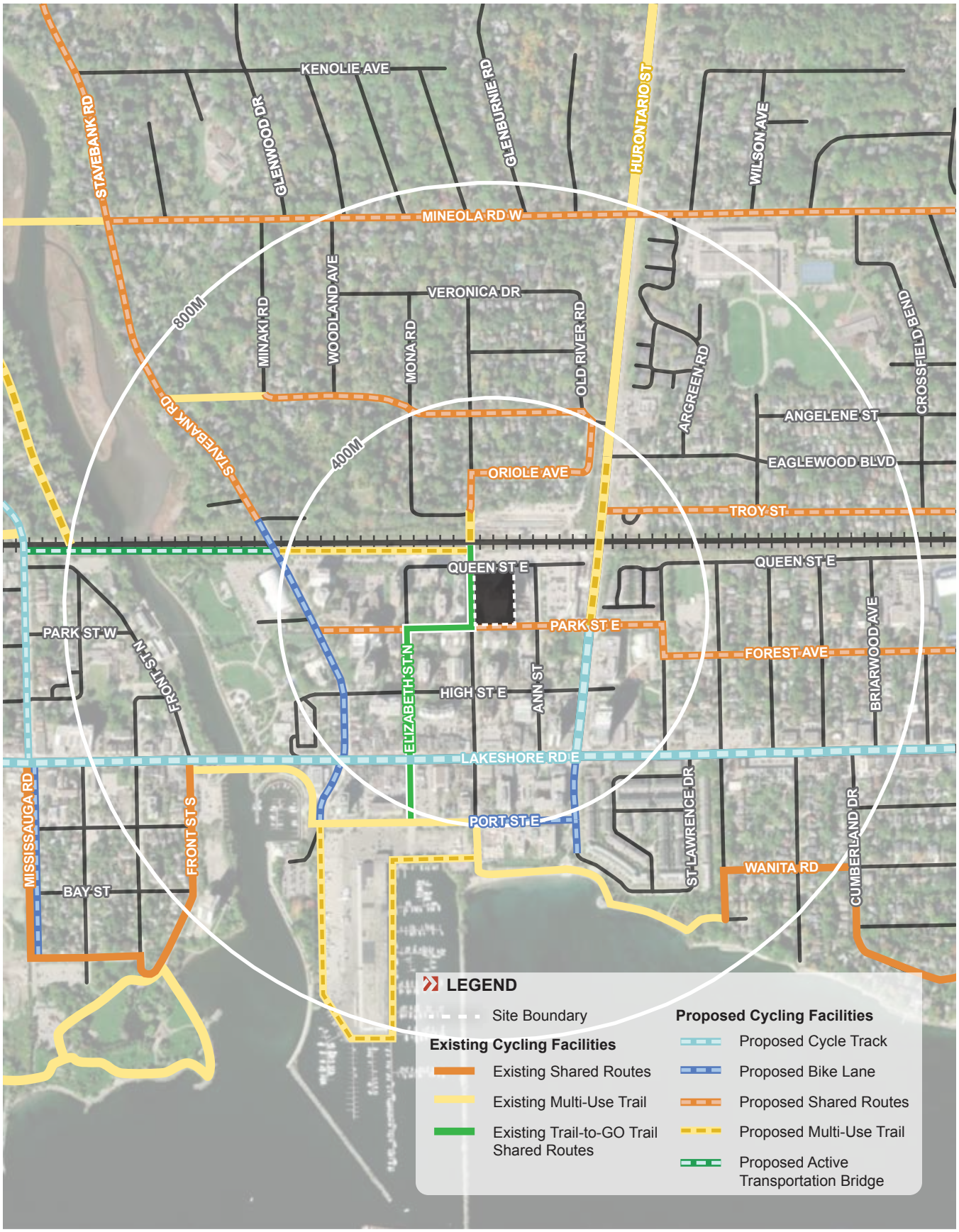


FIGURE 6 EXISTING AND PROPOSED CYCLING CONTEXT

2.4 PEDESTRIAN CONTEXT

The location of the Site provides for a strong pedestrian-oriented environment that encourages the use of non-automobile modes of travel. The Site vicinity is served by a combination of road types (arterial, collector, and local) where pedestrian sidewalks are provided.

Surrounding Area Pedestrian Destinations

The Site is located in Port Credit, a tourist destination in Mississauga and for the region, and as such the area is subject to high pedestrian activity. This is true at all times of the day and week given the presence of a variety of land uses including residential, office, retail, parks, community centres, places of worship, and the Port Credit GO Station. Key destinations within the Site vicinity include the following:

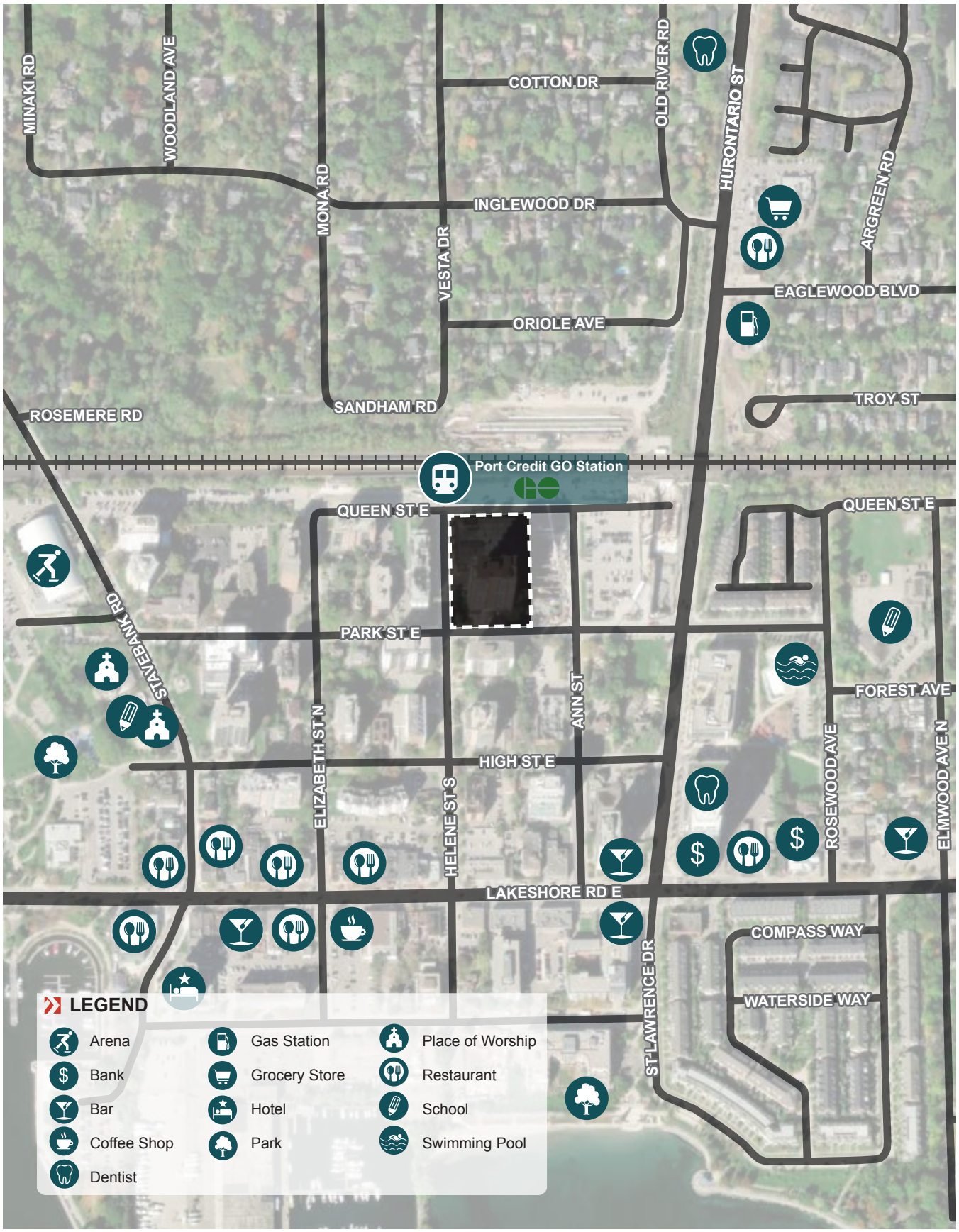
- Forest Avenue Public School: ~300 metres / ~4-minute walk
- Lions Club of Credit Valley Outdoor Pool: ~350 metres / ~4-minute walk
- Applewood Rainbow Montessori School: ~400 metres / ~5-minute walk
- Port Credit Memorial Arena: ~400 metres / ~5-minute walk
- Port Credit Memorial Park: ~700 metres / ~8-minute walk
- Cousin's Market Grocery Store: ~600 metres / ~8-minute walk

Pedestrian Crossings

In the immediate area surrounding the Subject Site, there are signalized intersections at Hurontario Street with marked pedestrian crossings, adequately facilitating pedestrian movement in a safe manner. Immediately surrounding the site are unsignalized intersections without pedestrian crossing markings, however corners are constructed with a depressed curb and tactile paving strips.

Sidewalks

All bordering streets – Park Street East, Helene Street North, Queen Street East, and Ann Street– have continuous sidewalks on both sides of the roadway. The sidewalks bordering the Site are approximately 1.8 to 2 metres wide.



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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 AREA PEDESTRIAN DESTINATIONS

3.0 TRANSPORTATION DEMAND MANAGEMENT

A central element of the transportation strategy for the Master Plan will be the adoption of a sustainable transportation demand management (TDM) Plan for the project that will attempt to influence the way people travel to and from the Site through a comprehensive suite of TDM strategies.

These measures will include the application of various Site design elements, alternative transportation offerings, property management, and operational policies, each of which have the goal of redistributing and reducing the travel demand of the project. Specifically, the primary goal is to reduce the overall reliance on single-occupant vehicles (SOV) while promoting active and sustainable modes of transportation.

Generally, this TDM Plan has three primary objectives:

1. Reduce car dependence and the need for everyday SOV travel;
2. Improve pedestrian / cycling convenience to encourage non-automobile modes of transportation; and
3. Promote low-carbon modes of transportation, such as car-sharing and transit

3.1 TDM PLAN STRATEGIES AND IMPLEMENTATION

The TDM Plan will serve as an initial guide for the design, development and implementation of the Site, as well as the ultimate operation of the facilities over time to maximize the travel demand sustainability of the project and allow the development to fully leverage its location relative to the growing range of employment, retail, recreation and residential uses in the vicinity of the Site. Strategies have been developed to support the use of non-auto modes of travel, and to encourage a change in travel behaviour that reduces automobile travel. The proposed TDM strategies are outlined in **Table 4**.

Some of the potential measures being considered as part of the TDM Plan can be classified as ‘hard’ TDM measures; these are the physical infrastructure components and they include pedestrian connections, bicycle parking, bicycle repair stations, and transit information centres. The implementation of a number of these elements and the costs associated with them are expected to be the responsibility of the applicant / land developer, as the measures may be constructed as part of the development.

Other measures can be classified as ‘soft’ measures, including travel mode information packages, unbundled vehicular parking, and pre-loaded PRESTO cards. Efforts to implement these measures should be the shared responsibility of property managers, City staff, and staff representing the relevant transit agencies. Developer credits for assisting in implementing some of these measures should be explored to encourage their realization.

The remainder of TDM initiatives involve connecting the Site to other locations and are likely to be provided by third parties (i.e. car-share program). Obtaining these services for the Site will require negotiations with service providers and in some cases, minor infrastructure additions may be required for implementation and it is anticipated that the City would be involved in implementing such measures.

TABLE 4 POTENTIAL AND RECOMMENDED SITE TDM MEASURES

TDM Measure	Overview	Impact
Pedestrian and Cycling Related		
Intersection Improvements	As outlined in **Section 9.0**, it is proposed to signalize the Ann Street / Park Street East intersection which will facilitate safer crossing opportunities for pedestrians travelling both north-south and east-west, increasing pedestrian safety and amenity. In addition, as is illustrated in **Appendix B** and analyzed in **Section 9.0**, it is proposed to convert the Queen Street East / Helene Street North intersection to all-way STOP control by adding a stop sign for the westbound movement. This will provide safe crossing opportunities for pedestrians to move between the Site (and surrounding area) and Port Credit GO Station to the north.	2. Improve pedestrian and cycling convenience to encourage non-automobile modes of transportation.
Pedestrian Connections	Expanded sidewalk conditions are introduced along the Helene Street North and Queen Street East site frontages.	2. Improve pedestrian and cycling convenience to encourage non-automobile modes of transportation.
Provision of Bicycle Parking	As outlined in **Section 5.0**, 350 bicycle parking spaces will be provided including 320 long-term bicycling parking spaces for residents, and 30 short-term bicycling parking spaces for visitors.	2. Improve pedestrian and cycling convenience to encourage non-automobile modes of transportation.
Bicycle Repair Station	A bicycle repair / maintenance station will be provided on the Site as illustrated in the architectural plan in the northwest corner of mezzanine bicycle parking room. This allows residents to change tires, inflate tires, adjust seat, etc.	2. Improve pedestrian and cycling convenience to encourage non-automobile modes of transportation.
Transit Related		
Transit Screen	An information screen, which is usually displayed in the building lobby. It provides real-time information on transit schedules, walking and cycling routes amongst other items.	3. Promote car-sharing and transit.
Provision of Transit Pass	Provide pre-loaded presto cards to each first-time unit owner. A suitable card value is to be determined.	3. Promote car-sharing and transit.
Travel Information Brochures	Provide a travel information brochure to residents providing an overview of transportation (walk, cycle, car-share, transit) in the area.	1. Reduce car dependence and the need for everyday travel. 2. Improve pedestrian and cycling convenience to encourage non-automobile modes of transportation. 3. Promote car-sharing and transit.
Automobile Infrastructure		
Lower Parking Rates	A reduced parking rate on-Site is proposed as is outlined in **Section 4.0**.	1. Reduce car dependence and the need for everyday travel.
Unbundled Vehicular Parking	Unbundle parking from residential units sales/leasing, allowing home purchasers/lessees to acquire a parking space if they are interested rather than getting one with their unit automatically.	1. Reduce car dependence and the need for everyday travel.
Car-Share Program	Opportunities to offer car-share service/arrangements on the Site will be explored.	1. Reduce car dependence and the need for everyday travel. 3. Promote car-sharing and transit.

4.0 VEHICLE PARKING CONSIDERATIONS

4.1 EXISTING VEHICLE PARKING GARAGE

The existing residential apartment building on-site is serviced by an above-ground parking garage and an adjacent surface parking area; the majority of the parking supply is provided within the former. Existing site statistics are provided below, representing both parking areas collectively:

- 210 residential units (204 units leased during period of study)
- 273 parking spaces (256 resident parking spaces and 17 visitor parking spaces, shared with retail use)
- 1.22 parking spaces per unit (residents)
- 0.08 parking spaces per unit (visitors, shared with retail/short-term uses)

Within this section, vehicle parking supply requirements are calculated to apply to the existing apartment building and the proposed mixed-use building, collectively, because the existing parking facilities will be removed and the proposed underground parking garage will service both buildings.

4.2 VEHICULAR PARKING REQUIREMENTS

The proposed development is located within the City of Mississauga and is subject to 'Parking Precinct 1' requirements within Zoning By-Law 0225-2007. The parking requirements for the existing building and proposed development are outlined in **Table 5** with sharing between non-resident uses considered.

TABLE 5 ZONING BY-LAW 0225-2007 MINIMUM PARKING REQUIREMENTS

Use	Units/GFA	Requirement (Rate)	Requirement (Spaces)
Residents	740 units	0.8 spaces per unit	592 spaces
Resident Sub-total			**592 spaces**
Residential Visitors	740 units	0.2 spaces per unit	*148 spaces*
Retail	463 m^2 GFA	3.0 spaces / 100 m^2 GFA	14 spaces
Daycare	401 m^2 GFA	2.5 spaces / 100 m^2 GFA	10 spaces
Non-Resident Sub-total[3]			**148 spaces[3]**
SITE TOTAL			**740 spaces**

Notes:
1. Site plan statistics provided by Arcadis IBI Group, dated January 25, 2023.
2. Where the number of non-residential parking spaces and/or loading spaces is calculated on the basis of a rate or ratio and results in a numeric fraction, fractions of less than 0.5 shall be rounded down to the nearest whole number and fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number (as per City of Mississauga Zoning By-law 0225-2017 section 3.1.1.1.4).
3. As per Section 3.1.2.1.3, a shared parking arrangement may be used for the calculation of required shared residential visitor/non-residential parking whereby the greater of the required residential visitor parking minimum requirement or the required parking for all non-residential uses is applicable as the minimum parking requirement.

A total of 740 parking spaces are required, as per the provisions of Sections 3.1.2.1.3 and 3.1.2.4 of the Zoning By-law. This includes 592 resident parking spaces and 148 non-resident parking spaces.

4.3 PROPOSED PARKING SUPPLY

It is proposed to provide vehicular parking on-site at supply rates that are lower than those stipulated by City of Mississauga Zoning By-law 0225-2007, which are outlined below.

- Residents: 0.65 parking spaces per unit
- Residential Visitors: 0.15 parking spaces per unit, to be provided on a shared, non-exclusive basis
- Retail: None, but retail employees/visitors can use non-resident parking supply as permitted by By-law 0225-2007
- Daycare: 4 short-term / pick-up/drop-off (PUDO) parking spaces at grade and daycare employees/visitors can share residential visitor supply as permitted by By-law 0225-2007

The application of the proposed parking supply rates to the site plan is outlined below in **Table 6**.

TABLE 6 PROPOSED PARKING SUPPLY

Use	Units/GFA	Requirement (Rate)	Requirement (Spaces)
Residents	740 units	0.65 spaces per unit	495 spaces[2]
Residential Visitors		0.15 spaces per unit	111 spaces
Retail	463 m^2 GFA	None (shared with visitors)	0 spaces
Daycare	401 m^2 GFA	4 at-grade spaces	4 spaces
TOTAL			**610 spaces**

Notes:
1. Site plan statistics provided by Arcadis IBI Group, dated January 25, 2023.
2. The amount of resident parking provided in the site plan is slightly higher than the application of the proposed minimum resident parking requirement. It is expected that the total resident parking shown in the architectural plans will fluctuate as part of future re-submissions. The proposed minimum resident parking rate is 0.65 spaces per unit.

In total, the site plan includes 610 parking spaces, including 495 resident parking spaces, 111 residential visitor parking spaces (to be provided on a shared non-exclusive basis and shared with retail and daycare use), and 4 short-term / PUDO parking spaces.

4.4 APPROPRIATENESS OF PROPOSED PARKING REQUIREMENTS

Parking is a powerful tool that can be used to achieve a variety of community objectives. It is intended that the parking provisions on the Site meet projected demands such that residents and visitors will be unlikely to disrupt off-Site roadways and parking areas, but not provide so much parking as to discourage achievement of the City of Mississauga multi-modal objectives.

It is proposed to adopt reduced parking supply standards in comparison to the minimum requirements of the Mississauga Zoning By-law. The residential parking standards outlined in Zoning By-law 0225-2007 (0.80 spaces per unit for residents, 0.20 spaces per unit for visitors, 3 spaces per unit for ancillary retail use, 2.5 spaces per unit for daycare) are considered to overstate the parking needs of a residential building in an urban context, within the Port Credit Mobility Hub, adjacent to the Port Credit GO Station and planned Hurontario LRT and Lakeshore Road Rapid Transit.

The following sections provide an overview of the contextual factors influencing parking needs in a contemporary development in an area with this level of rapid transit service and the appropriateness of the proposed parking supply for the Site.

4.4.1 Resident Parking

Recently, we have observed a substantial reduction in parking space demand at many of the new residential buildings throughout the GTA, compared to those that have existed historically. Factors that have played a part in establishing the framework for this change in parking needs include the change in size of residential units on an overall basis (i.e. reduction), the enhancement in travel alternatives that reduce the need for individuals to use a car on a day-to-day basis and, in fact, reduce the need to own a vehicle. The advent of car-sharing services and the investments being made in all forms of non-automobile travel alternatives (i.e. on and off-Site bicycle infrastructure and public transit) have made, and are continuing to make, a substantial difference in resident and tenant perspectives on travel mode and mobility choice. Adoption of the proposed reduced parking standards is, given the above, considered to be appropriate based upon the following considerations:

- A review of parking demand observed at the existing apartment building and parking garage on site, recorded by BA Group, and a review of on-site parking demand contextualized by rent roll data provided by the existing property management to contextualize the demand;
- Transportation planning principles supporting a reduced parking supply to change travel behaviour;
- The subject Site is in close proximity to significant existing and planned transit services and bicycle route facilities that provide non-automobile dependent travel connections across the City;
- A series of Transportation Demand Management measures proposed to be incorporated in the development to support the use of non-automobile travel modes;
- The existing area travel characteristics being supportive of low automobile use; and
- Recent reduced residential parking approvals trends.

4.4.1.1 Transportation Planning Principles

As discussed in **Section 1.0**, there are numerous provincial and municipal transportation policies as well as local area studies that are supportive of reduced parking standards that will facilitate compact urban development and improved urban design, support economic development and maximize the return on investment in the major transportation facilities. Within these policy documents, the surrounding area of the Site is repeatedly identified as a priority for development focused about transit; located at the intersection of two Priority Transit Corridors as identified in the Growth Plan, within an MTSA as identified in the Growth Plan and Peel Region OP; located within a Metrolinx Mobility Hub, an Intensification Area within the Mississauga OP, and a Community Node within the Mississauga OP and TMP.

The proposed development is consistent with the transportation-related goals set out in these policies and aims to reduce the share of auto trips and improve opportunities to travel by transit, cycling and walking through the application of transportation demand management initiatives, reduced parking standards, emphasis on active modes of travel and leveraging significant transit investments within the immediate Site context (Hurontario LRT and Lakeshore Road Rapid Transit).

4.4.1.2 Area Transportation Context

The Site is located in an area well served by surface and high-order transit and is within walking distance of a number of employment, retail, and recreational uses within Port Credit. As noted in **Section 2.0**, the area's access to non-automobile transportation infrastructure – currently excellent due to the location directly across the street from Port Credit GO Station – will be further improved with GO Expansion improving service on the Lakeshore GO corridor, the opening of the Hurontario LRT and planned Lakeshore Road Rapid Transit, and significant cycling infrastructure improvements planned for Lakeshore Road, Hurontario Street and within the local street network. The Site's location is highly supportive of the adoption of parking standards that are lower than the prevailing Zoning By-law requirements.

4.4.1.3 TDM Measures

As discussed in **Section 3.0**, a TDM is proposed for the Site, both as a method to reduce vehicular traffic but also to reduce parking demand. Included among the measures are "hard' infrastructure elements, integrated with the development plan and including proposed improvements to area intersections to improve pedestrian conditions, and "soft" operational strategies intended to promote sustainable transportation behaviour. Among these, the most effective TDM initiative is always to avoid the oversupply of parking which can induce vehicle trip making.

4.4.1.4 Area Travel Characteristics

BA Group has reviewed prevailing travel characteristics within the vicinity of the proposed redevelopment using a query of the Transportation Tomorrow Survey (TTS) database. For this assessment, travel data pertaining to residential uses within 2006 TTS zones 3642, 3877, and 3878.

Table 7 summarizes existing mode split information within the study area.

TABLE 7 EXISTING AREA TRAVEL MODE SPLIT

Mode	Weekday Morning Peak Split	Weekday Afternoon Peak Split
Auto Driver	70%	67%
Auto Passenger	12%	10%
Transit	14%	15%
Cycle	0%	0%
Walk	4%	8%
Total	**100%**	**100%**

Notes:
1. Based upon 2016 TTS query of home-based trips to/from TTS 2006 Zones 3642, 3877, and 3878 during the weekday morning and afternoon peak periods (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.).
2. Weekday morning and afternoon peak splits are based on data collected for the peak direction of travel (i.e. outbound in the morning, inbound in the afternoon).

The 2016 TTS survey confirms that approximately 18 to 23% of residential trips during the weekday morning and afternoon peak periods are being undertaken by using non-automobile means (walking or transit). It is expected that the future non-auto mode split pattern of residents travelling to and from the proposed development, given the significant transit and active network improvements in the area, will increase over time.

While existing residential auto-drive trips are in the range of 67–70% in the morning and afternoon peak periods, the proposed development's goal is not simply to plan to accommodate existing demands, but to plan for future parking demands. Minimum parking requirements have gradually been reduced across Mississauga and more specifically within the Port Credit area.

As referenced in **Section 2.2.2.3**, the Hurontario LRT is expected to provide significant transit improvement to the area. The LRT is planned to open in 2024, adding 19 stops along the Hurontario corridor, from Brampton Gateway Terminal in the north, extending southwards towards the Port Credit GO Station, directly north of the Site. Due to the LRT's connections to several GO Stations and employment hubs along the span of the corridor, the *Hurontario LRT Benefits Case Analysis* forecasts a reduction future transit mode share along the Hurontario – Main corridor from 24% to 49% with the introduction of the LRT. Applying the same percentage shift in mode split to the Site's existing transit mode split results in an increase from 14% to 29%. This increase translates to an auto mode split reduction from 67 – 70%, down to 52 – 55%.

The proposed parking supply (0.65 spaces / unit) recognizes future reductions in parking demand as a result of increased transit and active transportation options in the area (Hurontario LRT, Lakeshore Rapid Transit, cycling network expansions). It maximizes the efficiency of the Site and surrounding infrastructure and avoids the wasteful and unnecessary oversupply of parking for private vehicles. It is also consistent with the trend of reduced parking requirements in a manner which is supportive with best planning principles and the City's goals and vision for Port Credit and the City overall.

4.4.1.5 On-Site Parking Demand Review

In order to better understand parking demand at the site, a parking utilization survey was conducted at the existing parking garage on-site. In order to assess resident parking demand at its peak, 3:00am spot parking utilization counts were conducted across the following three nights:

- Friday, October 14, 2022 (i.e. Thursday night)
- Saturday, October 15, 2022 (i.e. Friday night)
- Sunday, October 16, 2022 (i.e. Saturday night)

Complete results are provided in **Appendix C** and the results are summarized below in **Table 8**. It is noted that the demand rate is calculated based upon the number of occupied units at the time of study (204 units).

TABLE 8 70 PARK STREET EAST PARKING UTILIZATION STUDY RESULTS

Address	# of Units	Parking Supply		Date of Study	# of Occupied Units	Parking Demand		Parking Utilization %
70 Park Street East	210 units	256 resident spaces	1.22 spaces per unit	Fri. Oct. 14, 2022	204 units	188 spaces	0.92 spaces per unit	73%
				Sat. Oct. 15, 2022		180 spaces	0.88 spaces per unit	70%
				Sun. Oct. 16, 2022		179 spaces	0.88 spaces per unit	70%

Notes:
1. Full results in **Appendix C**.

Peak observed resident parking demand was on the Thursday night; it was 0.92 spaces per unit and 73% of available resident parking capacity. Notably, this observed parking demand is higher than the proposed resident parking supply: 0.65 spaces per unit. However, it is also notable that peak utilization of available parking was 73%; the parking supply was considerably higher than peak demand.

In order to contextualize the results of the parking utilization survey, the on-site property manager circulated on-site parking space leasing information which ties parking space occupancy to specific units within the building. The data that was provided represented the same October 2022 period when the parking utilization study was undertaken.

The data that was provided is included in **Appendix D**. Parking demand derived straight from this data, reflecting the total number of parking spaces leased, is provided in **Table 9**.

TABLE 9 70 PARK STREET EAST PARKING SPACE LEASING – # OF PARKING SPACES LEASED

Unit Type	Units Leased	Parking Spaces Leased	Current Demand Rate	Total Units	Projected Parking Spaces Leased	Projected Demand Rate
Studio & 1-Bedroom	105 units	71 spaces	0.68 sps/unit	107 units	72 spaces	0.68 sps/unit
2- & 3-Bedroom	99 units	98 spaces	0.99 sps/unit	103 units	102 spaces	0.99 sps/unit
TOTAL	**204 units**	**169 spaces**	**0.83 sps/unit**	**210 units**	**174 spaces**	**0.83 sps/unit**

Notes:
1. Data reflects October 2022.
2. Studio and 1-bedroom units are combined for analytical purposes. 2-bedroom and 3-bedroom units are combined for analytical purposes.

Based upon the number of parking spaces leased, resident parking demand was observed to be 0.83 spaces per unit (projected to assume 100% occupancy).

The circulated data, available in **Appendix D**, also includes the number of parking stalls that were leased associated with individual units; this data is summarized in **Table 10**.

TABLE 10 70 PARK STREET EAST PARKING SPACE LEASING - # OF PARKING SPACES LEASED PER UNIT TYPE

Unit Type	Units with Specified Number of Parking Spaces Leased							
	0 spaces	1 space	2 spaces	3 spaces	4 spaces	5 spaces	6 spaces	7 spaces
Studio	1 unit	0 units	0 units	0 units	0 units	0 units	0 units	0 units
1-Bedroom	42 units	54 units	7 units	1 unit	0 units	0 units	0 units	0 units
2-Bedroom	29 units	45 units	23 units	0 units	0 units	0 units	0 units	1 unit
3-Bedroom	1 unit	0 units	0 units	0 units	0 units	0 units	0 units	0 units
TOTAL	**73 units**	**99 units**	**30 units**	**1 unit**	**0 units**	**0 units**	**0 units**	**1 unit**
	204 total occupied units							

Notes:
1. Data reflects October 2022.

The data indicates that many units were leasing more than one parking space including one unit that was leasing seven parking spaces. The following key takeaways can be drawn from this data:

- Resident parking supply (256 spaces) significantly exceeded the number of units that were leasing a parking space (131 units).
- Given the oversupply of parking on-site, parking spaces were leased to units on an "unlimited" basis, as evidenced by one units being associated with seven parking spaces and a number of units leasing 2 and 3 parking spaces.

Based on these takeaways, the data provided in **Table 9** can be examined differently. Below in **Table 11**, parking demand is summarized based upon the number of units that leased parking, irrespective of the number of parking spaces leased by a unit.

TABLE 11 70 PARK STREET EAST PARKING SPACE LEASING – UNITS WITH LEASED PARKING

Unit Type	Units Leased	Units with Leased Parking	Current Demand Rate[3]	Total Units	Projected Units with Leased Parking	Projected Demand Rate[3]
Studio & 1-Bedroom	105 units	62 units	0.59 sps/unit	107 units	63 units	0.59 sps/unit
2- & 3-Bedroom	99 units	69 units	0.70 sps/unit	103 units	72 units	0.70 sps/unit
TOTAL	**204 units**	**131 units**	**0.64 sps/unit**	**210 units**	**135 units**	**0.64 sps/unit**

Notes:
1. Data reflects October 2022.
2. Studio and 1-bedroom units are combined for analytical purposes. 2-bedroom and 3-bedroom units are combined for analytical purposes.
3. Demand rates reflect assumption of maximum of one parking space offered to a unit.

Based upon the number of units with leased parking, irrespective of number of parking spaces leased per unit, resident parking demand was observed to be 0.64 spaces per unit.

Data Interpretation

Based upon the findings of the on-site parking demand study, it is our opinion that the observed parking demand gleaned from on-site parking utilization counts overstates parking demand at the site. The parking space leasing data indicates that due to the abundance of parking provided at the site, parking space leasing was not limited in any manner (aside from cost). The transportation planning concept of "induced demand" is likely applicable: resident parking demand was increased by the availability of resident parking supply.

Further, given that developments in this precinct of the City of Mississauga are no longer required to provide 1 parking space per unit, or greater, as a result of the Mississauga Parking Regulations Study (which concluded in 2022 and resulted in amendments to Zoning By-law 0225-2007), it is therefore reasonable to conclude that the type of development that is proposed should not be required to include excess parking supply that incentivizes units to buy or lease more than one parking pace, as currently occurs at the Site.

For these reasons, on-site parking demand as a measure of units that were leasing parking in October 2022, irrespective of the number of parking spaces leased by the unit (as outlined in **Table 11**) is a more accurate and fair measure of on-site parking demand for the purpose of determining the right amount of parking supply for the development, as compared to parking utilization counts (see **Table 8**) or the total number of parking spaces leased (see **Table 9**).

It follows that resident parking demand observed with these considerations in mind (i.e. 0.64 spaces per unit) is appropriately informative and supportive of the proposed resident parking supply (0.65 spaces per unit).

4.4.1.6 Resident Parking Reduction Precedents

There are examples of recently approved parking reductions both in the Port Credit area and in comparable areas within the cities of Pickering and Hamilton. In the Port Credit area, a minor variance (File: A413.20) was approved on March 25, 2021 for 28 Ann Street. The approved minimum resident parking rates were 0.57 parking spaces for each one bedroom unit and 0.73 parking spaces for each two bedroom unit. The parking reduction was based upon parking space sales information provided by the applicant reflecting demand of 0.4 parking spaces for each one bedroom unit and 0.71 parking spaces for each two bedroom unit. Conditions of approval included the provision of two car-share spaces and a pre-loaded PRESTO card for each unit owner.

The proposed development is located within the same block as the approved 28 Ann Street development and, as such, a similar resident parking rate is being proposed for the Site.

Other examples of recent approvals have also been included for sites with more limited access to higher order transit to demonstrate the willingness of multiple municipalities (Mississauga, Pickering, Hamilton) to significantly reduce residential parking standards compared to the in-force Zoning By-law, recognizing a shift in travel behaviour and bigger emphasis placed on existing and future transit access. These approvals range from 0.47 to 0.86 spaces per unit for sites that are significantly further from a GO Station (between 575 metres to 2.2 km).

Table 12 outlines a selection of reduced parking approvals for proxy sites with similar or less transit supportive contexts as the proposed development.

TABLE 12 RESIDENTIAL DEVELOPMENTS WITH APPROVED RESIDENT PARKING REDUCTIONS

Address	Proximity to Transit	Municipality	Resident Standard Applied	Permission Through
Approvals with comparable access to High Order Transit				
78 Park Street East and 22 – 28 Ann Street	~80 m from Port Credit GO Station	Mississauga (Port Credit)	1 bedroom: 0.57 spaces / unit 2 bedroom: 0.73 spaces / unit 3 bedroom: 1.10 spaces / unit	CoA Decision – A413.20 & Site Specific Zoning By-law 0054-2020
Approvals with less proximate access to High Order Transit				
1496 Bayly Street	- 575m from Pickering GO Station	Pickering	0.71 spaces per unit	Site Specific Zoning By-law 7810/21
600 James Street North	~900 m from West Harbour GO Station	Hamilton	0.58 spaces / unit	LPAT Case No. PL190517 Site Specific Zoning By-law 21-053-LPAT
70 Mississauga Road South	~1.2km from Port Credit GO Station	Mississauga	0.86 spaces / unit	CoA Decision – A226.21
98 James Street South	~1.5 m from West Harbour GO Station	Hamilton	0.47 spaces / unit	City of Hamilton Zoning By-law 15-024
175 Catharine Street South and 117 Forest Avenue	~2.2 km from West Harbour GO Station	Hamilton	0.65 spaces / unit	City of Hamilton Zoning By-law 20-216

The cities of Mississauga, Pickering and Hamilton have shown flexibility and pragmatism in adapting to the evolving transportation landscape as options become available to residents that were not available at the time when the Zoning By-law was enacted. In this context, the proposed resident parking supply rate (0.65 spaces / unit) is within the range of documented parking supply reduction approvals that are appropriate proxies for the site.

4.4.1.7 Resident Parking Assessment Summary

In summary, the proposed resident parking supply rate (0.65 spaces per unit) is considered to be appropriate based upon the following:

- Numerous transportation planning principles that support reduced parking supplies;
- The Site adjacent to significant existing and planned transit services (Port Credit GO Station and planned Hurontario LRT and Lakeshore Road Rapid Transit) and bicycle route facilities that provide non-automobile dependent travel connections across the City;
- TDM measures proposed on-site;
- Future area travel characteristics (planned Hurontario LRT forecasts a reduction in auto driver mode split to 52-55%);
- Parking demand observed on-Site by BA Group contextualized by on-site parking space leasing behaviour which indicates true resident parking demand of 0.64 spaces per unit;
- Range of approvals for reductions in resident parking supply ratios for developments with less proximate access to a GO Station; and
- Consistency with the recently approved parking rates for the neighbouring residential development at 78 Park Street East and 22 – 28 Ann Street.

Based on the above, an adoption of the proposed resident parking supply rate of 0.65 spaces / unit is considered to be appropriate and will enable the essential resident parking demands of Site to be met.

4.4.2 Non-Resident Parking

4.4.2.1 Residential Visitor Parking

It is proposed to adopt a residential visitor parking rate of 0.15 spaces per unit. This rate is higher than the recently approved non-residential parking rate for the neighbouring residential development at 78 Park Street East and 22 – 28 Ann Street (0.10 spaces per unit) and the existing visitor parking supply on-site (0.08 spaces per unit) that services the existing building that will be retained.

Existing Site Visitor Parking Considerations

As noted, the existing visitor parking supply for the Site is provided at a rate of 0.08 spaces per unit and on a shared, non-exclusive basis with the existing retail uses that exist on Site. Notwithstanding the applicable minimum residential visitor parking requirement for the proposed development (see **Table 5**), the proposed parking garage will service both the proposed new building and the existing building to be retained.

The proposed residential visitor parking supply could therefore be considered differently by subtracting the equivalent of the existing supply from what is proposed and applying the subtracted total to only the proposed new building, as per the following:

- 17 residential visitor parking spaces for existing 210 dwelling units (0.08 spaces per unit)
- 94 residential visitor parking spaces for proposed 530 dwelling units (0.18 spaces per unit)

It is understood that practically, the parking garage will not (and nor should it) operate in a manner reflecting the above distinction between the two buildings. The shared visitor/non-residential parking area will be open to all visitors to the Site. However, this breakdown reflects that the provision of residential visitor parking for the proposed new building (i.e. 0.18 spaces per unit) is closer to the minimum Zoning By-law requirement for residential visitor parking (i.e. 0.20 spaces per unit) if matching the existing provision of residential visitor parking for the existing building (i.e. 0.08 spaces per unit) is considered.

Local Area Visitor Parking Demand Assessment

LEA Consulting Ltd. conducted proxy parking studies at residential developments located in the vicinity of the site in January 2020. These are: 26 Park Street E, 28 Elizabeth Street, and 49 Queen Street E. Survey results are summarized in **Table 13**.

TABLE 13 LEA DIRECTED VISITOR PARKING PROXY SURVEY RESULTS

Proxy Sites	28 Park Street E	28 Elizabeth Street N	49 Queen Street E
	Observed Parking Rate (Spaces / Unit)		
Friday, January 10, 2020	0.08	0.01	0.06
Saturday, January 11, 2020	0.08	0.00	0.06
Friday, January 17, 2020	0.07	0.02	0.06

Notes:
1. Source: Transportation Impact Study, 42-46 Park Street East & 23 Elizabeth Street North, LEA Consulting Ltd., May 2020

The maximum observed residential visitor parking demand rate was 0.08 parking spaces per unit.

Additionally, BA Group conducted more recent proxy parking studies at residential developments in the area in September 2022. These include the aforementioned 26 Park Street E, 28 Elizabeth Street, and 49 Queen Street E, included the subject Site (70 Park Street East), and in addition, included 1 Hurontario Street, 6-8 Ann Street, 66 High Street E, and 15 Elizabeth Street N. Survey results are summarized in **Table 14**. Parking survey data is attached in **Appendix E**.

As can be seen in the Table, survey results observed at 26 Park Street E, 28 Elizabeth Street, and 49 Queen Street E residential developments were generally in line with those observed by LEA Consulting Ltd., though maximum observed parking occupancy rates slightly higher; on the order of 0.10 to 0.15 spaces per unit.

At the subject Site (70 Park Street East), peak observed parking demand rate was 0.05 parking spaces per unit.

TABLE 14 BA GROUP DIRECTED VISITOR PARKING PROXY SURVEY RESULTS

Proxy Sites	28 Park Street E	28 Elizabeth Street N	49 Queen Street E	1 Hurontario Street	6-8 Ann Street	66 High Street E	15 Elizabeth Street N	70 Park Street East
	Observed Maximum Parking Rate (Spaces / Unit)[1]							
Friday, September 23, 2022	0.04	0.01	0.08	0.11	0.11	0.15	0.11	--
Saturday, September 24, 2022	0.10	0.01	0.08	0.14	0.14	0.15	0.09	--
Friday, September 30, 2022	0.06	0.02	0.13	0.08	0.10	0.10	0.11	--
Saturday October 1, 2022	0.08	0.02	0.13	0.09	0.15	0.15	0.11	--
Friday, October 14, 2022	--	--	--	--	--	--	--	0.05
Saturday, October 15, 2022	--	--	--	--	--	--	--	0.04

Notes:
1. Parking surveys were conducted on Fridays from 6:00 PM to 11:00 PM, and on Saturdays from 12:00 PM to 8:00 PM. Table values represent absolute maximum observed parking rates over survey periods.
2. At 70 Park Street East, visitor parking demand surveys were conducted from 2:00pm to 11:00pm on a Friday and a Saturday. Based upon 204 leased units at the time of study. The surveys for this site are included in **Appendix C**.

Visitor Parking Reduction Precedents

As with resident parking, visitor parking standards in areas with high levels of transit accessibility have been approved at rates well below the Zoning By-law 0225-2007 and, in the case of the neighbouring 78 Park Street East and 22 – 28 Ann Street development, below the City of Mississauga's proposed new visitor parking rate.

Table 15 outlines a selection of reduced residential visitor parking approvals for proxy sites in the Port Credit area and in areas within the cities of Brampton, Pickering, and Hamilton with equal or less transit supportive contexts than the Site. The provision of a lower visitor parking standard at Site (0.15 spaces per unit) is considered appropriate when compared to sites located significantly further from high order transit.

TABLE 15 RESIDENTIAL VISITOR DEVELOPMENTS WITH APPROVED PARKING REDUCTIONS

Address	Proximity to Transit	Municipality	Resident Standard Applied	Permission Through
Approvals with comparable access to High Order Transit				
78 Park Street East and 22 – 28 Ann Street	~80 m from Port Credit GO Station	Mississauga (Port Credit)	0.10 spaces / unit	CoA Decision – A413.20 & Site Specific Zoning By-law 0054-2020
Approvals with less proximate access to High Order Transit				
1496 Bayly Street	- 575m from Pickering GO Station	Pickering	0.15 spaces / unit	Site Specific Zoning By-law 7810/21
600 James Street North	~900 m from West Harbour GO Station	Hamilton	0 spaces / unit *visitors will rely on area public parking	LPAT Case No. PL190517 Site Specific Zoning By-law 21-053-LPAT
70 Mississauga Road South	~1.2km from Port Credit GO Station	Mississauga	0.15 spaces / unit	LPAT Case No. PL18019
8 Ann Street	~1.0km from Port Credit GO Station	Mississauga	0.15 spaces / unit	Site Specific By-law 0102-2017
Block 7 (Mount Pleasant)	~ 200m from Mount Pleasant GO Station	Brampton	0.15 spaces / unit	OMB Cases PL160478 & PL160479
80 Scott Street	~ 750m from Brampton GO Station	Brampton	0.15 spaces / unit	Site-specific By-law 140-2020
2 & 4 Hanover Road	~3.25km from Bramalea GO Station	Brampton	0.14 spaces / unit	Site-specific By-law 48-2020
499 Main Street South	~3.50km from Bramalea GO Station	Brampton	0.15 spaces / unit	Site-specific By-law 228-2020

Visitor Parking Assessment Summary

The provision of a reduced visitor parking standard for the Site is considered appropriate based upon the following considerations:

- Numerous transportation planning principles that support reduced parking supplies;
- The Site adjacent to significant existing and planned transit services (Port Credit GO Station and planned Hurontario LRT and Lakeshore Road Rapid Transit) and bicycle route facilities that provide non-automobile dependent travel connections across the City;
- Visitor parking supply is provided on-site today for the existing building to be retained at 0.08 parking spaces per unit and, as per parking utilization study conducted in October 2022, peak demand was observed at 0.05 parking spaces per unit on-Site.
- The range of recent reduced residential visitor parking supply ratio approvals with less proximate access to a GO Station;
- Consideration of the recently approved parking rates for the neighbouring residential development at 78 Park Street East and 22 – 28 Ann Street; and
- Consideration of observed visitor parking rates for neighbouring proxy residential developments.

4.4.2.2 Ancillary Retail Parking

The retail use proposed as part of the application is considered to be ancillary and, as such, no dedicated parking has been proposed for this use. The retail uses on site are intended to serve users within the building or very local area (i.e. close walking distance) and therefore these uses will not generate parking demand.

From a practical perspective, in the unlikely event that the ancillary non residential uses generate a greater than nominal vehicle need, these uses can be accommodated within the proposed residential visitor spaces which is appropriate for a mixed-use urban area. Visitor parking on-site is intended, for this site, to accommodate any retail parking demand, should it arise.

The proposed sharing arrangement is permitted as per Zoning By-law 0225-007 Section 3.1.2.1.3.

4.4.2.3 Daycare Parking

Designated parking (4 spaces) is provided at the ground floor, intended for short-term and PUDO daycare use. A detailed assessment is provided in **Section 7.0** of daycare PUDO demand.

Aside from this at-grade parking supply, daycare staff and visitors will be permitted to use the shared residential visitor / non-residential areas of the parking garage. The proposed sharing arrangement is permitted as per Zoning By-law 0225-007 Section 3.1.2.1.3.

5.0 BICYCLE PARKING CONSIDERATIONS

5.1 EXISTING CONDITION

The existing building on-site to be retained does not have bicycle parking. Therefore, within this section, bicycle parking supply requirements are calculated to apply to the proposed mixed-use building only.

5.2 BICYCLE PARKING REQUIREMENTS

Bicycle parking requirements are specified in the City's Zoning By-law 225-2007. Application of by-law rates to the proposed building only are summarized in **Table 16**.

TABLE 16 CITY OF MISSISSAUGA BY-LAW 225-2007 BICYCLE PARKING RATES

Land Use	Class Type[2]	Number of Units / GFA	Minimum Bicycle Parking Standard	Spaces Required
Residential	Class A	530 units	0.60 spaces / unit	318 spaces
	Class B		The greater of 0.05 spaces per unit or 6.0 spaces	27 spaces
Retail	Class A	463 m^2	None[3]	0 spaces
	Class B			0 spaces
Daycare	Class A	401 m^2	None	0 spaces
	Class B			0 spaces
	Total			345 spaces

Notes:
1. Site plan statistics provided by Arcadis IBI Group, dated January 25, 2023.
2. Class A means a bicycle parking space designed to provide long-term parking for employees or residents of the building. Bicycle Parking Space, Class B means a bicycle parking space designed to provide short-term transient parking for persons who are not residents or employees of the building.
3. As per Section 3.1.6.1.3, *"bicycle parking spaces shall not be required for non-residential uses with less than 1 000 m2 of gross floor area - non-residential."*

Application of these rates to the proposed development results in a bicycle parking requirement of 345 spaces, of which 318 are long-term spaces (called "Class A" in the By-law) and 27 are short-term spaces (called "Class B" in the By-law).

5.3 PROPOSED BICYCLE PARKING SUPPLY

The current concept plan for Site illustrates the provision of 350 parking spaces including 320 long-term (resident) spaces and 30 short-term (visitor) spaces. This proposed bicycle parking supply meets and slightly exceeds the minimum requirements as per City-wide Zoning By-law 225-2007.

It is proposed to provide visitor bicycle parking spaces at-grade while long-term occupant spaces will be located in secure and weather-protected facilities within the P1 level of the parking garage.

6.0 LOADING CONSIDERATIONS

6.1 EXISTING LOADING ARRANGEMENTS

Waste collection / loading activity for the existing apartment building currently occurs on-site, outdoors, within the surface parking area accessed from Helene Street North.

6.2 LOADING REQUIREMENTS

The City of Mississauga Zoning By-law 0225-2007 loading standards apply to the proposed development. **Table 17** summarizes the minimum loading requirements for the proposed building only.

TABLE 17 CITY OF MISSISSAUGA ZONING BY-LAW 0225-2007 LOADING REQUIREMENTS

Use	Units / GFA (sq. m.)	Minimum Zoning By-Law Requirement	Number of Loading Spaces Required[2]
Residential	530 units	1 loading space for apartment dwelling containing > 30 units	1
Retail	463 m^2	1 loading space for GFA greater than 250 sq. m. and less than 2350 sq. m.	1
Day Care	401 m^2	No Requirement	0
Total Required Loading Spaces[2]			2

Notes:
1. Site plan statistics provided by Arcadis IBI Group, dated January 25, 2023.
2. The City of Mississauga Zoning By-law requires loading spaces to have an "unobstructed rectangular area with a minimum width of 3.5 m and a minimum length of 9.0 m". A clear height of 7.5m for a loading area is specified within the Region of Peel Waste Collection Design Standards Manual" (2007)
3. The City of Mississauga Zoning By-law does not including any provisions for shared loading arrangements.

The application of the minimum Zoning By-law loading requirements requires a total of two (2) loading spaces to be provided.

6.3 PROPOSED LOADING SUPPLY AND FACILITIES

It is proposed to provide two (2) loading spaces on-Site; both are accessed from the site driveway which is accessed from Park Street East.

- One (1) outdoor loading space located adjacent the existing building to replace the existing loading area.
- One (1) loading space, consistent with the requirements set out in the Mississauga Zoning By-law and Peel Waste Collection design standards (3.5 m width, 9.0 m length, and 7.5 m height), located within the base of the proposed building.

While the City of Mississauga's Zoning By-law 0225-2007 does not contain shared loading permission between uses, shared loading is recognized / permitted in other municipalities (i.e. City of Toronto) to maximize the efficiency of loading facilities, resulting in efficient pedestrian-oriented buildings and spaces while still meeting the functional servicing requirements of the multiple uses on the site. If shared loading provisions were applied to the site, it would result in the requirement of one (1) formal loading space; the loading space required for the ancillary retail use would not be required.

Further, given the provision of two full-size loading facilities (i.e. one to serve each building), the site will have some redundancy to accommodate retail loading demand as needed.

It is intended that the use of the proposed loading facilities will be managed by a building facility coordinator, allowing for the efficient use of the loading spaces through scheduling of deliveries and waste/recycling collection.

Vehicle manoeuvring diagrams are provided in **Appendix F** and illustrate the turning movements for the design vehicles entering / departing the proposed loading spaces. These diagrams confirm that the proposed loading arrangements are appropriate and will facilitate the manoeuvring needs of the vehicles that will make deliveries to the proposed development.

7.0 PICK-UP & DROP-OFF CONSIDERATIONS

To accommodate short-term and pick-up / drop-off (PUDO) demand at the site, primarily associated with the daycare use, four (4) at-grade parking spaces are provided, located adjacent to the proposed daycare facility.

It is further noted that the daycare is expected to have a capacity of 30 children.

In order to determine the anticipated parking demand associated with the proposed 30-child daycare facility, an extensive amount of parking survey data collected at daycare facilities within the City of Toronto with varying distances to rapid transit stations was reviewed.

These surveys were conducted during the weekday morning and afternoon peak periods and captured the accumulation of short-term parked vehicles associated with daycare pick-up / drop-off activity. This data is summarized in **Table 18**. Rates are based upon the maximum child capacity of the daycare facility.

TABLE 18 DAYCARE FACILITIES – PICK-UP / DROP-OFF ACCUMULATION DATA

Location	Study Date	Study Times	# of Kids (Cap.)	95th %-ile PUDO Acc.	95th %-ile Acc. per Child	Peak PUDO Acc.	Peak Acc. per Child
Two Short Stories Daycare – 430 Broadview Avenue	May 30, 2019	7:00 a.m. - 6:00 p.m.	88	4	0.05	6	0.07
All About Kids Daycare – 1055 Gerrard Street East	May 30, 2019	7:00 a.m. - 6:00 p.m.	82	3	0.04	6	0.07
Beez Kneez Daycare – Mount Pleasant/Davisville	May 3, 2010	7:15 - 9:45 a.m. 2:45 - 6:45 p.m.	45	9	0.20	12	0.27
Little Tots Manor Daycare – Mount Pleasant/Davisville	Apr 21, 2010	7:10 - 9:45 a.m. 2:40 - 6:15 p.m.	75	7	0.09	9	0.12
Kids and Company Daycare – Bloor/Church	Feb 12, 2015	7:00 a.m. - 6:00 p.m.	85	3	0.04	5	0.06
High Park Early Learning Centre – Bloor/High Park	Nov 25, 2015	7:00 - 9:00 a.m. 4:00 - 6:00 p.m.	62	4	0.06	4	0.06
Mothercraft Daycare – Yonge/Heath	Apr 22, 2014	7:00 - 9:30 a.m. 4:00 - 6:30 p.m.	61	4	0.07	6	0.10
Cole Street Childcare – Gerrard/Parliament	Apr 10-12, 2012	7:15 - 9:40 a.m. 4:00 - 6:00 p.m.	62	1	0.02	1	0.02
Regent Park Childcare Centre – Dundas/Parliament	Apr 10-12, 2012	7:15 - 9:40 a.m. 4:00 - 6:00 p.m.	40	1	0.03	2	0.05
Upper Yonge Village Daycare – Yonge/Briar Hill	Apr 3, 2013	6:30 - 9:30 a.m. 3:00 - 6:00 p.m.	55	6	0.11	10	0.18
Upper Yonge Village Daycare – Yonge/Briar Hill	Aug 28, 2003	7:30 - 9:30 a.m. 4:00 - 6:00 p.m.	55	6	0.11	9	0.16
Metamorphosis Early Learning Childcare Centre – Bloor/Donlands	Dec 17, 2015	7:00 - 9:00 a.m. 4:00 - 6:00 p.m.	39	3	0.07	4	0.10
Dandylion Daycare – Bloor/Donlands	Jan 7, 2015	7:00 - 9:00 a.m. 4:00 - 6:00 p.m.	122	6	0.05	8	0.07
				Average Rate	**0.07**		**0.10**

Based on the data, an average peak accumulation rate of 0.10 vehicles per child was calculated. Applying this rate to the proposed daycare facility (which has a planned capacity of 30 children) results in an anticipated peak accumulation of approximately 3 vehicles.

It is noted that 3 vehicles is the anticipated peak vehicle accumulation and this peak will likely only occur for short periods of time based on the parking surveys conducted. The average 95th-percentile accumulation rate is 0.07 vehicles per child, which applied to the proposed daycare yields an anticipated 2 to 3 vehicle 95th-percentile accumulation – i.e., for 95% of the time, vehicular accumulation is anticipated to be less than this.

Based on this assessment, the proposed daycare PUDO parking supply of 4 spaces will adequately accommodate daycare PUDO demand.

Off-peak Usage

Short-term and PUDO parking demand associated with the planned daycare use is expected to occur at the beginning and end of daytime periods when drop-off and pick-up typically occur at the daycare. Outside of these time periods, it is anticipated that daycare PUDO demand will be minimal, and the parking spaces can be used for other purposes.

Therefore, the parking spaces should be made available for general short-term parking and PUDO use outside of these periods; an example would be weekday evenings and during weekends. Couriers, food deliveries and more can use these facilities.

Upon occupancy, it should be ensured that appropriate signage and enforcement of the usage of these parking spaces is in place to prevent conflict between daycare uses and others, as listed above.

8.0 TRAFFIC VOLUMES

The following section outlines the traffic volume forecasting scope of work as discussed and agreed upon with the City of Mississauga.

8.1 EXISTING TRAFFIC VOLUMES

Baseline existing traffic volumes for intersections within the study area for vehicles, cyclists, and pedestrians were established for the weekday morning and afternoon peak hour periods on the area street network based on intersection traffic information collected by Spectrum Traffic Data Inc. on behalf of BA Group, and additional data provided by the City of Mississauga. The turning movement count dates and sources are summarized in **Table 19**.

The raw turning movement counts are attached in **Appendix G**.

TABLE 19 EXISTING TRAFFIC COUNT INFORMATION

Intersection	Date	Source
Hurontario Street / Park Street E	Thursday 4 June 2015	Mississauga
Park Street E / Ann Street	Tuesday 2 December 2014	Mississauga
Park Street E / Site PUDO	Wednesday 21 September 2022	Spectrum Traffic
Park Street E / Helene Street N	Wednesday 21 September 2022	Spectrum Traffic
Helene Street N / Site Driveway	Wednesday 21 September 2022	Spectrum Traffic
Helene Street N / Queen Street	Wednesday 21 September 2022	Spectrum Traffic
Queen Street E / Port Credit GO PUDO	Wednesday 21 September 2022	Spectrum Traffic
Queen Street E / Site Driveway	Wednesday 21 September 2022	Spectrum Traffic
Queen Street E / Ann Street	Wednesday 21 September 2022	Spectrum Traffic

Due to construction of the LRT ongoing at the intersection of Hurontario Street and Park Street East, pre-construction traffic counts (dated 2015) were utilized for this intersection. Existing turning movement counts at other area intersections were reviewed for consistency with the ‘main’ intersection at Hurontario Street and Park Street East. Through traffic volumes at intersections along Park Street East were conservatively balanced up to match the pre-construction volumes.

Existing traffic volumes are shown in **Figure 8**.

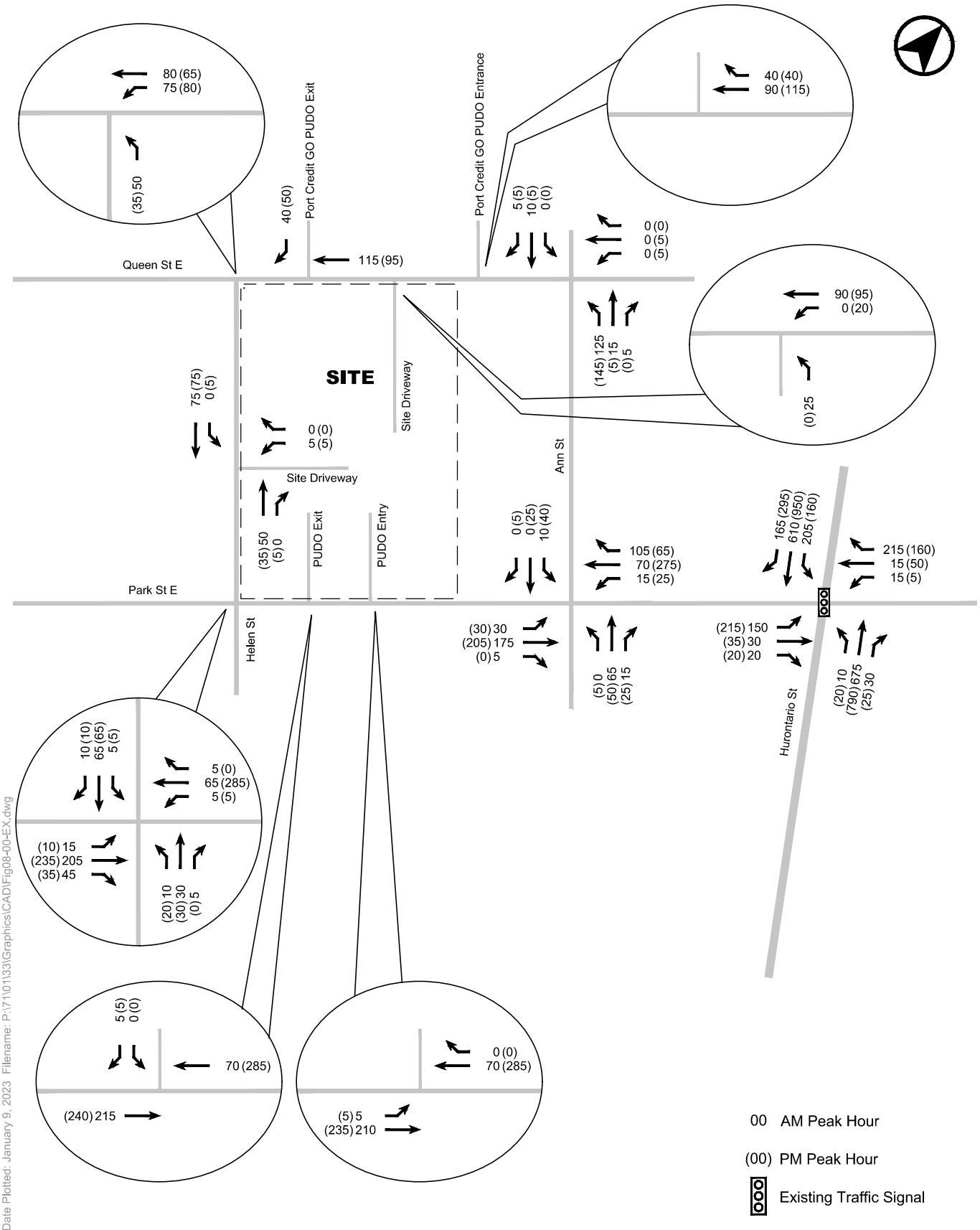

FIGURE 8 EXISTING TRAFFIC VOLUMES

8.2 FUTURE BACKGROUND TRAFFIC VOLUMES

8.2.1 Corridor Growth

Corridor growth rates have been provided by the City and were obtained using the City's Travel Demand Model and supporting traffic count data. The rates have been applied to the major roadway of the study area – Hurontario Street. The recommended projected growth rates are summarized in **Table 20** and have been applied to traffic volumes on Hurontario Street and Lakeshore Road East over a 5-year planning horizon.

Correspondence from the City is included in **Appendix H**.

TABLE 20 CORRIDOR GROWTH RATES – HURONTARIO STREET

Peak Hour	Northbound	Southbound
Weekday Morning	1.5%	2.0%
Weekday Afternoon	0.5%	1.5%

8.2.2 Specific Development Allowances

Following a review of area developments within the City of Mississauga, specific allowances have been made to account for new traffic generated by other area development proposals in the vicinity of the site. The specific background developments included in the analysis are summarized in **Table 21**.

TABLE 21 SPECIFIC BACKGROUND DEVELOPMENTS

Site	Development Program	Source of Traffic Assignment
30 Queen Street East	1,139 residential units 1,765 m^2 non-residential GFA	GHD, March 2022
17-19 Ann Street, 84 & 90 High Street, and 91 Park Street East	359 residential units 310 m^2 non-residential GFA	BA Group, December 2021
42-46 Park Street East	258 residential units	LEA, May 2020
128 Lakeshore Road East	42 residential units At-grade retail	LEA, December 2021
170 Lakeshore Road East	174 residential units 625 m^2 non-residential GFA	NexTrans, October 2021
28 Ann Street & 78 Park Street East	359 residential units, 250 m^2 non-residential GFA	LEA, July 2019
55 Port Street East	31 residential units	RJ Burnside, February 2018
21, 25, 29 Park Street East	204 residential units	No report available[1]
42 Port Street East	221 residential units 1,686 m^2 non-residential GFA	Report not yet submitted, currently in progress with BA Group

Notes:
1. Volumes and distribution generated based on trip generation rates observed at nearby developments of similar scale and distribution patterns determined by 2016 TTS data and observed traffic patterns.

8.2.3 Future Background Traffic Volumes

Future background traffic volumes for the 5-year study horizon were development by combining the area corridor growth, specific background developments, and existing traffic volumes as illustrated in **Figure 9**.

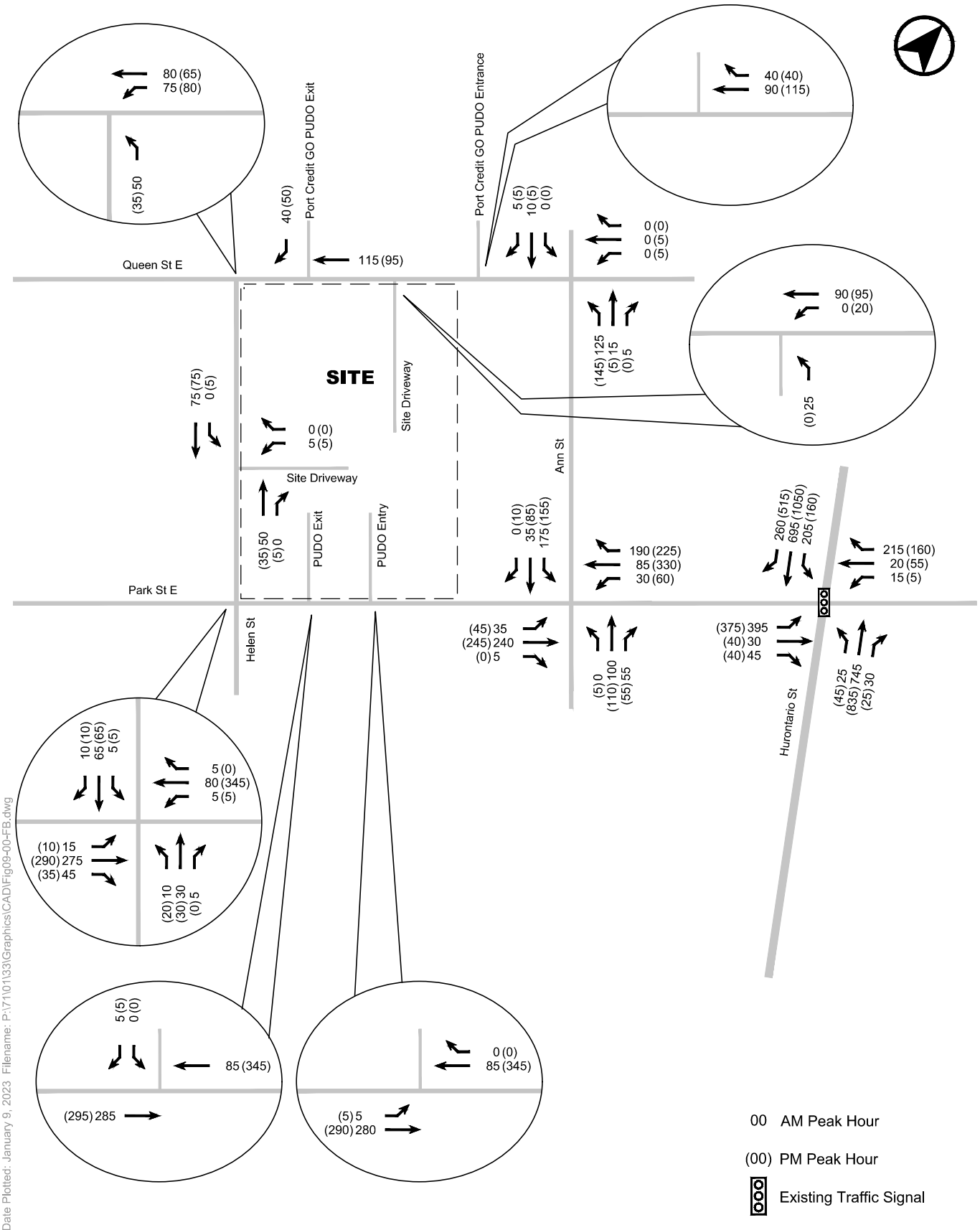

FIGURE 9 FUTURE BACKGROUND TRAFFIC VOLUMES

8.3 SITE TRAFFIC

8.3.1 Vehicle Trip Generation

Vehicular trip generation adopted for the proposed residential component of the development was based upon existing site trip generation characteristics for the residential component of the site. For the planned daycare use, trip generation is based on proxy sites from the Toronto area – given the advantageous transit context of the development lands. New retail use on the site is considered to be ancillary in nature (no external vehicle trips generated), given its relatively small floor area and the mixed-use nature of the site. The adopted site trip generation is summarized in **Table 22**.

Proxy trip generation data is attached in **Appendix I**.

TABLE 22 SITE TRIP GENERATION

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
ITE Rates (11th Edition)						
Multifamily Housing (High-Rise) - LUC 222, per unit	*0.09*	*0.18*	*0.27*	*0.18*	*0.14*	*0.32*
Day Care Center - LUC 565, per child	*0.41*	*0.37*	*0.78*	*0.37*	*0.42*	*0.79*
70 Park Street East Traffic Counts (Includes 3 Driveways)						
70 Park Street East (all 3 existing driveways)	***0.05***	***0.16***	***0.21***	***0.15***	***0.08***	***0.22***
Daycare Proxy Sites (per child)						
108 Strathmore Boulevard	*0.09*	*0.16*	*0.25*	*0.18*	*0.23*	*0.41*
High Park Early Learning Centre (17 High Park Avenue)	*0.23*	*0.24*	*0.47*	*0.16*	*0.23*	*0.39*
Metamorphosis Early Learning Child Care Centre (53 Strathmore Boulevard)	*0.21*	*0.21*	*0.42*	*0.18*	*0.21*	*0.39*
Average Rate	*0.18*	*0.20*	*0.38*	*0.17*	*0.22*	*0.40*
85th Percentile Rate (selected)	***0.22***	***0.23***	***0.46***	***0.18***	***0.23***	***0.41***
Trips Generated						
Resident (530 units)	30	85	115	80	40	120
Day Care (30 children)	5	5	10	5	5	10
Total	**35**	**90**	**125**	**85**	**45**	**130**

The site is expected to generate a total of **125** and **130** new vehicular trips in the weekday morning and afternoon peak hours, respectively.

8.3.2 Trip Distribution and Assignment

Residential traffic distribution patterns are based upon a review of information from the 2016 Transportation Tomorrow Survey (TTS) and observations of existing traffic patterns in the area. The adopted distribution is summarized in **Table 23**. For daycare-related trips, existing observed traffic patterns were adopted as future traffic distribution. TTS data queries and calculations are attached in **Appendix J**.

TABLE 23 SITE TRIP DISTRIBUTION (RESIDENTIAL)

To/From	Road	Inbound Proportion	Outbound Proportion
North	Hurontario Street	45%	55%
East	Lakeshore Road East	30%	25%
West	Lakeshore Road West	25%	20%

The adopted directional distribution was used to assign site trips to the area road network. The resulting site traffic for the 2027 horizon year (including traffic relocation due to closing two site driveways) is illustrated in **Figure 10**.

8.4 FUTURE TOTAL TRAFFIC VOLUMES

The 2027 future background traffic volumes in the weekday morning and afternoon peak hours were combined with site traffic volumes to develop the future 2027 total traffic forecasts.

The future total traffic volumes for the weekday morning and afternoon peak hours are illustrated in **Figure 11**

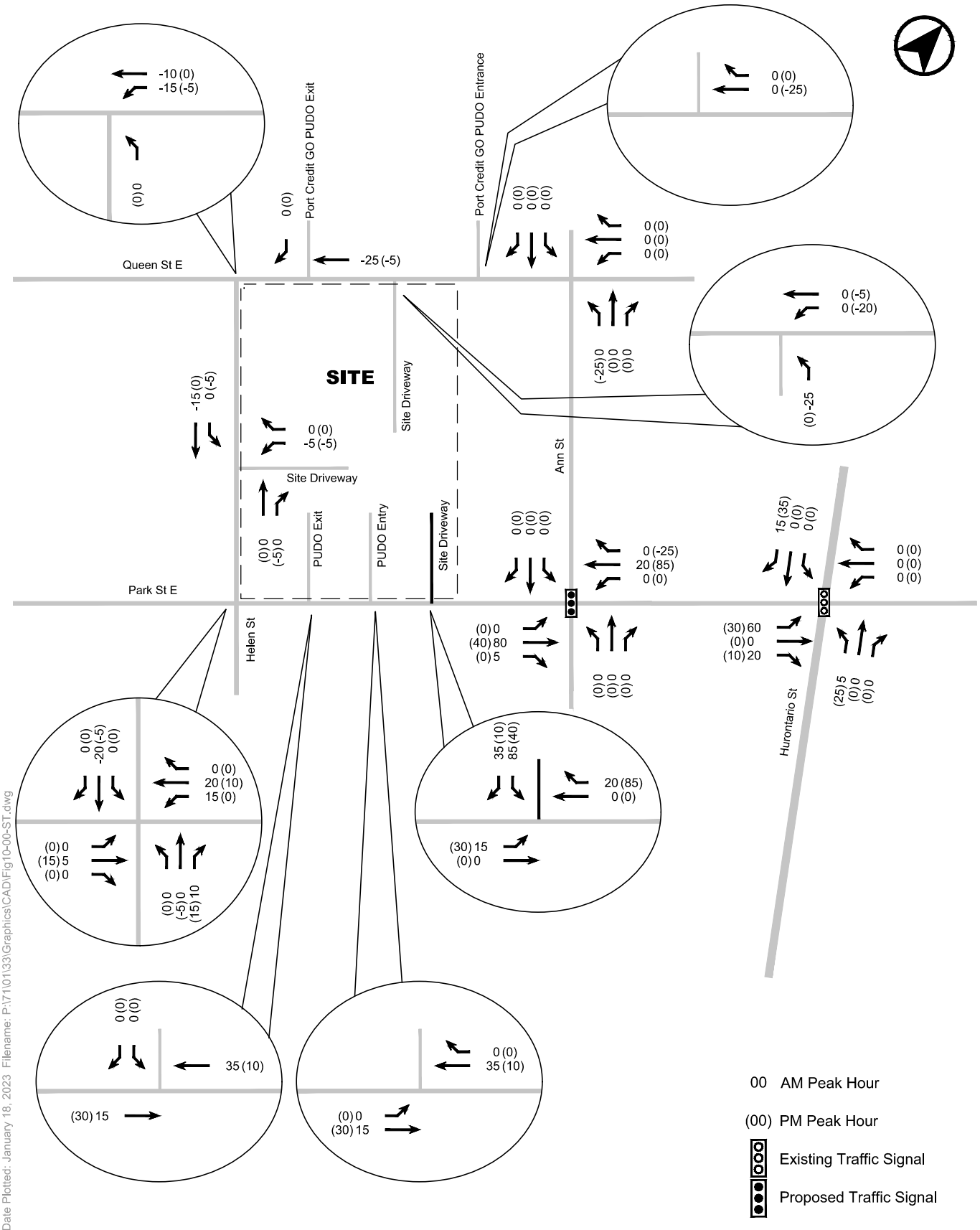

FIGURE 10 NEW SITE TRAFFIC VOLUMES

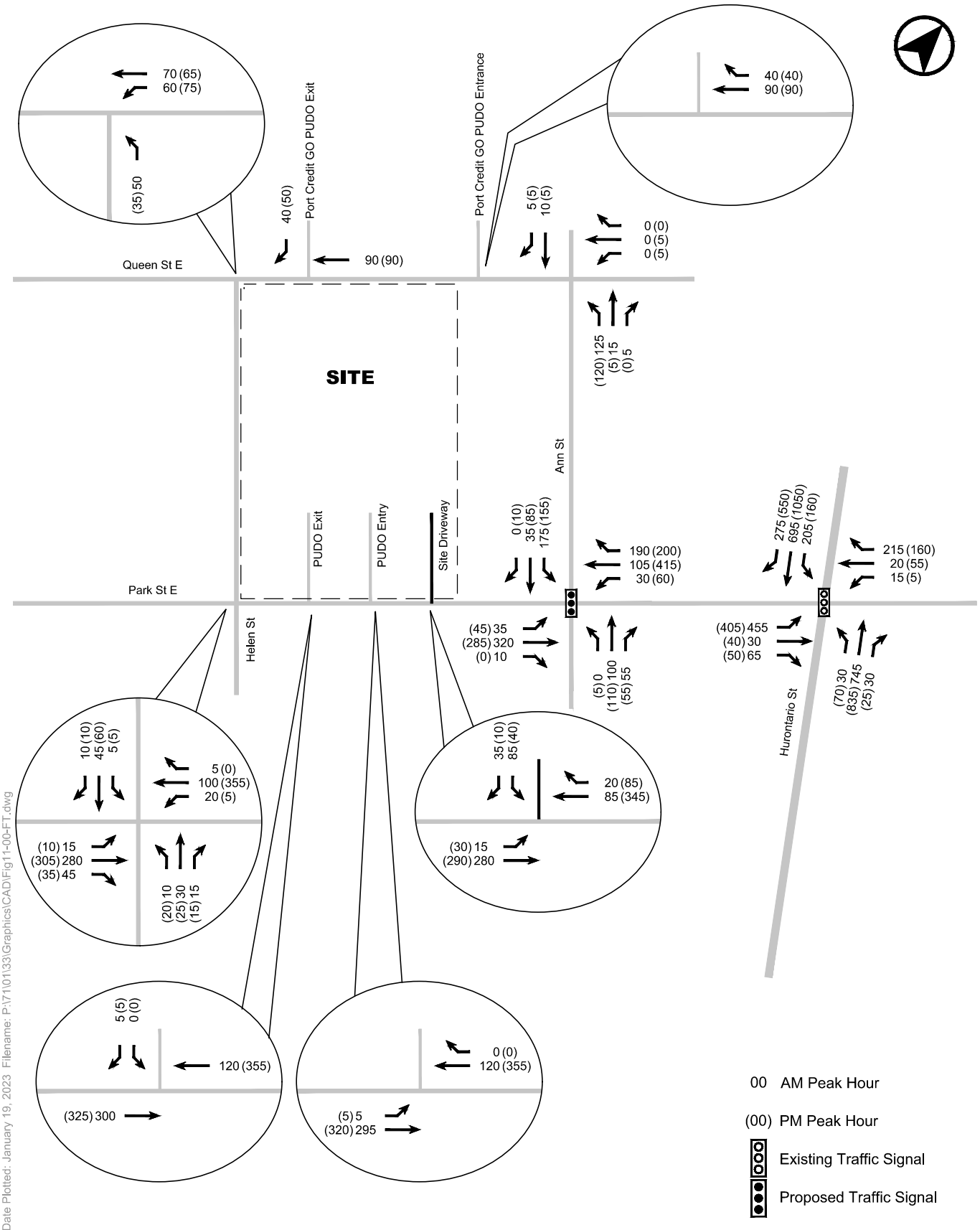

FIGURE 11 FUTURE TOTAL TRAFFIC VOLUMES

9.0 TRAFFIC ANALYSIS

9.1 BASIS OF ANALYSIS

An analysis of the study area intersections was undertaken using Synchro version 11 and the *Highway Capacity Manual (HCM)* methodologies. The quality of traffic operations at intersections is typically based on the volume to capacity (v/c) ratio and level of service (LOS).

The v/c ratio for a particular movement (e.g., left/right turn or through) at an intersection is a measure of the capacity consumed by the number of vehicles making that movement and the total available capacity. The v/c ratio for an intersection overall is the weighted average of the v/c ratios for the critical movements. A v/c ratio of 1.00 indicates that the movement or intersection is operating at its theoretical capacity and there is no capacity available to accommodate any additional vehicles.

The LOS for a particular movement is based on the average delay per vehicle and includes deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, the LOS ranges from LOS A (10 seconds or less average delay per vehicle) to LOS F (greater than 80 seconds average delay per vehicle). The LOS for an intersection overall is based on the weighted average delay for all vehicles processed by the intersection.

The LOS criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections as the characteristics of different transportation facilities result in different driver perceptions. The expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay than an unsignalized intersection. Therefore, the delay values for unsignalized intersection have a smaller range, from LOS A (10 seconds or less average delay per vehicle) to LOS F (greater than 50 seconds average delay per vehicle). For unsignalized intersections, LOS is only calculated for those movements that conflict with opposing free-flow traffic and is not defined for the intersection as a whole.

Acceptable operations are generally considered to be LOS D or better although longer delays may be accepted in urban areas and where other modes of transportation such as transit are prioritized.

9.2 ANALYSIS PARAMETERS

Key parameters used in the analysis include:

- Existing lane configurations;
- Future lane configurations to account for the implementation of the Hurontario LRT (plans provided in **Appendix K**) as shown in **Figure 12**;
- Peak hour factors (PHFs) based on existing counts for existing conditions;
- PHFs set to 1.00 under future conditions to reflect a busier street network;
- Lost time adjustments: Advanced Greens set to 1.0 seconds, Main Phase set to: 5 seconds.
- Heavy vehicle percentages as derived from existing turning movement counts;
- Pedestrian and bicycle approach crossings as derived from existing traffic counts;
- Signal timing plan data (i.e., minimum green time, pedestrian clearance time) under existing and future conditions are based on the parameters obtained from the City of Mississauga (plans provided in **Appendix L**);
- Synchro defaults for all other parameters.

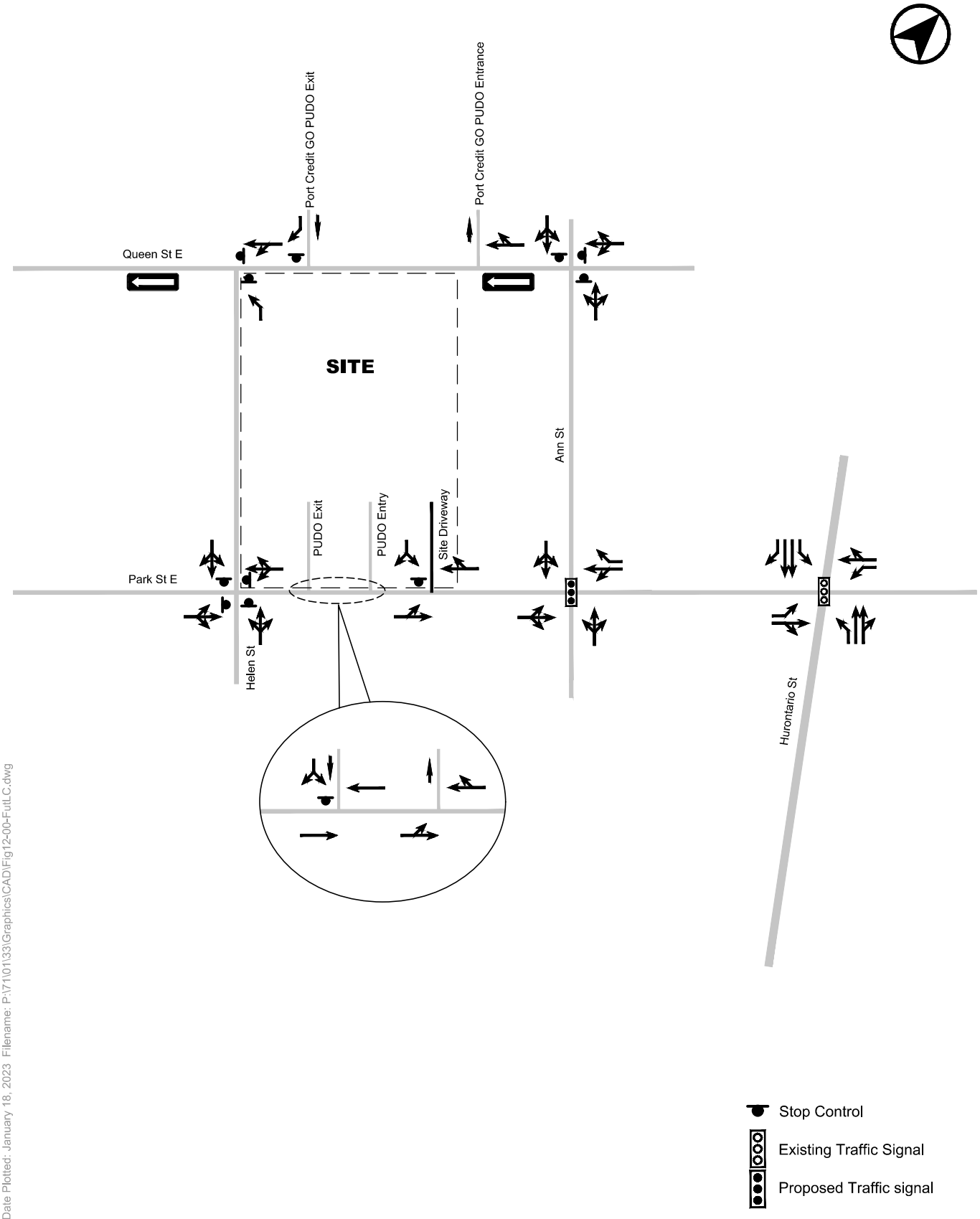

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FIGURE 12 FUTURE LANE CONFIGURATION AND TRAFFIC CONTROL

9.3 TRAFFIC OPERATIONS SCENARIOS

Traffic operations analyses results are presented in the subsequent sections for these scenarios:

- Existing conditions based on adjusted 2022 base counts;
- Future background conditions, which consider existing traffic volumes plus background traffic growth anticipated at the 5-year analysis horizon (2027 horizon year); and
- Future total conditions which consider the future background traffic with the addition of the newly generated site traffic.

9.4 NEW SIGNAL – PARK STREET EAST / ANN STREET

The intersection of Park Street East / Ann Street is currently operating under two-way STOP control and is proposed to be converted to a signalized intersection in future. This change would ensure that queueing activity along Park Street East can be contained and not spillback onto Hurontario Street during peak hours (particularly PM peak hour).

The new signal will have a cycle length of 70 seconds to minimize queueing impacts and efficiently move vehicles and pedestrians through the intersection. This represents exactly half the cycle length of the adjacent signal at Hurontario Street / Park Street East, which will be ideal for coordination purposes.

Though not explicitly warranted based on the Ontario Traffic Manual (Book 12) methodology, a new signal at this location is required to minimize delay to an acceptable level with buildout of numerous development sites in the local area. A signal at this intersection would also facilitate safer crossing opportunities for pedestrians travelling both north-south and east-west, contributing as a valuable TDM measure through the provision of increased pedestrian safety and amenity.

9.5 NEW STOP CONTROL – QUEEN STREET EAST / HELENE STREET (WESTBOUND)

With buildout of the development, the westbound movement at the intersection of Queen Street East and Helene Street is proposed to be converted into a STOP controlled movement, as illustrated in **Appendix B**, and as outlined as a TDM measure in **Section 3.0**. This will provide safe crossing opportunities for pedestrians to move between the Site (and surrounding area) and Port Credit GO Station to the north.

This proposal is also compliant with Section 5.6.19.4 of the Region of Peel Official Plan (outlined in **Section 1.2** of this report) which is the following:

> *Develop and enhance active transportation connections and infrastructure (including sidewalks and multi-use paths) to transit stations and stops to support complete communities, improve multi-modal station access, and to support the Region's modal split target by increasing transit ridership in Peel.*

The intersection will maintain STOP control for the northbound movement, making this intersection effectively All-Way STOP Controlled given that Queen Street East is one-way in the westbound direction.

9.6 TRAFFIC OPERATIONS ANALYSIS

The below section summarizes results of the traffic operations analysis. Detailed Synchro output sheets are attached in **Appendix M** for reference.

9.6.1 Signalized Intersections

The summarized results of the intersection traffic operations analyses undertaken for all signalized intersections are summarized in the below tables.

TABLE 24 CAPACITY ANALYSIS RESULTS – HURONTARIO STREET / PARK STREET EAST

Movement	Existing		Future Background[2]		Future Total[2]	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.39 (0.65)	C (C)	0.66 (0.89)	C (E)	0.72 (0.96)	C (E)
EBTR	0.06 (0.07)	C (B)	0.06 (0.09)	B (C)	0.08 (0.09)	B (C)
WBL	0.03 (0.01)	C (B)	0.04 (0.02)	C (D)	0.05 (0.02)	D (D)
WBTR	0.19 (0.30)	C (C)	0.19 (0.38)	D (D)	0.21 (0.38)	D (D)
NBL	0.05 (0.13)	C (B)	0.20 (0.34)	D (C)	0.25 (0.53)	D (C)
NBTR	0.73 (0.51)	D (B)	0.82 (0.54)	D (C)	0.82 (0.54)	D (C)
SBL	0.70 (0.83)	C (D)	0.74 (0.46)	D (B)	0.74 (0.46)	D (B)
SBT	0.45 (0.60)	C (B)	Existing only.			
SBR	0.20 (0.37)	C (B)				
SBTR	Future only.		0.72 (0.94)	D (D)	0.73 (0.96)	D (D)
Overall	**0.55 (0.75)**	**C (C)**	**0.60 (0.77)**	**D (D)**	**0.64 (0.80)**	**D (D)**

Notes:
1. XX (XX): Weekday a.m. peak hour (Weekday p.m. peak hour).
2. Protected-permissive left turn added to eastbound left movements.

Under existing traffic conditions, the intersection operates at an acceptable level of service during the weekday morning and afternoon peak hour periods, with overall v/c ratios of 0.55 and 0.75, respectively.

Under future conditions, the signal was optimized to accommodate for overall corridor growth and area background development allowances. A protected-permissive left-turn phase was added to the eastbound left movement in both peak hours. The overall cycle length was unchanged for the purposes of this analysis. Should the City wish to further optimize queue lengths at this intersection in future, a potential change in cycle length could be one mechanism to achieve this.

Under future background traffic conditions, with allowances of specific area developments and corridor growth, the intersection can operate at an acceptable level of service during the weekday morning and afternoon peak hours with overall v/c ratios of 0.60 and 0.77.

With the addition of site-related traffic under future traffic conditions, as the proposed development is occupied, the intersection can continue to operate at an acceptable level of service during the weekday morning and afternoon peak hours with overall v/c ratios of 0.64 and 0.80. Site related impacts on the intersection are relatively minor.

As discussed above in **Section 9.4**, at the intersection of Park Street East / Ann Street, a new signal will be added to accommodate future traffic conditions. A cycle length of 70 seconds was selected to optimize queue lengths along Park Street East and to offer coordination with the adjacent traffic signal at Hurontario Street. **Table 25** provides a summary of results for the new signalized intersection under future total traffic conditions.

TABLE 25 CAPACITY ANALYSIS RESULTS – PARK STREET EAST / ANN STREET

	Future Total	
	V/C	LOS
EBTLR	0.37 (0.33)	A (A)
WBR	0.12 (0.15)	A (A)
WBTL	0.15 (0.46)	A (A)
NBTLR	0.30 (0.35)	B (C)
SBTLR	0.58 (0.72)	C (C)
Overall	**0.45 (0.54)**	**B (B)**

Notes:
1. XX (XX): Weekday a.m. peak hour (Weekday p.m. peak hour).

Based on the foregoing, site traffic volumes can be appropriately accommodated at the network signalized intersections with the Hurontario LRT through basic signal timing adjustments.

9.6.2 Unsignalized Intersections

The summarized results of the intersection traffic operations analyses undertaken the unsignalized intersections are summarized in **Table 26**. All unsignalized intersections will operate at acceptable levels of service (LOS B or better) under all analysis scenarios.

TABLE 26 UNSIGNALIZED INTERSECTION CAPACITY RESULTS

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Park Street East / Ann Street						
EBTLR	B (B)	10.8 (11.5)	B (C)	13.0 (16.8)	Signalized in future.	
WBTL	A (B)	8.3 (13.2)	A (C)	9.6 (23.8)		
WBR	A (A)	7.3 (7.0)	A (A)	9.2 (11.0)		
NBTLR	B (A)	10.0 (9.9)	B (B)	11.4 (13.6)		
SBTLR	A (A)	8.8 (9.8)	B (C)	12.1 (16.1)		
Park Street East / Future Site Driveway						
EBTL	Future only.				A (A)	0.5 (1.0)
SBLR					B (B)	11.5 (14.6)
Park Street East / Existing PUDO Exit						
SBLR	A (B)	8.8 (10.1)	A (B)	8.8 (10.4)	A (B)	9.0 (10.1)
Park Street East / Helene Street						
EBTLR	A (B)	9.4 (10.5)	B (B)	10.0 (11.1)	B (B)	10.1 (11.5)
WBTLR	A (B)	8.0 (10.8)	A (B)	8.2 (11.5)	A (B)	8.4 (11.8)
NBTLR	A (A)	8.3 (9.1)	A (A)	8.4 (9.2)	A (A)	8.4 (9.2)
SBTLR	A (A)	8.4 (9.2)	A (A)	8.5 (9.3)	A (A)	8.5 (9.3)
Helene Street / Existing Site Driveway						
WBLR	A (A)	9.2 (9.6)	A (A)	9.2 (9.5)	Existing only.	
SBTL	A (A)	0.0 (0.5)	A (A)	0.0 (0.5)		
Queen Street East / Helene Street[2]						
WBTL	A (A)	3.8 (4.3)	A (A)	3.7 (4.2)	A (A)	8.1 (8.2)
NBL	B (B)	11.3 (11.6)	B (B)	10.6 (10.6)	A (A)	7.7 (7.6)
Queen Street East / Port Credit GO PUDO Exit						
SBR	A (A)	9.8 (9.9)	A (A)	9.6 (9.7)	A (A)	9.4 (9.6)
Queen Street East / Existing Site Driveway						
WBTL	A (A)	0.0 (1.3)	A (A)	0.0 (1.4)	Existing only.	
NBL	A (A)	9.2 (0.0)	A (A)	9.1 (0.0)		
Queen Street East / Ann Street						
WBTLR	A (A)	7.3 (7.5)	A (A)	7.3 (7.4)	A (A)	7.3 (7.4)
NBTLR	A (A)	8.4 (8.5)	A (A)	8.2 (8.3)	A (A)	8.2 (8.1)
SBTLR	A (A)	6.9 (6.8)	A (A)	6.9 (6.8)	B (A)	6.9 (6.8)

Notes:
1. XX (XX): Weekday a.m. peak hour (Weekday p.m. peak hour).
2. STOP control added for the westbound movement in the future total scenario.

9.6.3 Signalized Intersection Queue Length Summary

For comparison, 95th percentile queue lengths for each signalized intersection are summarized in **Table 27** under existing, future background and future total traffic conditions.

TABLE 27 95TH PERCENTILE QUEUE LENGTH SUMMARY

Intersection	Existing Traffic	Future Background Traffic	Future Total Traffic	Approximate Storage Available (m)
Hurontario Street / Park Street East				
EBL	58.6 (67.6)	96.9 (130.9)	117.1 (155.8)	40
EBT	15.2 (13.4)	13.3 (19.4)	14.3 (19.8)	70
WBL	8.1 (3.3)	9.8 (5.0)	9.8 (5.0)	70
WBT	20.6 (38.6)	28.8 (55.5)	28.8 (55.5)	105
NBL	6.7 (7.1)	14.2 (11.1)	16.6 (19.6)	40
NBT	121.4 (76.7)	134.1 (117.4)	134.1 (117.4)	95
SBL	49.3 (71.4)	59.5 (32.0)	59.5 (32.0)	35
SBT	74.3 (94.3)	136.2 (274.3)	138.8 (285.0)	290+
SBR	27.6 (44.4)	Dedicated right-turn lane removed for LRT.		12
Park Street East / Ann Street				
EBT	Not signalized under existing conditions.		48.7 (36.6)	100
WBT			18.7 (56.5)	70
WBR			9.3 (11.2)	12
NBT			20.6 (30.3)	100
SBT			36.7 (59.2)	100

Notes:
1. XX (XX): Weekday a.m. peak hour (Weekday p.m. peak hour).

In general, most 95th percentile queue lengths can be accommodated by existing or planned storage lengths. No further geometric changes or traffic restrictions are recommended as a result of the development of the subject site.

95th percentile queue lengths will exceed available storage for the eastbound left-turn movement at Park Street East / Hurontario Street under future background conditions. However, it is notable that with Park Street East becoming increasingly constrained in future due to local development, any cut-through or non-local traffic would likely divert to other available routes – mainly High Street East or potentially Lakeshore Road East. In time, this shift would act to ease the traffic volume moving through the Park Street East / Hurontario Street intersection and allow more efficient traffic flow for the eastbound left-turn movement.

APPENDICES

Appendix A:
Reduced Scale Architectural Plans

70 PARK STREET EAST, MISSISSAUGA – OPA/ZBA APPLICATION

LIST OF DRAWINGS

S.NO	Sheet Name
A000	COVER PAGE
A001	CONTEXT PLAN
A002	SURVEY
A003	SITE PLAN
A004	BASEMENT PARKING P7LOWER PLAN
A005	BASEMENT PARKING P1 TO P7 LEVEL PLANS
A006	GROUND FLOOR & MEZZANINE FLOOR PLANS
A007	LEVEL 2TO4 AND LEVEL 5 FLOOR PLANS
A008	LEVEL 6 AND LEVEL 7 FLOOR PLANS
A009	LEVEL 8 AND LEVEL 9(AMENITY) FLOOR PLANS
A010	TYP TOWER FLOOR PLANS
A011	MECH PH AND ROOF LEVEL FLOOR PLANS
A012	NORTH AND SOUTH ELEVATIONS
A013	EAST AND WEST ELEVATIONS
A014	SECTION
A015	RENDER FROM GO STATION
A016	INTERIOR COURTYARD RENDER
A017	DAYCARE AND RESIDENTIAL ENTRANCE RENDER

ARCHITECTURAL VISUALIZATION

True North

Project North

CLIENT

MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
5960

PROJECT

70 PARK STREET EAST

PROJECT NO: Project Number	SCALE:
DRAWN BY: JK	CHECKED BY: MV
PROJECT MGR: JK	APPROVED BY: MS

PRIME CONSULTANT

ARCADIS ARCADIS IBI GROUP
55 St. Clair Avenue West, 7th Floor,
Toronto, ON M4V 2Y7, Canada
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SHEET TITLE

COVER PAGE

SHEET NUMBER	ISSUE
A000	1

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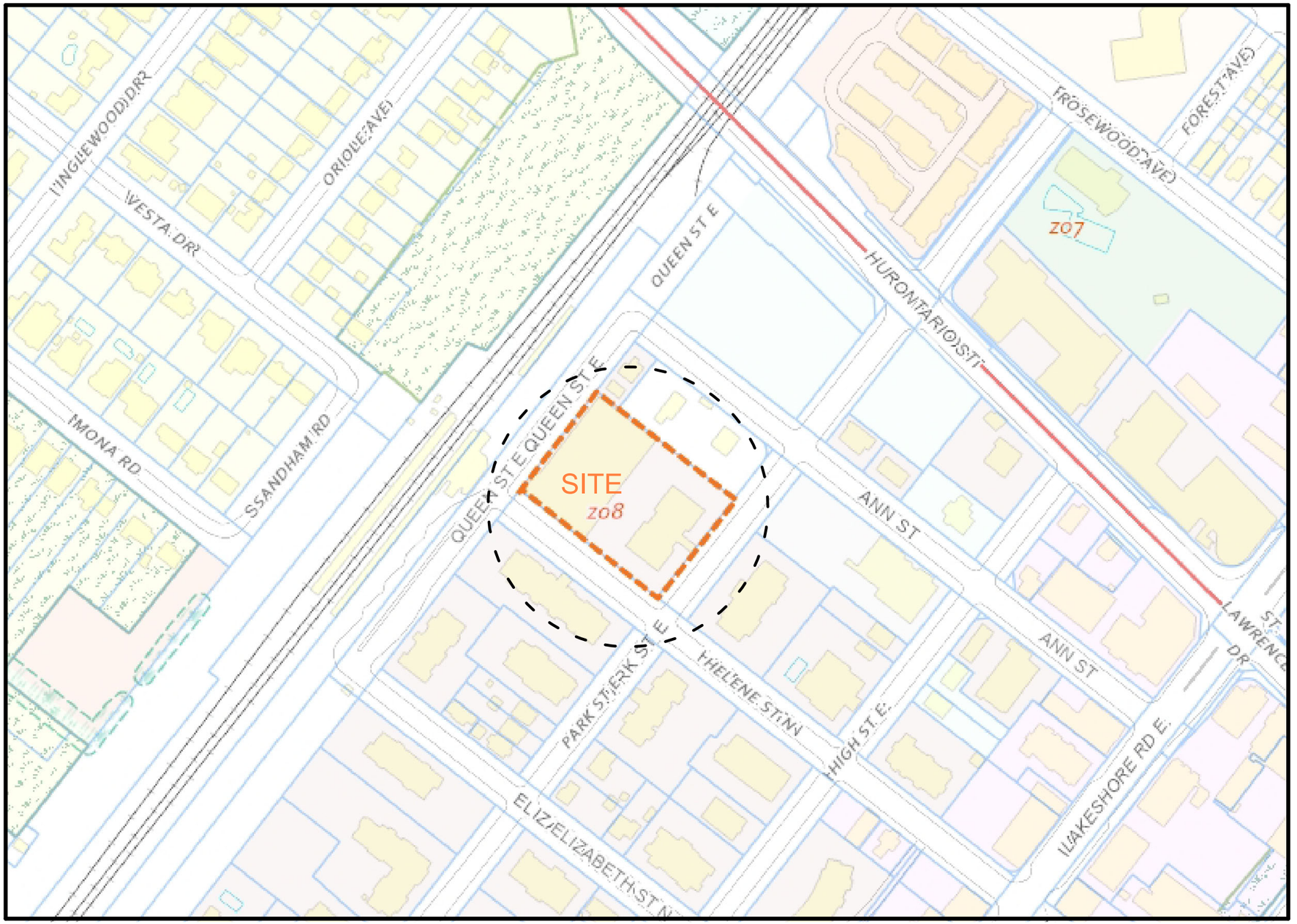

PROJECT STATISTICS

Municipal Address
70 Park street, Mississauga,ON

Area Summary (m²)		
GCA (Including Below Grade)	67,395	
GCA (Excluding Below Grade)	40,900	
Landscape Area (Grade)	2,004	32%

GFA (Mississauga Bylaw 0174-2017) (m²)			
Proposed 38 storeyed Tower	PROPOSED TOWER	RETAINED TOWER	PROPOSED+RETAINED
Residential GFA	34,610	23,807	58,417
Retail GFA	463	0	463
Daycare GFA	401	0	401
Total GFA	35,474	23,807	59,281

FSI		
	SITE AREA	FSI
Site Area (excluding Existing tower)	4,527	7.8
Site Area (including Existing retained tower)	6,276	9.4

Unit Mix			
Unit Type	Provided	Percentage	Percentage
Studio	86	16%	59%
One Bedroom	230	43%	
Two Bedroom	114	22%	22%
Two Bedroom + Den	100	19%	19%
Total	530	100	

Amenity Area (m²)			TOTAL	
	PROPOSED TOWER	RETAINED TOWER	PROPOSED + RETAINED	
Indoor Amenity (2 m² per unit)	Provided	Provided	Provided	Required (4m²/unit)
Level 09	532			
Mezzanine	879			
Total	1,411	189	1,599.8	
Outdoor Amenity (2 m² per unit)	Provided			
Level 09	1,410			
Total	1,410	70	1,480.0	
Total Indoor +Outdoor Amenity	2,821	259	3,079.8	2,960.0

BICYCLE PARKING			
Long-Term	Provided	Required	Rate
Mezz	320	318	
Total	320	318	0.6 bike/unit
Short-Term	Provided	Required	
Mezz	30	27	
Total	30	27	0.05 bike/unit

Parking Provided	Regular	Visitor/Non residential	Resident
Ground Floor (Pick-up / Drop-off (Short-term))	4	4	
P1 (Visitor)	70	70	0
P2 (41 Visitor & 40 Residential)	81	41	40
P3 (Residential)	82		82
P4 (Residential)	82		82
P5 (Residential)	82		82
P6 (Residential)	82		82
P7 (Residential)	82		82
P8 (Residential) partial	45		45
provided per unit	*0.80*	*0.15*	*0.65*
Total Provided	610	111	495

BUILDING HEIGHT (m)	
	Proposed
Number of Storeys	38
Building Height	126.30
Establsihed Grade	82.15
Building height measured from Established Grade:	208.5

IBI GROUP ARCHITECTS

True North Project North

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MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

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ONTARIO ASSOCIATION OF ARCHITECTS
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SHEET TITLE
CONTEXT PLAN

PROJECT NO:	SCALE:
Project Number	
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

SHEET NUMBER A001
ISSUE 1

DO NOT SCALE DRAWING
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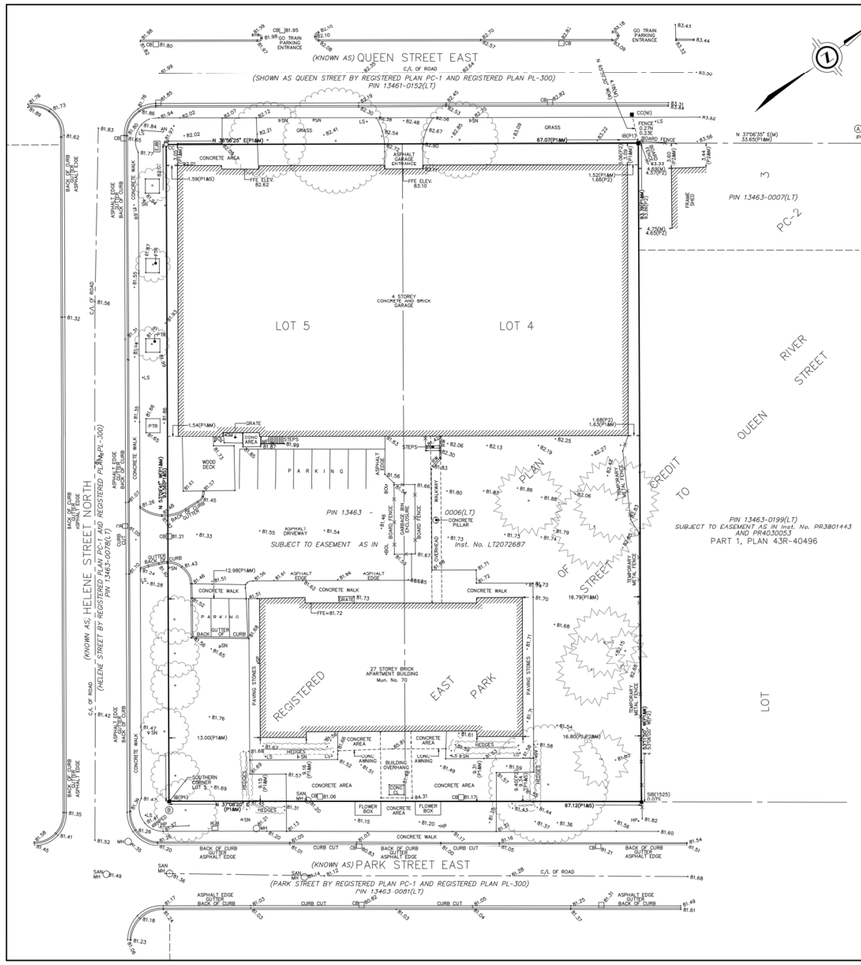

PLAN OF SURVEY SHOWING TOPOGRAPHY OF

LOTS 4 AND 5
EAST OF CREDIT RIVER
PARK STREET TO QUEEN STREET
REGISTERED PLAN PC-2
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL

SCALE 1 : 250

0 5 0 5 10 15 metres

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METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES. METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9997534.

FOR BEARING COMPARISONS, A ROTATION OF 00°57'35" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN PT.

INTEGRATION DATA

OBSERVED REFERENCE POINTS (ORPs): UTM ZONE 17, NAD83 (CSRS) (2010.0).

COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG 216/10.

POINT ID	EASTING	NORTHING
ORP (A)	614 227.11	4 823 600.32
ORP (B)	614 241.40	4 823 463.80

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

THE RESULTANT TIE BETWEEN ORP (A) AND ORP (B) IS 137.29 N 6°58'30" W

BENCHMARK

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO THE CANADIAN GEODETIC VERTICAL DATUM 1928, PRE 1978 ADJUSTMENT, AND ARE DERIVED FROM THE CITY OF MISSISSAUGA BENCHMARK No. 732 HAVING A PUBLISHED ELEVATION OF 78.128 METRES.

LEGEND

■	DENOTES MONUMENT FOUND
□	DENOTES MONUMENT SET
□ IJI	DENOTES UNITILITY LA/MINIUM
□ HJB	DENOTES HYDRO JUNCTION BOX
⊞ HPED	DENOTES HYDRO PEDESTAL
• GM	DENOTES GAS METER
• SP	DENOTES STAND PIPE
◯ MH	DENOTES MANHOLE
◯ SAN MH	DENOTES SANITARY MANHOLE
• BOL	DENOTES BOLLARD
• HP	DENOTES HYDRO POLE
• AN	DENOTES POLE ANCHOR
• LS	DENOTES LIGHT STANDARD
• SV	DENOTES SPRINKLER VALVE
⊞ SN	DENOTES SIGN
◯ XXDXXR	DENOTES DECIDUOUS TREE WITH RADIUS AND DIAMATER
◯ XXEXXR	DENOTES CONIFEROUS TREE WITH RADIUS AND DIAMETER
CL	DENOTES COLUMN
CONC	DENOTES CONCRETE
FFE	DENOTES FINISHED FLOOR ELEVATION
GP	DENOTES GAS PIPE
MP	DENOTES MILIAL PLMUL
PTR	DENOTES PLANTER
RW	DENOTES RETAINING WALL
CC	DENOTES CUT CROSS
IB	DENOTES IRON BAR
IP	DENOTES IRON PIPE
SIB	DENOTES STANDARD IRON BAR
NI	DENOTES NOT IDENTIFIABLE
M	DENOTES MEASURED
S	DENOTES SET
BAB	DENOTES WILLIAM BEVERLY STARR, OLS
1525	DENOTES R.AVIS SURVEYING INC, OLS
P1	DENOTES PLAN OF SURVEY BY TARASICK, MCMILLAN LIMITED DATED MARCH 15, 2006
P2	DENOTES PLAN 43R-40496

ALL SET SIB AND PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN ABOVE THE ROOF OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON SEPTEMBER 08, 2022.

SEPTEMBER 27 2022
DATE

AMIR KESHAVARZ
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER V-32930

J.D.BARNES LIMITED — SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
140 RENFREW DRIVE, SUITE 108, MARKHAM, ON L3R 6B3
T: (905) 477-3600 F: (905) 477-3882 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
IA	AK	22-15-189-02
PLOTTED: 9/27/2022		DATED: SEPTEMBER 21, 2022

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True North Project North

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MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
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PROJECT
70 PARK STREET EAST

PROJECT NO:	SCALE:
Project Number	
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

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SHEET TITLE
SURVEY

SHEET NUMBER	ISSUE
A002	1

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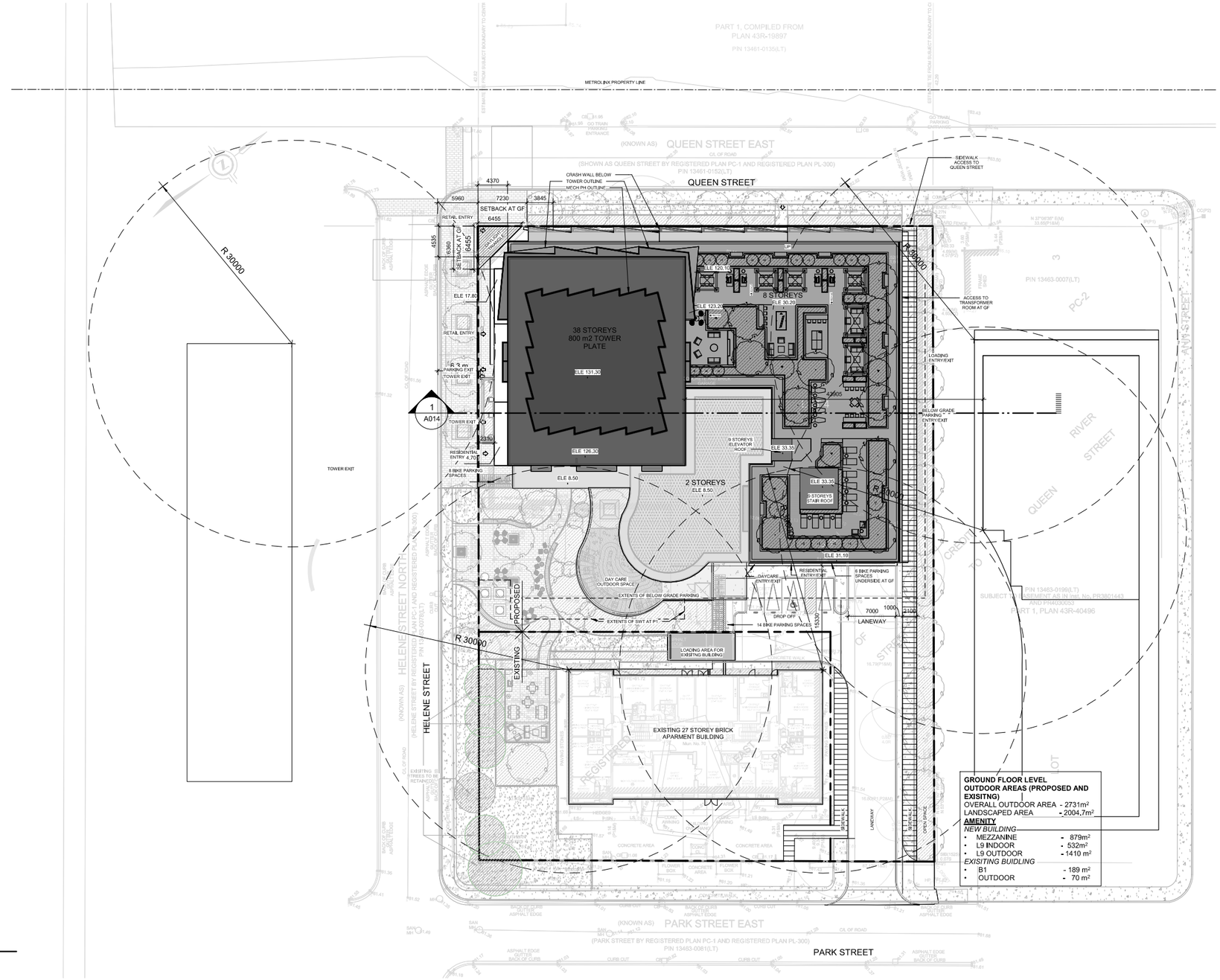

1 / A003 SITE PLAN
Scale: 1 : 300

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MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

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ISSUES

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PROJECT
70 PARK STREET EAST

PROJECT NO:	SCALE:
Project Number	1 : 300
DRAWN BY: JK	CHECKED BY: MV
PROJECT MGR: JK	APPROVED BY: MS

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SHEET TITLE
SITE PLAN

SHEET NUMBER A003 | ISSUE 1

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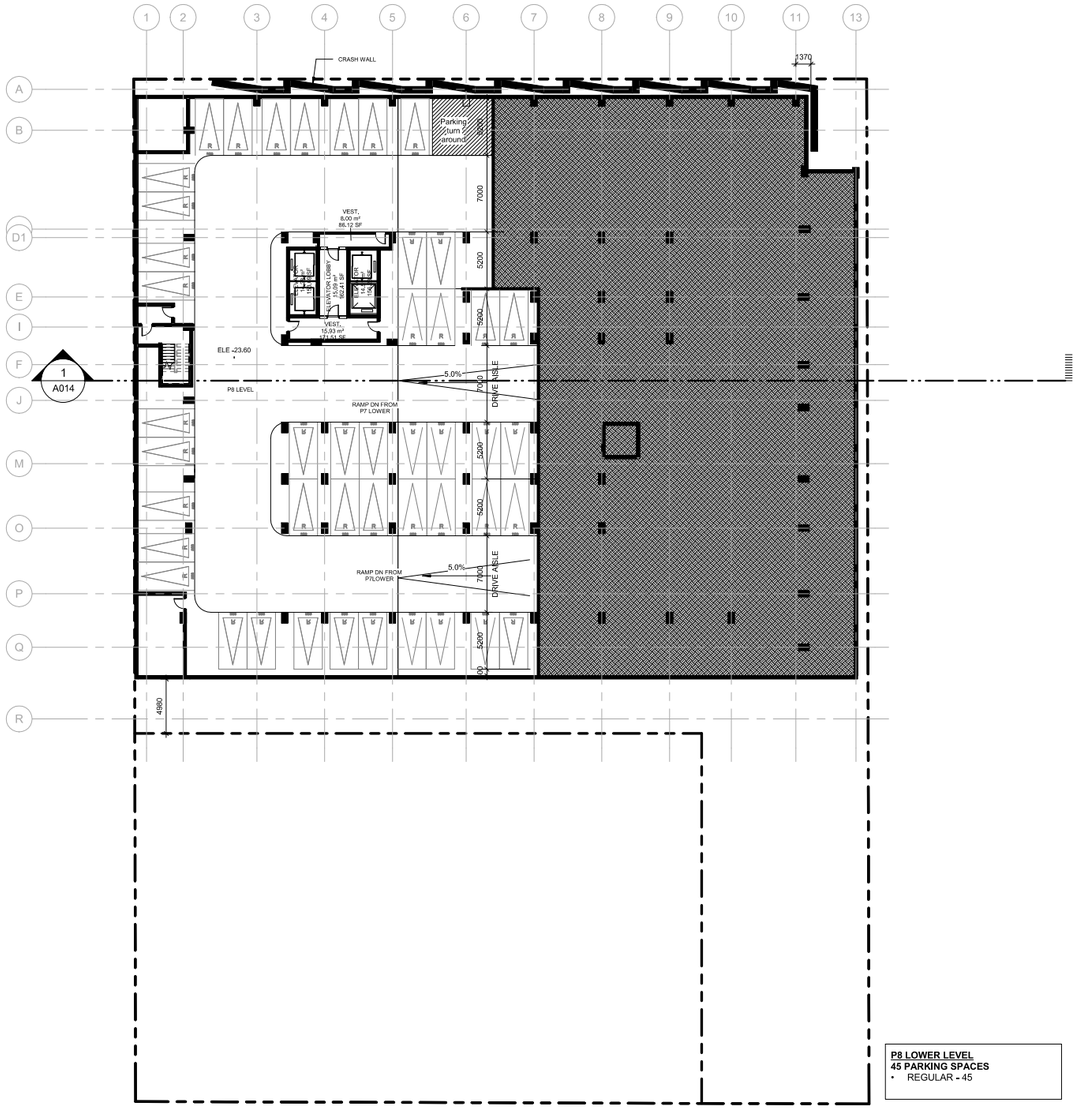
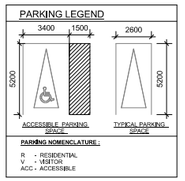


P8 LOWER LEVEL
45 PARKING SPACES
- REGULAR - 45

1 A004 PARKING LEVEL - P8
Scale: 1 : 250

PARKING LEGEND



PARKING NOMENCLATURE :
R - RESIDENTIAL
V - VESTOR
ACC - ACCESSIBLE

True North
Project North

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MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

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ONTARIO ASSOCIATION OF ARCHITECTS
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PROJECT
70 PARK STREET EAST

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SHEET TITLE
BASEMENT PARKING P7LOWER PLAN

PROJECT NO:	SCALE:
Project Number	As indicated
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

SHEET NUMBER A004
ISSUE 1

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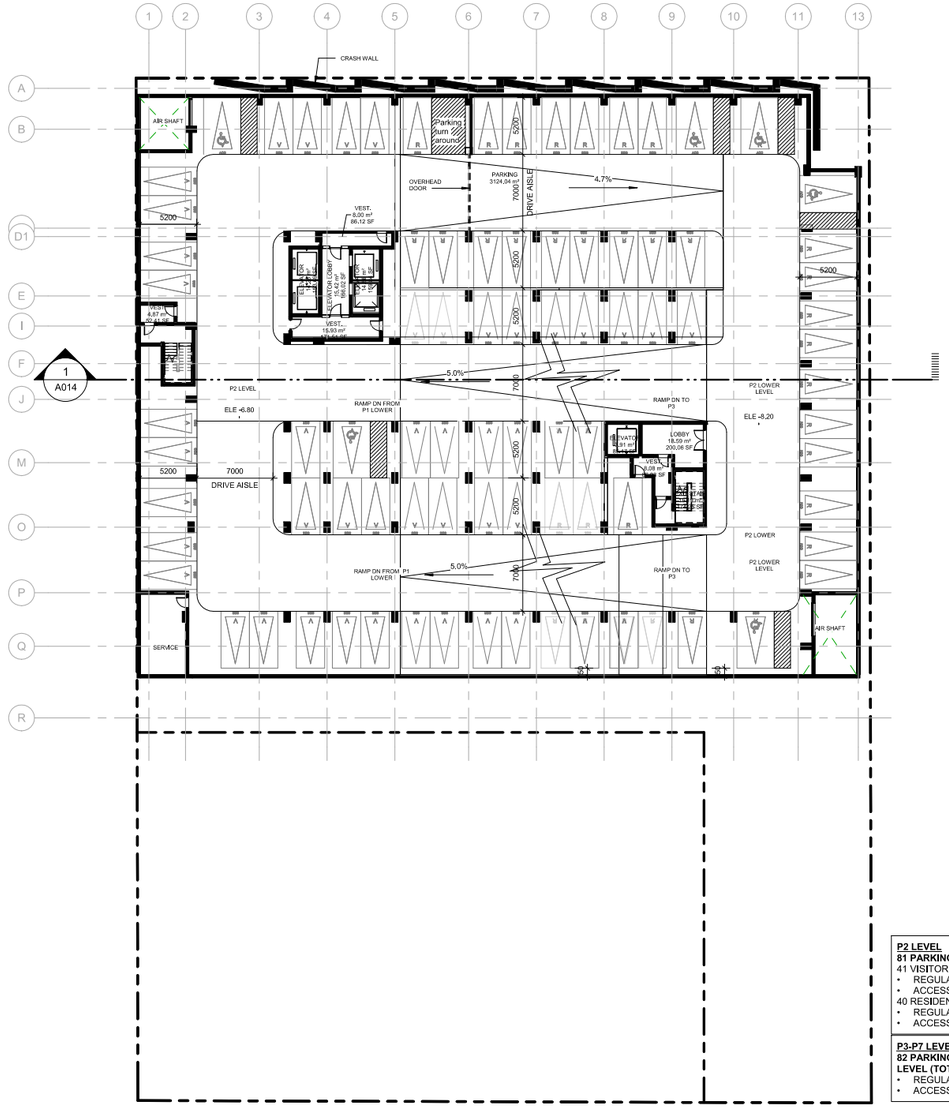
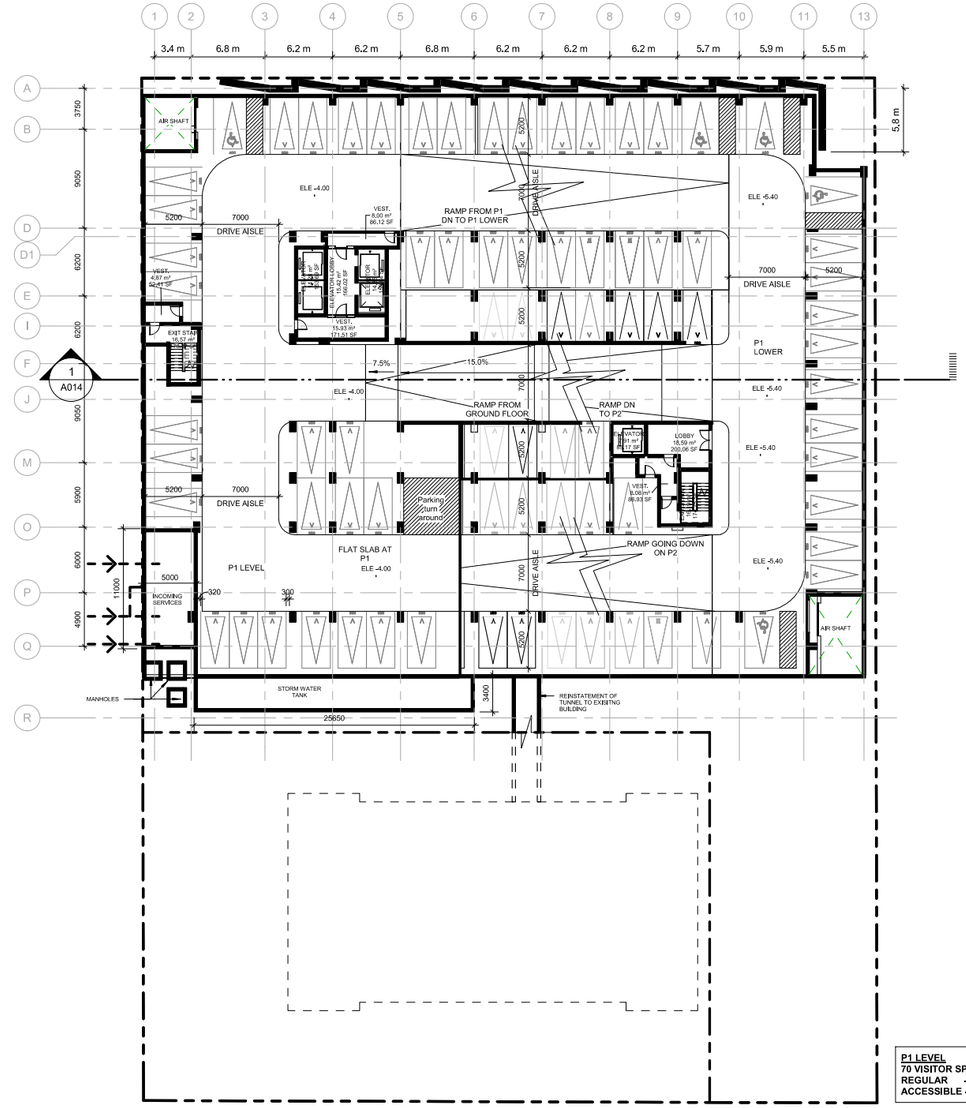


P2 LEVEL
81 PARKING SPACES
41 VISITOR
- REGULAR - 39
- ACCESSIBLE - 2

40 RESIDENTIAL
- REGULAR - 36
- ACCESSIBLE - 4

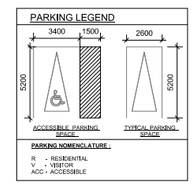
P3-P7 LEVELS (PER LEVEL)
82 PARKING SPACES PER LEVEL (TOTAL 410)
- REGULAR -76
- ACCESSIBLE - 6

1 A005 TYPICAL PARKING LEVELS -P2-P5
Scale: 1 : 250



P1 LEVEL
70 VISITOR SPACES
REGULAR - 66
ACCESSIBLE - 04

2 A005 PARKING LEVEL - P1
Scale: 1 : 250



CLIENT
MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
5860

PROJECT
70 PARK STREET EAST

PROJECT NO:	SCALE:
Project Number	As indicated
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

PRIME CONSULTANT
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SHEET TITLE
BASEMENT PARKING P1 TO P7 LEVEL PLANS

SHEET NUMBER	ISSUE
A005	1

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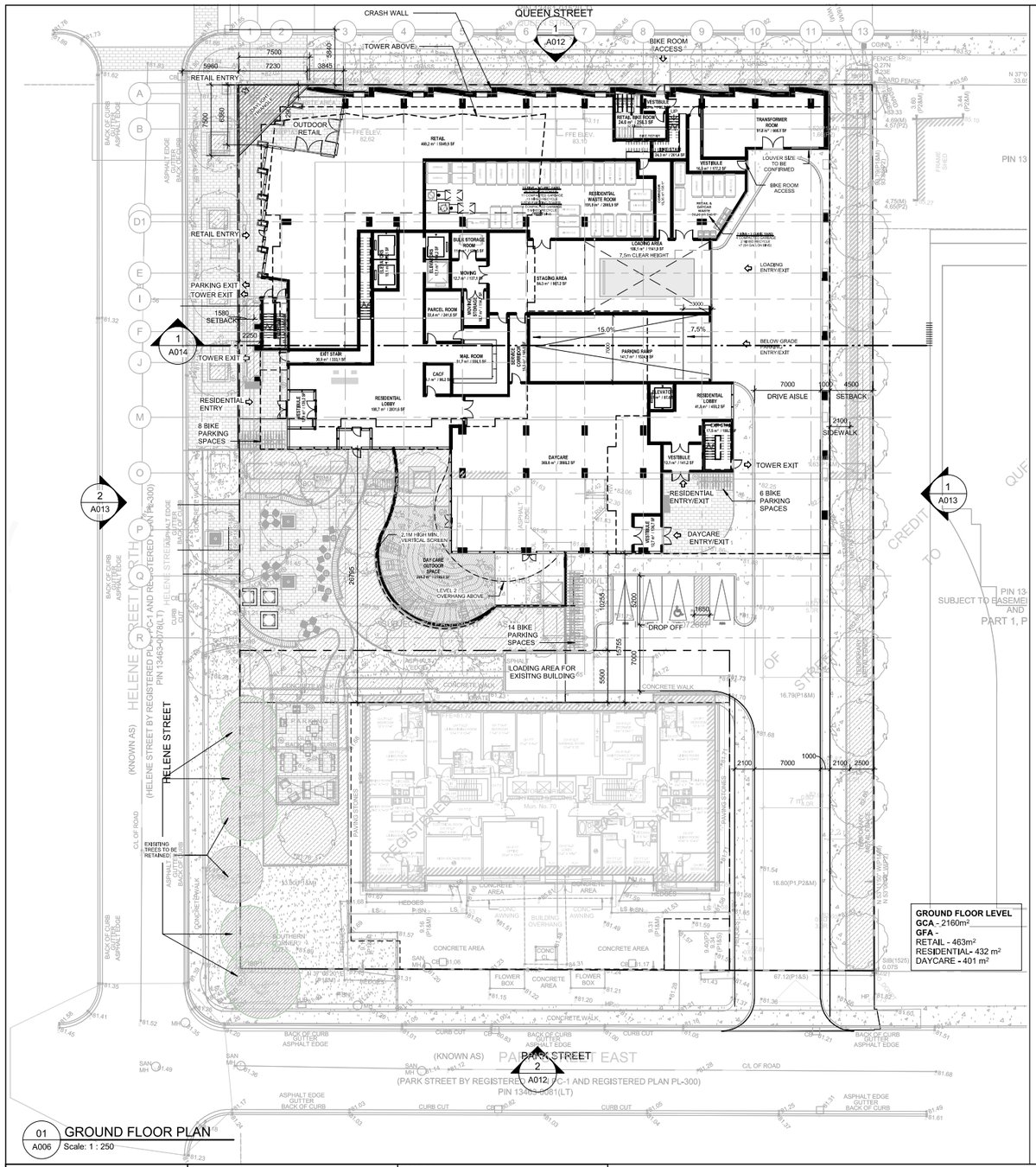
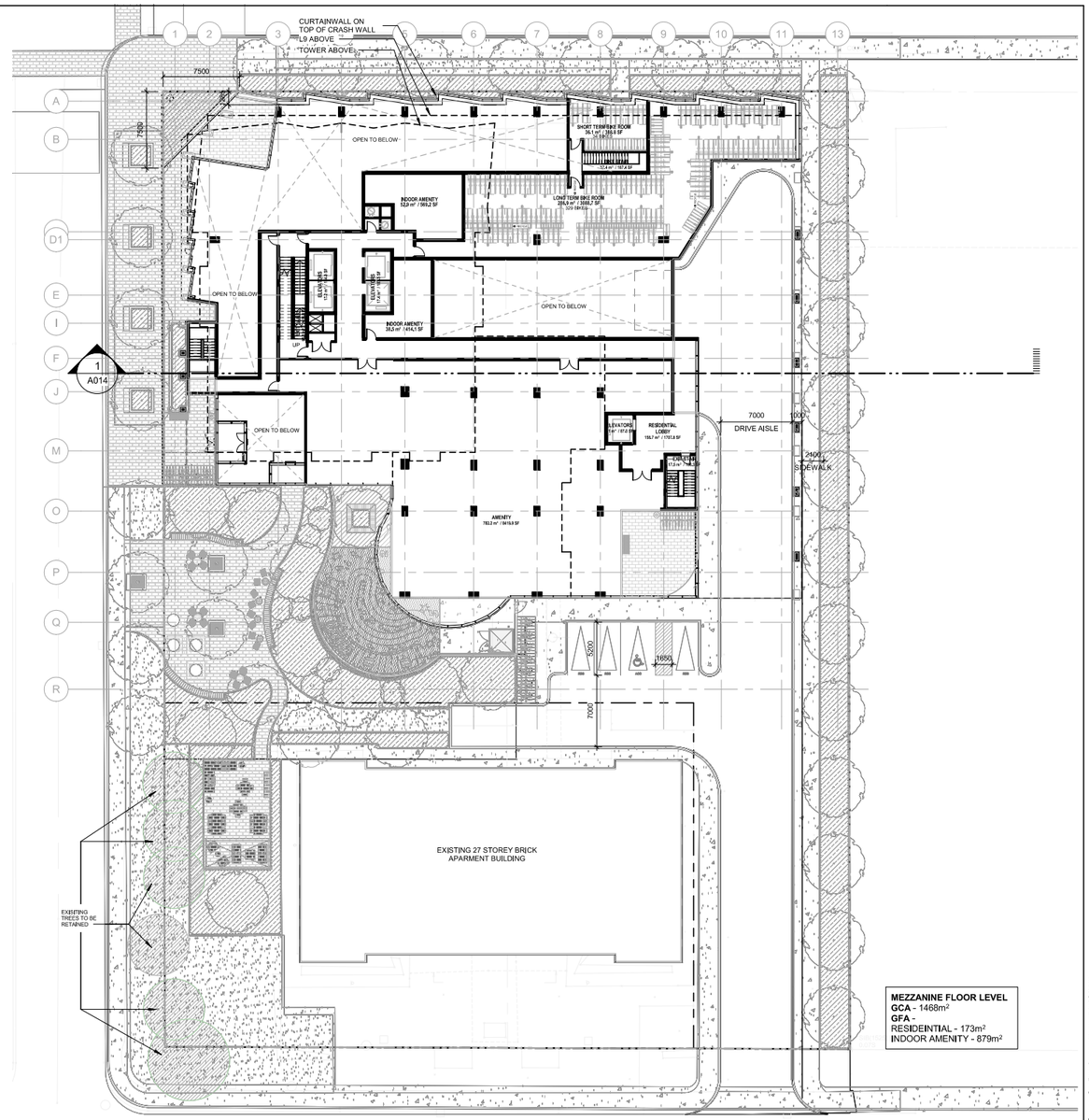


01 A006 GROUND FLOOR PLAN
Scale: 1 : 250



02 A006 MEZZANINE LEVEL FLOOR PLAN
Scale: 1 : 250

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5860

PROJECT
70 PARK STREET EAST

PRIME CONSULTANT
ARCADIS ARCADIS IBI GROUP
55 St. Clair Avenue West, 7th Floor, Toronto, ON M4V 2Y7, Canada
IBI GROUP tel 416 596 1930 fax 416 596 0644 ibigroup.com

SHEET TITLE
GROUND FLOOR & MEZZANINE FLOOR PLANS

PROJECT NO:	SCALE:
Project Number	1 : 250
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
MV	MS

SHEET NUMBER A006
ISSUE 1

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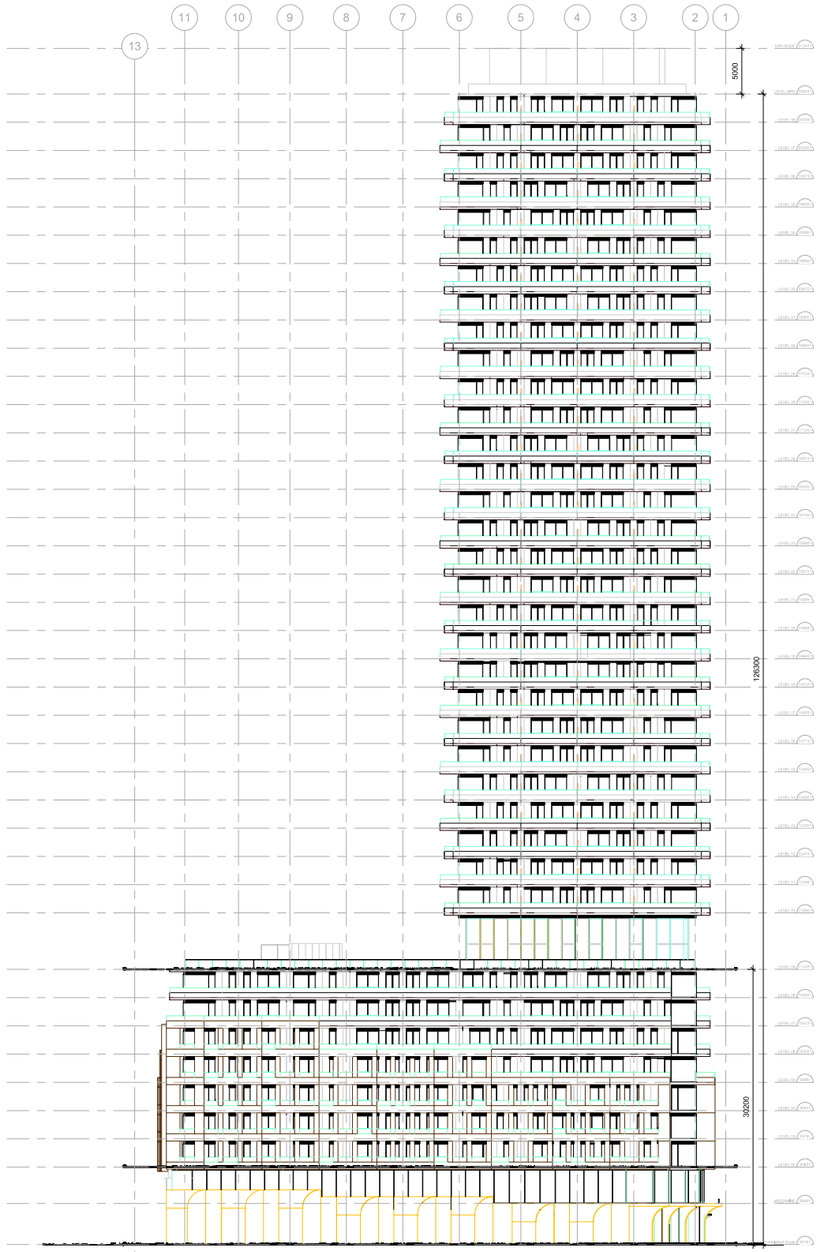
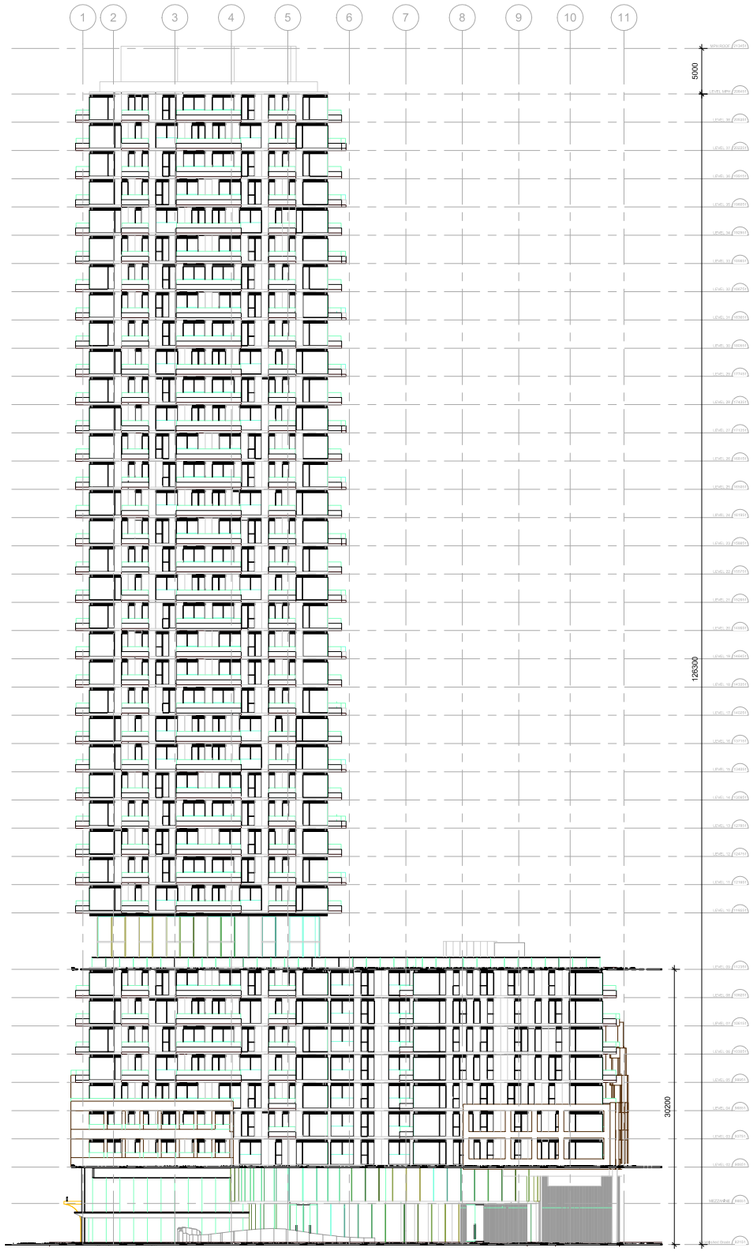


1 / A012 NORTH ELEVATION
Scale: 1 : 300



2 / A012 SOUTH ELEVATION
Scale: 1 : 300

True North

Project North

CLIENT
MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
5660

PROJECT
70 PARK STREET EAST

PROJECT NO:	SCALE:
Project Number	1 : 300
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

PRIME CONSULTANT
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SHEET TITLE
NORTH AND SOUTH ELEVATIONS

SHEET NUMBER	ISSUE
A012	1

10cm
Do not check this dimension

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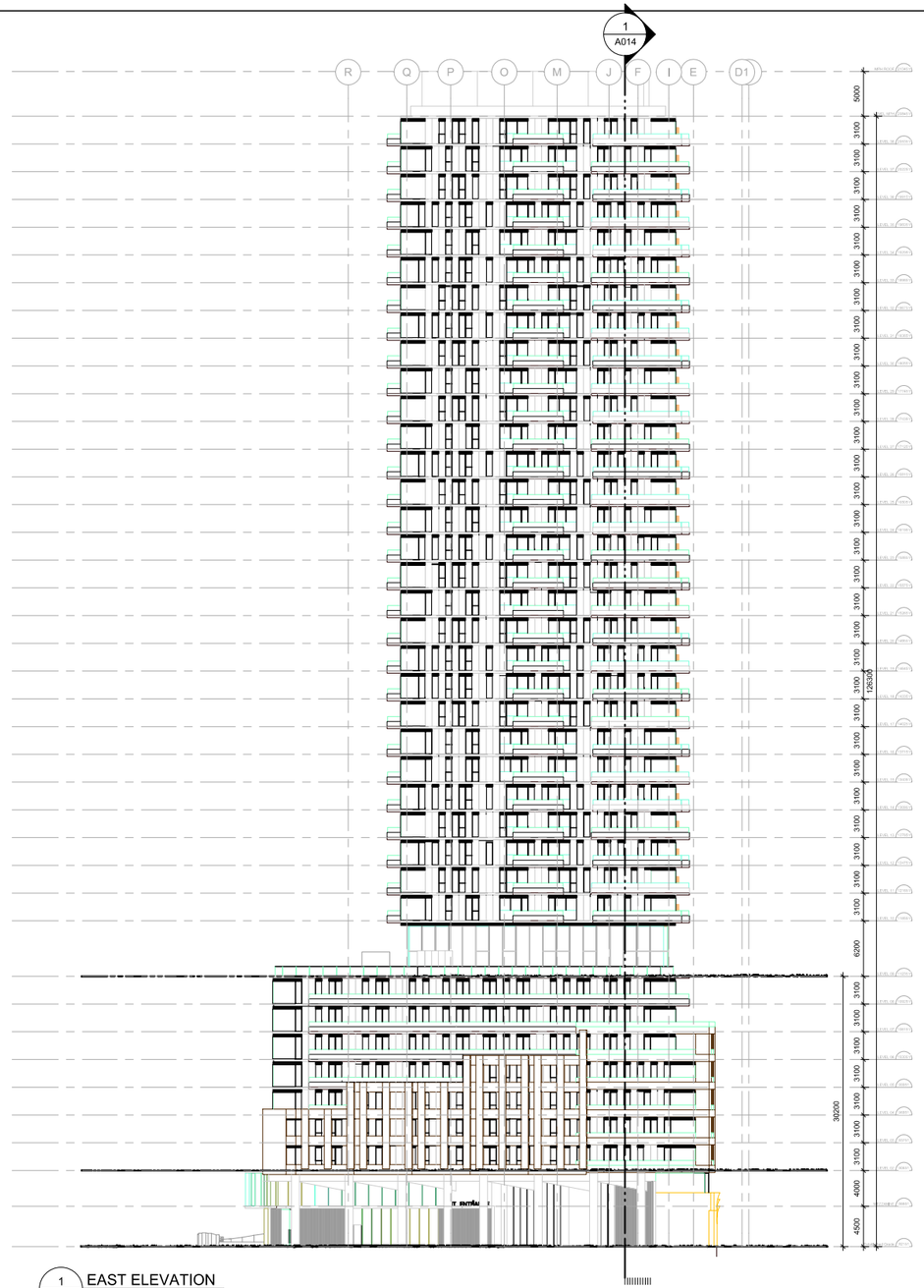
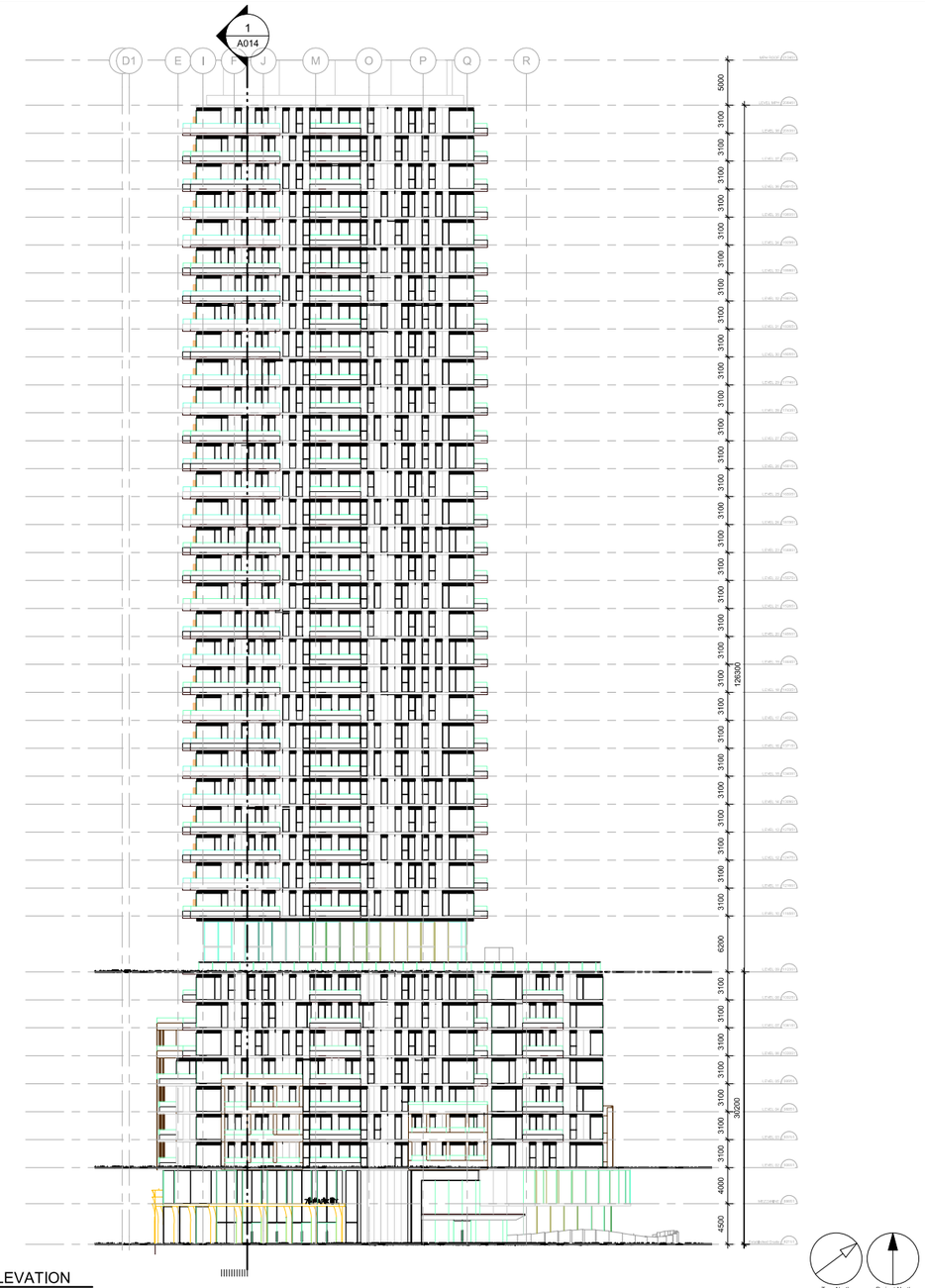


1 A013 EAST ELEVATION
Scale: 1 : 300



2 A013 WEST ELEVATION
Scale: 1 : 300

True North
Project North

CLIENT
MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
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PROJECT
70 PARK STREET EAST

PRIME CONSULTANT
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SHEET TITLE
EAST AND WEST ELEVATIONS

PROJECT NO:	SCALE:
Project Number	1 : 300
DRAWN BY:	CHECKED BY:
JK	MV
PROJECT MGR:	APPROVED BY:
JK	MS

SHEET NUMBER A013

ISSUE 1

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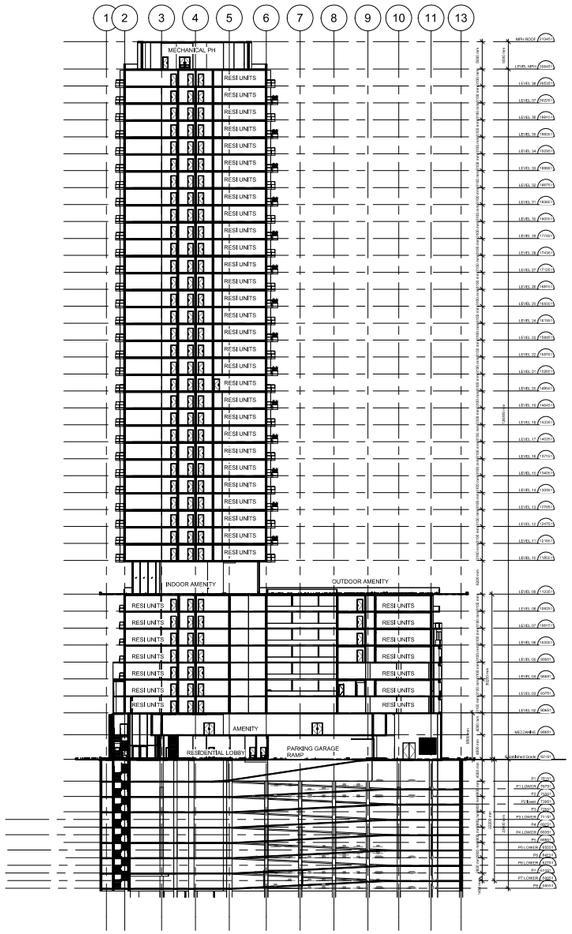

1 / A014 EAST WEST SECTION
Scale: 1 : 500

True North

Project North

CLIENT
MPCT DIF 70 Park Street East LP

30 Adelaide Street East, Toronto, ON

KEYPLAN

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR REZONING	2023-01-25

CONSULTANTS

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
MANSOOR H. KAZEROUNI
LICENCE
5660

PROJECT
70 PARK STREET EAST

PROJECT NO: Project Number	SCALE: 1 : 500
DRAWN BY: JK	CHECKED BY: MV
PROJECT MGR: JK	APPROVED BY: MS

PRIME CONSULTANT
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SHEET TITLE
SECTION

SHEET NUMBER	ISSUE
A014	1

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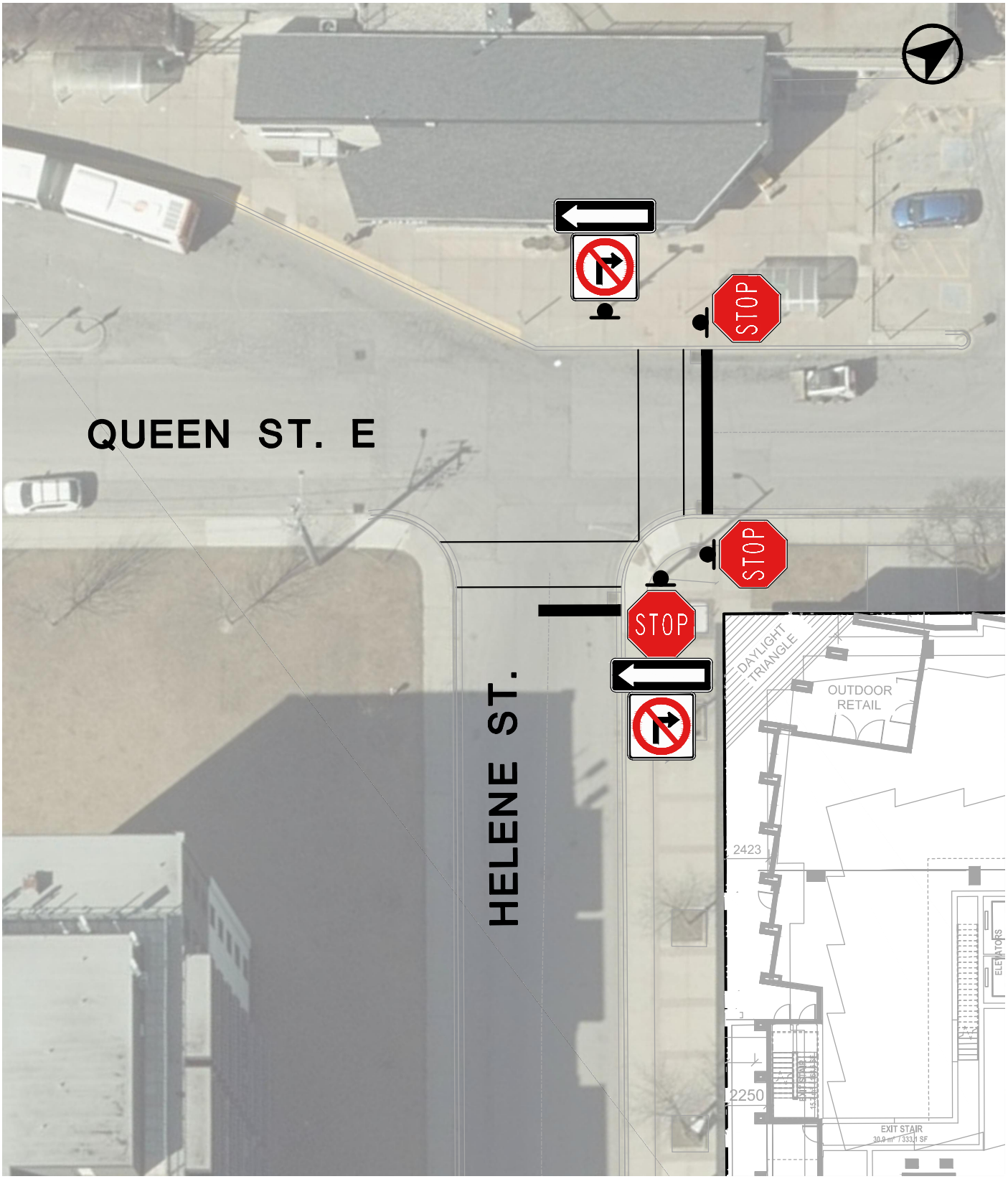
10mm

Do not scale drawing

Appendix B:
Queen Street East / Helene Street North Intersection Improvements



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Scale

Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

Queen St. E & Helene St. Intersection

Recommended Modifications

Project:	70 PARK ST. E
Project No.	7101-33
Date:	December 22, 2022
Revised:	--
Drawing No.	FD-01

Appendix C:
70 Park Street East October 2022 BA Group Parking Utilization Study Results

Project: 70 Park St
Project No: 7101-33
Study Location: Century Park Apts, 70 Park St
Municipality: Mississauga
Date: October 14, 15, 16, 2022

Visitors Parking Study Summary

Date	Friday October 14, 2022				
Area	Surface	Structure	Total	Occupancy	Demand
Supply	9	8	17	Ratio	Ratio
14:00	9	0	9	0.53	0.04
14:30	8	0	8	0.47	0.04
15:00	6	0	6	0.35	0.03
15:30	3	0	3	0.18	0.01
16:00	4	0	4	0.24	0.02
16:30	6	0	6	0.35	0.03
17:00	6	0	6	0.35	0.03
17:30	4	0	4	0.24	0.02
18:00	3	0	3	0.18	0.01
18:30	4	0	4	0.24	0.02
19:00	7	1	8	0.47	0.04
19:30	8	1	9	0.53	0.04
20:00	8	1	9	0.53	0.04
20:30	**9**	**2**	**11**	**0.65**	**0.05**
21:00	7	2	9	0.53	0.04
21:30	7	2	9	0.53	0.04
22:00	7	2	9	0.53	0.04
22:30	8	2	10	0.59	0.05
23:00	6	2	8	0.47	0.04

Date	Saturday October 15, 2022				
Area	Surface	Structure	Total	Occupancy	Demand
Supply	9	8	17	Ratio	Ratio
14:00	8	0	8	0.47	0.04
14:30	**9**	**0**	**9**	**0.53**	**0.04**
15:00	7	0	7	0.41	0.03
15:30	6	0	6	0.35	0.03
16:00	4	0	4	0.24	0.02
16:30	7	0	7	0.41	0.03
17:00	6	0	6	0.35	0.03
17:30	8	0	8	0.47	0.04
18:00	6	0	6	0.35	0.03
18:30	6	0	6	0.35	0.03
19:00	4	0	4	0.24	0.02
19:30	6	0	6	0.35	0.03
20:00	4	1	5	0.29	0.02
20:30	3	1	4	0.24	0.02
21:00	7	1	8	0.47	0.04
21:30	4	1	5	0.29	0.02
22:00	4	1	5	0.29	0.02
22:30	4	1	5	0.29	0.02
23:00	3	1	4	0.24	0.02

3AM Resident Spot Counts

Date	Fri Oct 14	Sat Oct 15	Sun Oct 16
Supply	256	256	256
Demand	188	180	179
Occupancy Rati	0.73	0.70	0.70
Demand Ratio	0.92	0.88	0.88

Total Units 210
Leased Units 204

Appendix D:
70 Park Street East October 2022 On-Site Rental Parking Demand (Rent Roll Data)

70 Park E - Parking Breakdown

Total No. of Parking Stalls

Unit Type	No. of Parking Stalls
Bach	-
1 Bedroom	71
2 Bedroom	98
3 Bedroom	-
Total	**169**

Parking Spots per Unit Type

Unit Type	0 Stalls	1 Stall	2 Stalls	3 Stalls	4 Stalls	5 Stalls	6 Stalls	7 Stalls
Bach	1	-	-	-	-	-	-	-
1 Bedroom	44	54	7	1	-	-	-	-
2 Bedroom	33	45	23	-	-	-	-	1
3 Bedroom	1	-	-	-	-	-	-	-
Total	**79**	**99**	**30**	**1**	**0**	**0**	**0**	**1**

Parking Spots per (Occupied) Unit Type

Unit Type	0 Stalls	1 Stall	2 Stalls	3 Stalls	4 Stalls	5 Stalls	6 Stalls	7 Stalls
Bach	1	0	0	0	0	0	0	0
1 Bedroom	42	54	7	1	0	0	0	0
2 Bedroom	29	45	23	0	0	0	0	1
3 Bedroom	1	0	0	0	0	0	0	0
Total	**73**	**99**	**30**	**1**	**0**	**0**	**0**	**1**

Unit Type	No. of Units	No. of Occupied Units	Occupancy (%)
Bach	1	1	100%
1 Bedroom	106	104	98%
2 Bedroom	102	98	96%
3 Bedroom	1	1	100%
Total|Weighted Average	**210**	**204**	**97%**

Notes:
The first table shows the total amount of parking stalls.

The second table shows the amount of parking spots for each unit type (e.g There are 54 1 bedroom tenants with 1 stall, 7 with 2 stalls, and 1 with 3 stalls.)

Actual Demand in Leased Parking Spaces

	Units Leased	Parking Spaces Leased	Current Demand Rate	TOTAL UNITS	PROJECTED PARKING SPACES LEASED	Projected Demand Rate
Studio + 1B	105	71	0.68	107	72	0.68
2B +3B	99	98	0.99	103	102	0.99
Total	204	169	0.83	210	174	0.83

Unit Type	Total Leased Parking Spaces
Bach	0
1 Bedroom	71
2 Bedroom	98
3 Bedroom	0
Total	169

Unit Type	Units That Leased Parking	
Bach	0	0
1 Bedroom	62	62
2 Bedroom	69	69
3 Bedroom	0	0
Total	131	131

Demand Altered to Reflect Units that Lease Parking or Not (i.e. pretend they are only allowed to lease 1 parking space)

	Units Leased	Units That Leased Parking	Demand Rate	TOTAL UNITS	PROJECTED PARKING SPACES LEASED (if 1 per unit only)	Projected Demand Rate
Studio + 1B	105	62	0.59	107	63	0.59
2B +3B	99	69	0.70	103	72	0.70
Total	204	131	0.64	210	135	0.64

Appendix E:
BA Group 2022 Local Area Visitor Parking Utilization Studies

Project: 42 Port St E
Project No: 7406-06
Location: Port Credit
Date: September 2022

No of Units:

26 Park St	84
12 Park St	60
1 Hurontario St	213
6-8 Ann St	66
7 Helene St	39

Residential Parking Summary

Date	Time	26 Park St				12 Park St				1 Hurontario St				6-8 Ann St				7 Helene St				
		Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	
Friday September 23, 2022	2:00	81	67	83%	0.797619	55	44	80%	0.733333	312	224	72%	1.051643	-	-	-	-	40	26	65%	0.666667	0.812316
Wednesday September 28, 2022	2:00	81	54	67%	0.642857	55	40	73%	0.666667	312	221	71%	1.037559	86	62	72%	0.939394	40	26	65%	0.666667	0.790629
Average				75%	0.720238			76%	0.7			71%	1.044601			72%	0.939394			65%	0.666667	Average 0.81418

Project: 42 Port St E
Project No: 7406-06
Location: Port Credit
Date: September 2022

No of Units:

26 Park St	84
28 Elizabeth St	102
49 Queen St E	48
1 Hurontario St	213
6-8 Ann St	66
66 High St E	48
15 Elizabeth St N	47

Visitor Parking Summary

Date	Time	26 Park St				28 Elizabeth St				49 Queen St E				1 Hurontario St				6-8 Ann St				66 High St E				15 Elizabeth St N			
		Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate
Friday September 23, 2022	18:00	8	3	38%	0.035714	18	1	6%	0.009804	6	1	17%	0.020833	41	18	44%	0.084507	11	7	64%	0.106061	10	3	30%	0.0625	8	2	25%	0.042553
	19:00	8	2	25%	0.02381	18	0	0%	0	6	4	67%	0.083333	41	20	49%	0.093897	11	7	64%	0.106061	10	3	30%	0.0625	8	3	38%	0.06383
	20:00	8	2	25%	0.02381	18	0	0%	0	6	4	67%	0.083333	41	24	59%	0.112676	11	6	55%	0.090909	10	5	50%	0.104167	8	5	63%	0.106383
	21:00	8	1	13%	0.011905	18	1	6%	0.009804	6	4	67%	0.083333	41	20	49%	0.093897	11	6	55%	0.090909	10	7	70%	0.145833	8	5	63%	0.106383
	22:00	8	1	13%	0.011905	18	1	6%	0.009804	6	3	50%	0.0625	41	18	44%	0.084507	11	5	45%	0.075758	10	6	60%	0.125	8	2	25%	0.042553
	23:00	8	1	13%	0.011905	18	1	6%	0.009804	6	4	67%	0.083333	41	15	37%	0.070423	11	5	45%	0.075758	10	6	60%	0.125	8	1	13%	0.021277
Saturday September 24, 2022	12:00	8	5	63%	0.059524	18	1	6%	0.009804	6	4	67%	0.083333	41	20	49%	0.093897	11	3	27%	0.045455	10	3	30%	0.0625	8	4	50%	0.085106
	13:00	8	5	63%	0.059524	18	1	6%	0.009804	6	2	33%	0.041667	41	24	59%	0.112676	11	3	27%	0.045455	10	2	20%	0.041667	8	3	38%	0.06383
	14:00	8	8	100%	0.095238	18	1	6%	0.009804	6	2	33%	0.041667	41	28	68%	0.131455	11	4	36%	0.060606	10	5	50%	0.104167	8	2	25%	0.042553
	15:00	8	7	88%	0.083333	18	0	0%	0	6	2	33%	0.041667	41	31	76%	0.14554	11	6	55%	0.090909	10	7	70%	0.145833	8	2	25%	0.042553
	16:00	8	4	50%	0.047619	18	0	0%	0	6	3	50%	0.0625	41	26	63%	0.122066	11	5	45%	0.075758	10	5	50%	0.104167	8	1	13%	0.021277
	17:00	8	5	63%	0.059524	18	0	0%	0	6	3	50%	0.0625	41	27	66%	0.126761	11	6	55%	0.090909	10	7	70%	0.145833	8	1	13%	0.021277
	18:00	8	3	38%	0.035714	18	0	0%	0	6	2	33%	0.041667	41	25	61%	0.117371	11	7	64%	0.106061	10	6	60%	0.125	8	3	38%	0.06383
	19:00	8	4	50%	0.047619	18	0	0%	0	6	3	50%	0.0625	41	20	49%	0.093897	11	9	82%	0.136364	10	6	60%	0.125	8	4	50%	0.085106
	20:00	8	4	50%	0.047619	18	1	6%	0.009804	6	3	50%	0.0625	41	14	34%	0.065728	11	7	64%	0.106061	10	4	40%	0.083333	8	2	25%	0.042553
Friday September 30, 2022	18:00	8	4	50%	0.047619	18	1	6%	0.009804	6	1	17%	0.020833	41	10	24%	0.046948	11	2	18%	0.030303	10	2	20%	0.041667	8	4	50%	0.085106
	19:00	8	3	38%	0.035714	18	1	6%	0.009804	6	2	33%	0.041667	41	10	24%	0.046948	11	3	27%	0.045455	10	3	30%	0.0625	8	5	63%	0.106383
	20:00	8	1	13%	0.011905	18	0	0%	0	6	6	100%	0.125	41	14	34%	0.065728	11	3	27%	0.045455	10	4	40%	0.083333	8	4	50%	0.085106
	21:00	8	1	13%	0.011905	18	1	6%	0.009804	6	6	100%	0.125	41	12	29%	0.056338	11	3	27%	0.045455	10	5	50%	0.104167	8	4	50%	0.085106
	22:00	8	5	63%	0.059524	18	2	11%	0.019608	6	5	83%	0.104167	41	7	17%	0.032864	11	5	45%	0.075758	10	4	40%	0.083333	8	4	50%	0.085106
	23:00	8	4	50%	0.047619	18	2	11%	0.019608	6	6	100%	0.125	41	7	17%	0.032864	11	5	45%	0.075758	10	3	30%	0.0625	8	4	50%	0.085106
Saturday October 1, 2022	12:00	8	3	38%	0.035714	18	3	17%	0.029412	6	5	83%	0.104167	41	14	34%	0.065728	11	5	45%	0.075758	10	2	20%	0.041667	8	4	50%	0.085106
	13:00	8	5	63%	0.059524	18	2	11%	0.019608	6	6	100%	0.125	41	22	54%	0.103286	11	5	45%	0.075758	10	3	30%	0.0625	8	4	50%	0.085106
	14:00	8	5	63%	0.059524	18	0	0%	0	6	6	100%	0.125	41	28	68%	0.131455	11	5	45%	0.075758	10	5	50%	0.104167	8	2	25%	0.042553
	15:00	8	4	50%	0.047619	18	0	0%	0	6	5	83%	0.104167	41	27	66%	0.126761	11	6	55%	0.090909	10	5	50%	0.104167	8	2	25%	0.042553
	16:00	8	5	63%	0.059524	18	0	0%	0	6	5	83%	0.104167	41	25	61%	0.117371	11	5	45%	0.075758	10	4	40%	0.083333	8	1	13%	0.021277
	17:00	8	5	63%	0.059524	18	1	6%	0.009804	6	4	67%	0.083333	41	23	56%	0.107981	11	4	36%	0.060606	10	4	40%	0.083333	8	5	63%	0.106383
	18:00	8	7	88%	0.083333	18	2	11%	0.019608	6	4	67%	0.083333	41	22	54%	0.103286	11	6	55%	0.090909	10	3	30%	0.0625	8	5	63%	0.106383
	19:00	8	6	75%	0.071429	18	1	6%	0.009804	6	5	83%	0.104167	41	25	61%	0.117371	11	4	36%	0.060606	10	7	70%	0.145833	8	5	63%	0.106383
	20:00	8	7	88%	0.083333	18	1	6%	0.009804	6	6	100%	0.125	41	16	39%	0.075117	11	3	27%	0.045455	10	4	40%	0.083333	8	5	63%	0.106383

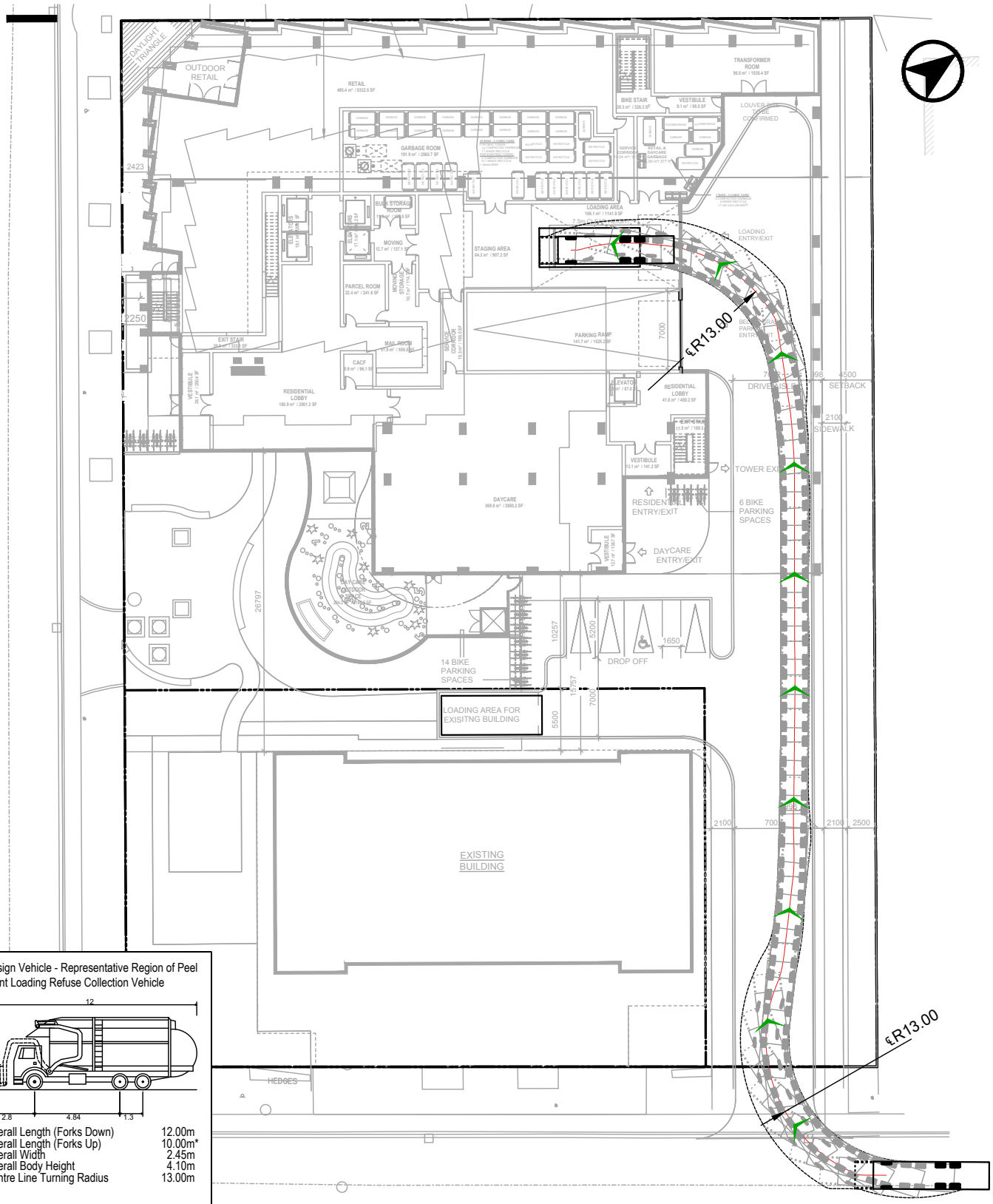
		26 Park St				28 Elizabeth St				49 Queen St E				1 Hurontario St				6-8 Ann St				66 High St E				15 Elizabeth St N			
		Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate	Supply	Demand	% Full	Unit Rate
Friday	18:00			44%	0.041667			6%	0.009804			17%	0.020833			34%	0.065728			41%	0.068182			25%	0.052083			38%	0.06383
	19:00			31%	0.029762			3%	0.004902			50%	0.0625			37%	0.070423			45%	0.075758			30%	0.0625			50%	0.085106
	20:00			19%	0.017857			0%	0			83%	0.104167			46%	0.089202			41%	0.068182			45%	0.09375			56%	0.095745
	21:00			13%	0.011905			6%	0.009804			83%	0.104167			39%	0.075117			41%	0.068182			60%	0.125			56%	0.095745
	22:00			38%	0.035714			8%	0.014706			67%	0.083333			30%	0.058685			45%	0.075758			50%	0.104167			38%	0.06383
	23:00			31%	0.029762			8%	0.014706			83%	0.104167			27%	0.051643			45%	0.075758			45%	0.09375			31%	0.053191
			Max	44%	0.04		Max	8%	0.01		Max	83%	0.10		Max	46%	0.09		Max	45%	0.08		Max	60%	0.13		Max	56%	0.10
			Min	13%	0.01		Min	0%	0.00		Min	17%	0.02		Min	27%	0.05		Min	41%	0.07		Min	25%	0.05		Min	31%	0.05
			Average	29%	0.03		Average	5%	0.01		Average	64%	0.08		Average	36%	0.07		Average	43%	0.07		Average	43%	0.09		Average	45%	0.08
Saturday	12:00			50%	0.047619			11%	0.019608			75%	0.09375			41%	0.079812			36%	0.060606			25%	0.052083			50%	0.085106
	13:00			63%	0.059524			8%	0.014706			67%	0.083333			56%	0.107981			36%	0.060606			25%	0.052083			44%	0.074468
	14:00			81%	0.077381			3%	0.004902			67%	0.083333			68%	0.131455			41%	0.068182			50%	0.104167			25%	0.042553
	15:00			69%	0.065476			0%	0			58%	0.072917			71%	0.13615			55%	0.090909			60%	0.125			25%	0.042553
	16:00			56%	0.053571			0%	0			67%	0.083333			62%	0.119718			45%	0.075758			45%	0.09375			13%	0.021277
	17:00			63%	0.059524			3%	0.004902			58%	0.072917			61%	0.117371			45%	0.075758			55%	0.114583			38%	0.06383
	18:00			63%	0.059524			6%	0.009804			50%	0.0625			57%	0.110329			59%	0.098485			45%	0.09375			50%	0.085106
	19:00			63%	0.059524			3%	0.004902			67%	0.083333			55%	0.105634			59%	0.098485			65%	0.135417			56%	0.095745
	20:00			69%	0.065476			6%	0.009804			75%	0.09375			37%	0.070423			45%	0.075758			40%	0.083333			44%	0.074468
			Max	81%	0.08		Max	11%	0.02		Max	75%	0.09		Max	71%	0.14		Max	59%	0.10		Max	65%	0.14		Max	56%	0.10
			Min	50%	0.05		Min	0%	0.00		Min	50%	0.06		Min	37%	0.07		Min	36%	0.06		Min	25%	0.05		Min	13%	0.02
			Average	64%	0.06		Average	4%	0.01		Average	65%	0.08		Average	57%	0.11		Average	47%	0.08		Average	46%	0.09		Average	38%	0.07

Max	0.13
Min	0.00
Average	0.06

Max	0.14
Min	0.00
Average	0.07

Appendix F:
Vehicle Manoeuvring Diagrams

HELENE ST.



Design Vehicle - Representative Region of Peel
Front Loading Refuse Collection Vehicle

Overall Length (Forks Down)	12.00m
Overall Length (Forks Up)	10.00m*
Overall Width	2.45m
Overall Body Height	4.10m
Centre Line Turning Radius	13.00m

* Field measured by BA Group, Aug. 8/11

1:500

0 5 10 15 20m

Scale

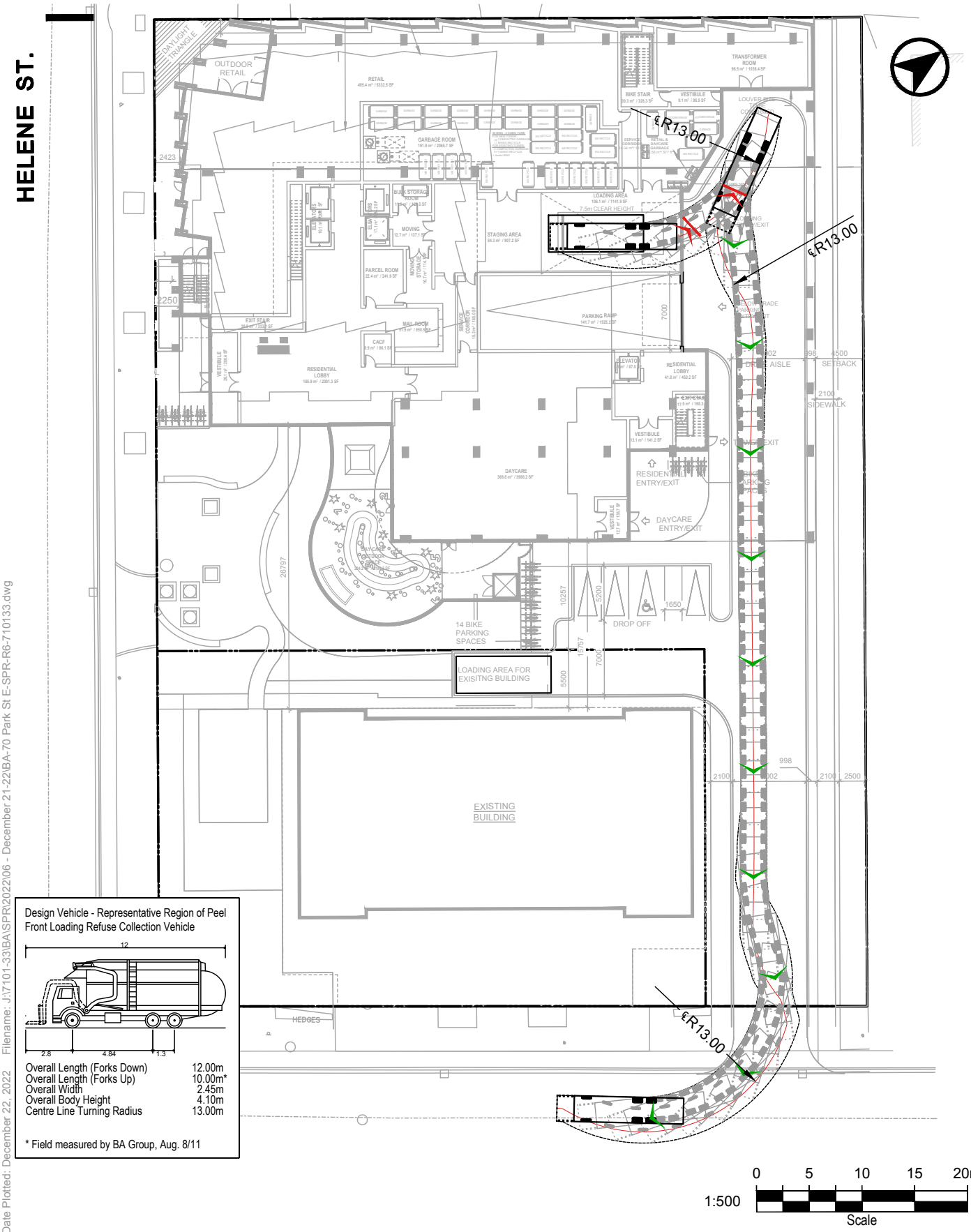
Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
REPRESENTATIVE REGION OF PEEL
WASTE COLLECTION VEHICLE - INBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-01



Design Vehicle - Representative Region of Peel
Front Loading Refuse Collection Vehicle

Overall Length (Forks Down)	12.00m
Overall Length (Forks Up)	10.00m*
Overall Width	2.45m
Overall Body Height	4.10m
Centre Line Turning Radius	13.00m

* Field measured by BA Group, Aug. 8/11

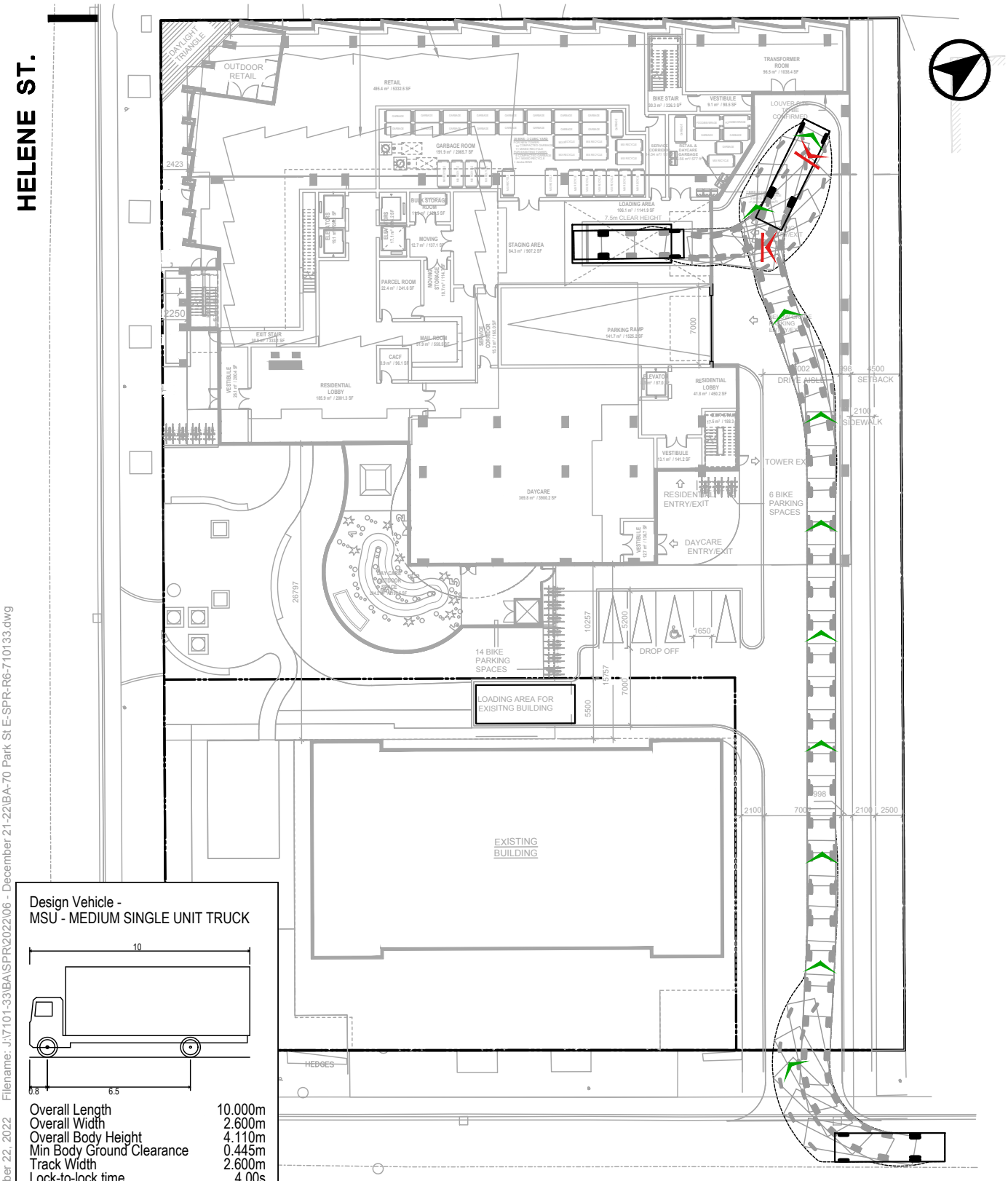
Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
REPRESENTATIVE REGION OF PEEL
WASTE COLLECTION VEHICLE - OUTBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-02



Design Vehicle -
MSU - MEDIUM SINGLE UNIT TRUCK

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	4.110m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

1:500

0 5 10 15 20m

Scale

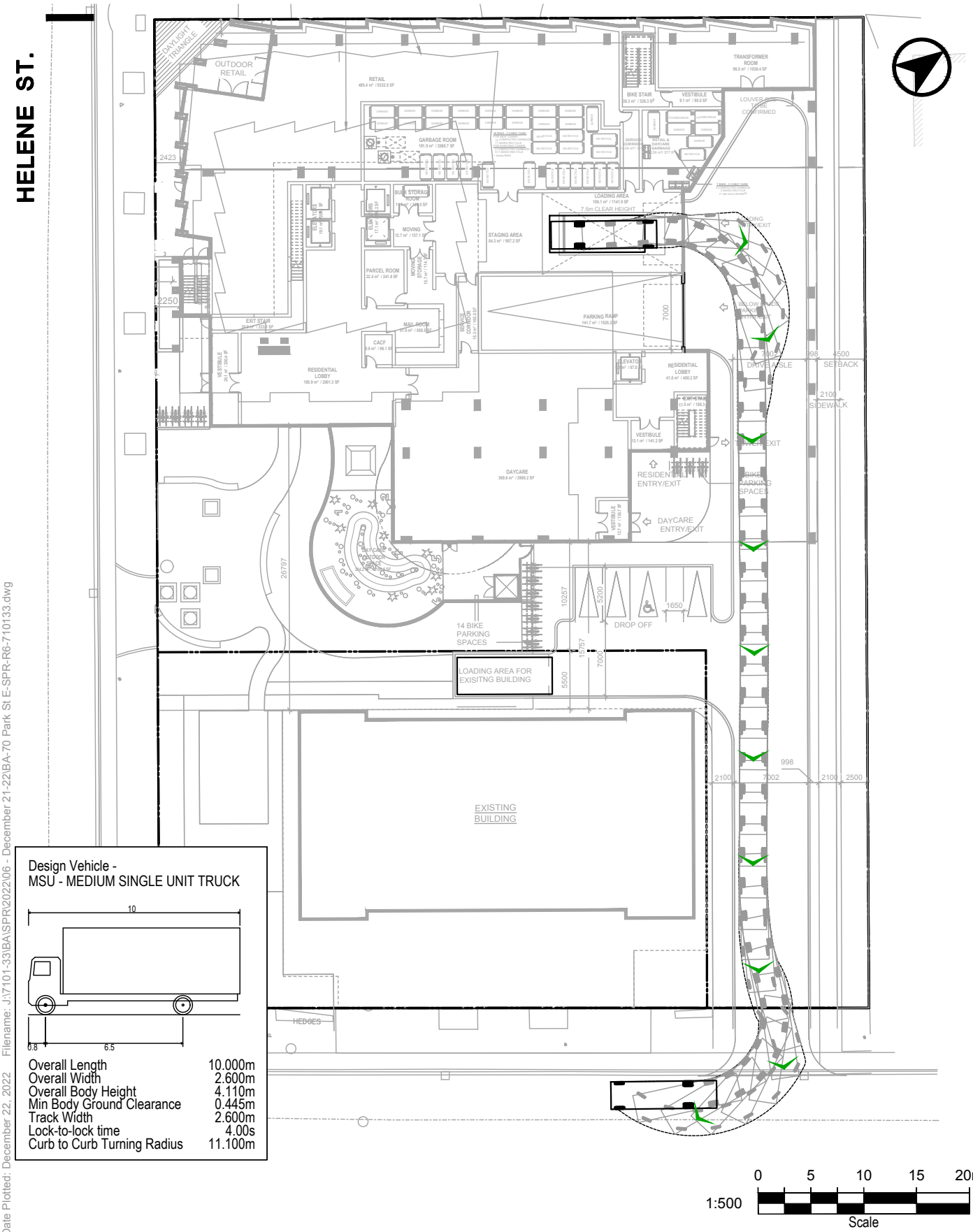
Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
TAC MEDIUM SINGLE UNIT (MSU) TRUCK
INBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-03



Design Vehicle -
MSU - MEDIUM SINGLE UNIT TRUCK

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	4.110m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

1:500

0 5 10 15 20m

Scale

Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

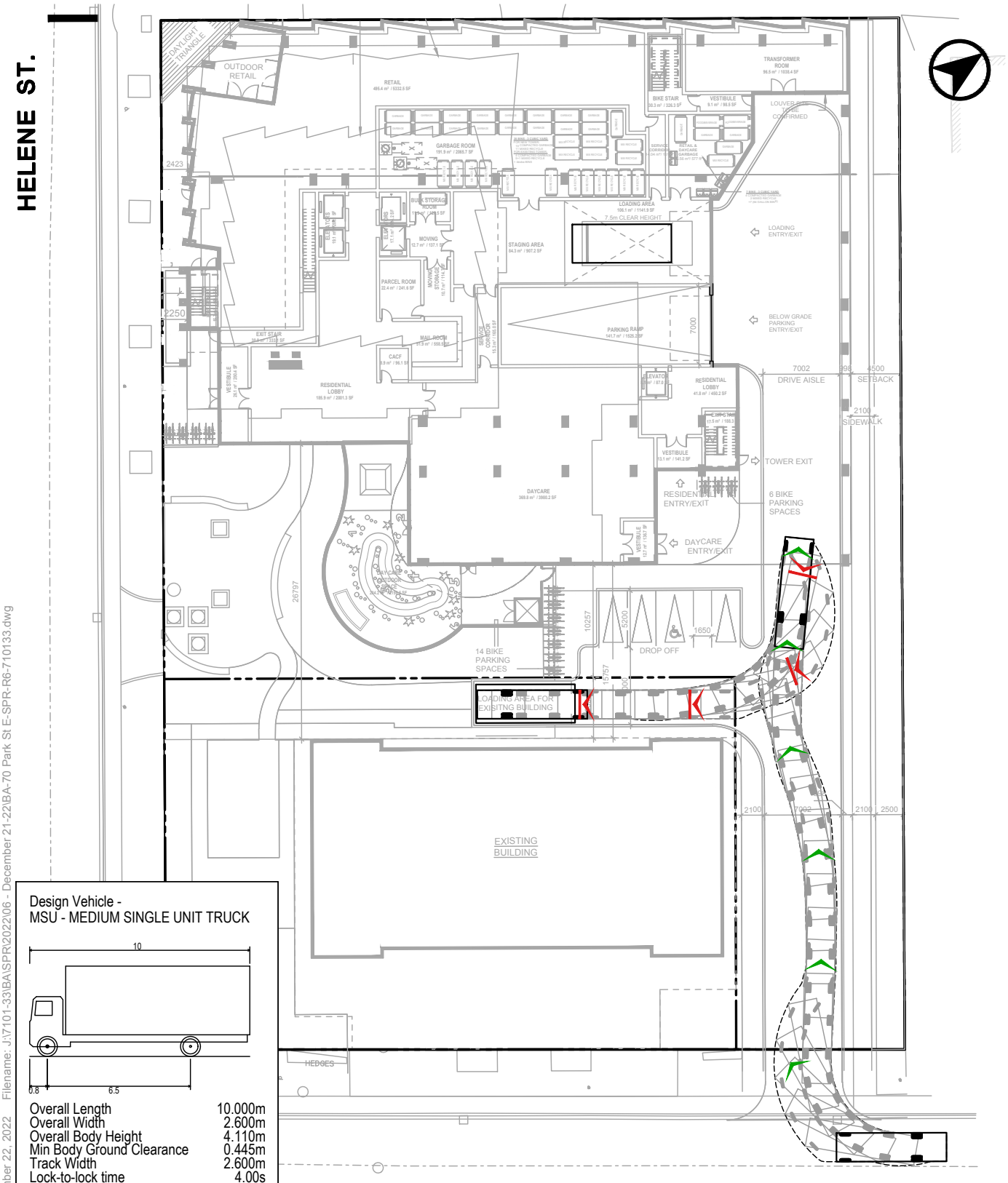
BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
TAC MEDIUM SINGLE UNIT (MSU) TRUCK
OUTBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-04

HELENE ST.



Design Vehicle -
MSU - MEDIUM SINGLE UNIT TRUCK

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	4.110m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

1:500

0 5 10 15 20m

Scale

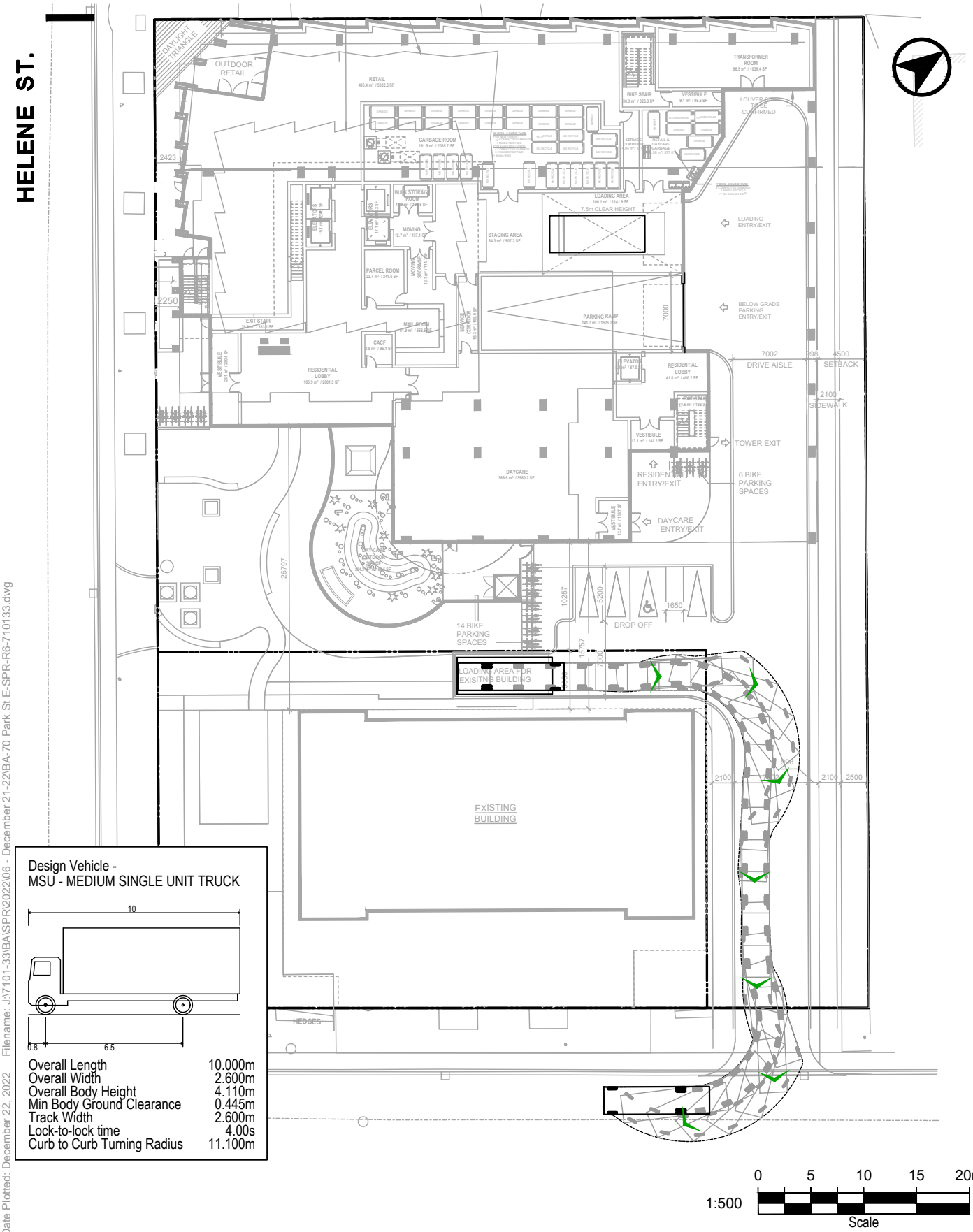
Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
TAC MEDIUM SINGLE UNIT (MSU) TRUCK
EXISTING LOADING SPACE - INBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-05



Design Vehicle -
MSU - MEDIUM SINGLE UNIT TRUCK

Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	4.110m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.100m

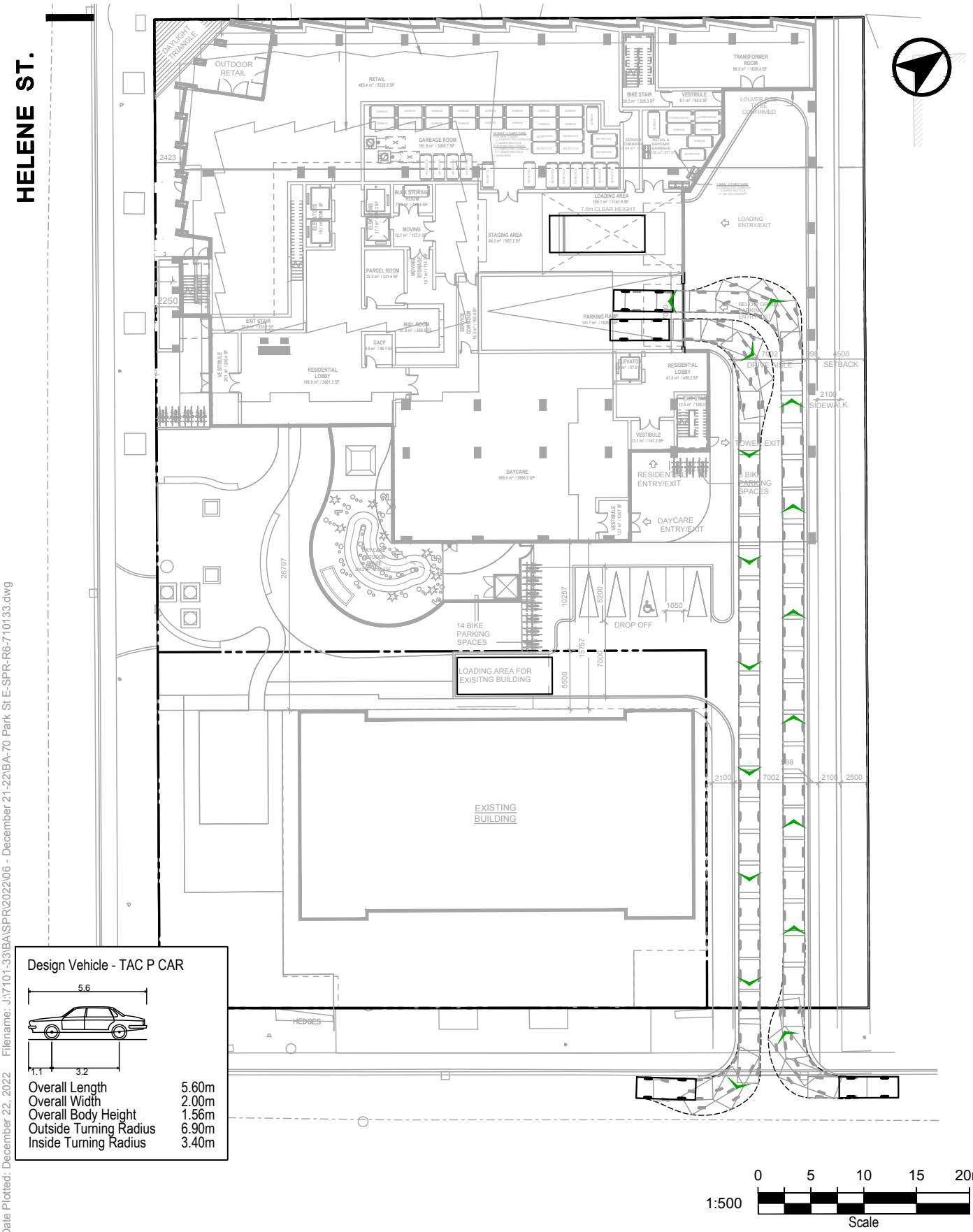
Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
TAC MEDIUM SINGLE UNIT (MSU) TRUCK
EXISTING LOADING SPACE - OUTBOUND

Project:	70 PARK ST. E
Project No.	7101-33
Date:	September 20, 2022
Revised:	December 22, 2022
Drawing No.	VMD-06



Design Vehicle - TAC P CAR

Overall Length	5.60m
Overall Width	2.00m
Overall Body Height	1.56m
Outside Turning Radius	6.90m
Inside Turning Radius	3.40m

1:500

0 5 10 15 20m

Scale

Date Plotted: December 22, 2022 Filename: J:\7101-33\BA\SPR\2022\06 - December 21-22\BA-70 Park St E-SPR-R6-710133.dwg

BA Group

70 PARK ST. E

VEHICLE MANOEUVRING DIAGRAM
TAC P CAR
PARKING RAMP ACTIVITY

Project:	70 PARK ST. E
Project No.	7101-33
Date:	December 22, 2022
Revised:	--
Drawing No.	VMD-07

Appendix G:
Turning Movement Count Data

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & PARK ST E
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (1 . HURONTARIO ST & PARK ST E)

Start Time	N Approach HURONTARIO ST						E Approach PARK ST E						S Approach HURONTARIO ST						W Approach PARK ST E						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	16	38	13	0	1	67	14	0	0	0	2	14	0	78	1	0	3	79	1	1	9	0	2	11	171	
07:15:00	30	41	9	0	4	80	10	0	0	0	1	10	4	57	3	0	9	64	1	0	11	0	3	12	166	
07:30:00	20	48	8	0	1	76	12	0	0	0	1	12	5	78	2	0	5	85	2	1	5	0	3	8	181	
07:45:00	27	50	16	0	15	93	9	5	1	0	9	15	3	66	0	0	13	69	0	2	7	0	1	9	186	704
08:00:00	17	57	28	0	13	102	15	4	1	0	19	20	7	90	3	0	12	100	2	1	5	0	4	8	230	763
08:15:00	15	66	41	0	8	122	29	1	4	0	18	34	23	102	2	0	15	127	0	6	3	0	4	9	292	889
08:30:00	13	76	44	0	1	133	61	6	18	0	2	85	29	58	2	0	17	89	1	5	2	0	1	8	315	1023
08:45:00	21	90	23	0	2	134	37	7	13	0	2	57	12	55	0	0	19	67	1	4	2	0	0	7	265	1102
BREAK																										
16:00:00	24	75	14	0	1	113	24	5	7	0	2	36	5	84	3	0	7	92	0	1	2	0	2	3	244	
16:15:00	23	74	17	0	0	114	23	6	3	0	2	32	3	83	0	0	7	86	1	1	2	0	2	4	236	
16:30:00	29	105	17	0	1	151	25	6	4	0	3	35	5	73	2	0	9	80	0	0	1	0	0	1	267	
16:45:00	37	89	17	0	0	143	29	9	2	0	4	40	4	124	2	0	5	130	0	2	15	0	1	17	330	1077
17:00:00	22	91	17	0	2	130	21	8	3	0	4	32	2	97	0	0	8	99	3	0	9	0	1	12	273	1106
17:15:00	36	91	18	0	3	145	34	4	2	0	3	40	3	107	0	0	8	110	1	1	5	0	1	7	302	1172
17:30:00	39	98	13	0	2	150	19	6	2	0	3	27	6	105	1	0	5	112	0	1	2	0	1	3	292	1197
17:45:00	42	85	13	0	8	140	19	7	2	0	4	28	6	132	2	0	12	140	2	2	8	0	1	12	320	1187
Grand Total	411	1174	308	0	62	1893	381	74	62	0	79	517	117	1389	23	0	154	1529	15	28	88	0	27	131	**4070**	-
Approach%	21.7%	62%	16.3%	0%		-	73.7%	14.3%	12%	0%		-	7.7%	90.8%	1.5%	0%		-	11.5%	21.4%	67.2%	0%		-	**-**	-
Totals %	10.1%	28.8%	7.6%	0%		46.5%	9.4%	1.8%	1.5%	0%		12.7%	2.9%	34.1%	0.6%	0%		37.6%	0.4%	0.7%	2.2%	0%		3.2%	**-**	-
Heavy	9	68	9	0		-	11	1	0	0		-	2	79	0	0		-	1	0	1	0		-	**-**	-
Heavy %	2.2%	5.8%	2.9%	0%		-	2.9%	1.4%	0%	0%		-	1.7%	5.7%	0%	0%		-	6.7%	0%	1.1%	0%		-	**-**	-
Bicycles	0	2	1	0		-	0	1	0	0		-	0	0	0	0		-	0	6	0	0		-	**-**	-
Bicycle %	0%	0.2%	0.3%	0%		-	0%	1.4%	0%	0%		-	0%	0%	0%	0%		-	0%	21.4%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & PARK ST E
Date: Wed, Sep 21, 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: Scattered Clouds (15.9 °C)

Start Time	N Approach HURONTARIO ST						E Approach PARK ST E						S Approach HURONTARIO ST						W Approach PARK ST E						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	17	57	28	0	13	102	15	4	1	0	19	20	7	90	3	0	12	100	2	1	5	0	4	8	230
08:15:00	15	66	41	0	8	122	29	1	4	0	18	34	23	102	2	0	15	127	0	6	3	0	4	9	292
08:30:00	13	76	44	0	1	133	61	6	18	0	2	85	29	58	2	0	17	89	1	5	2	0	1	8	315
08:45:00	21	90	23	0	2	134	37	7	13	0	2	57	12	55	0	0	19	67	1	4	2	0	0	7	265
Grand Total	66	289	136	0	24	491	142	18	36	0	41	196	71	305	7	0	63	383	4	16	12	0	9	32	**1102**
Approach%	13.4%	58.9%	27.7%	0%		-	72.4%	9.2%	18.4%	0%		-	18.5%	79.6%	1.8%	0%		-	12.5%	50%	37.5%	0%		-	**-**
Totals %	6%	26.2%	12.3%	0%		44.6%	12.9%	1.6%	3.3%	0%		17.8%	6.4%	27.7%	0.6%	0%		34.8%	0.4%	1.5%	1.1%	0%		2.9%	**-**
PHF	0.79	0.8	0.77	0		0.92	0.58	0.64	0.5	0		0.58	0.61	0.75	0.58	0		0.75	0.5	0.67	0.6	0		0.89	**-**
Heavy	5	17	5	0		27	9	1	0	0		10	2	21	0	0		23	1	0	1	0		2	**-**
Heavy %	7.6%	5.9%	3.7%	0%		5.5%	6.3%	5.6%	0%	0%		5.1%	2.8%	6.9%	0%	0%		6%	25%	0%	8.3%	0%		6.3%	**-**
Lights	61	272	131	0		464	133	17	36	0		186	69	284	7	0		360	3	16	11	0		30	**-**
Lights %	92.4%	94.1%	96.3%	0%		94.5%	93.7%	94.4%	100%	0%		94.9%	97.2%	93.1%	100%	0%		94%	75%	100%	91.7%	0%		93.8%	**-**
Single-Unit Trucks	4	4	0	0		8	0	0	0	0		0	0	2	0	0		2	1	0	1	0		2	**-**
Single-Unit Trucks %	6.1%	1.4%	0%	0%		1.6%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.5%	25%	0%	8.3%	0%		6.3%	**-**
Buses	1	11	5	0		17	9	1	0	0		10	2	19	0	0		21	0	0	0	0		0	**-**
Buses %	1.5%	3.8%	3.7%	0%		3.5%	6.3%	5.6%	0%	0%		5.1%	2.8%	6.2%	0%	0%		5.5%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0.7%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	23	-	-	-	-	-	29	-	-	-	-	-	63	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	16.8%		-	-	-	-	21.2%		-	-	-	-	46%		-	-	-	-	5.8%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	12	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0.7%		-	-	-	-	8.8%		-	-	-	-	0%		-	-	-	-	0.7%		**-**
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

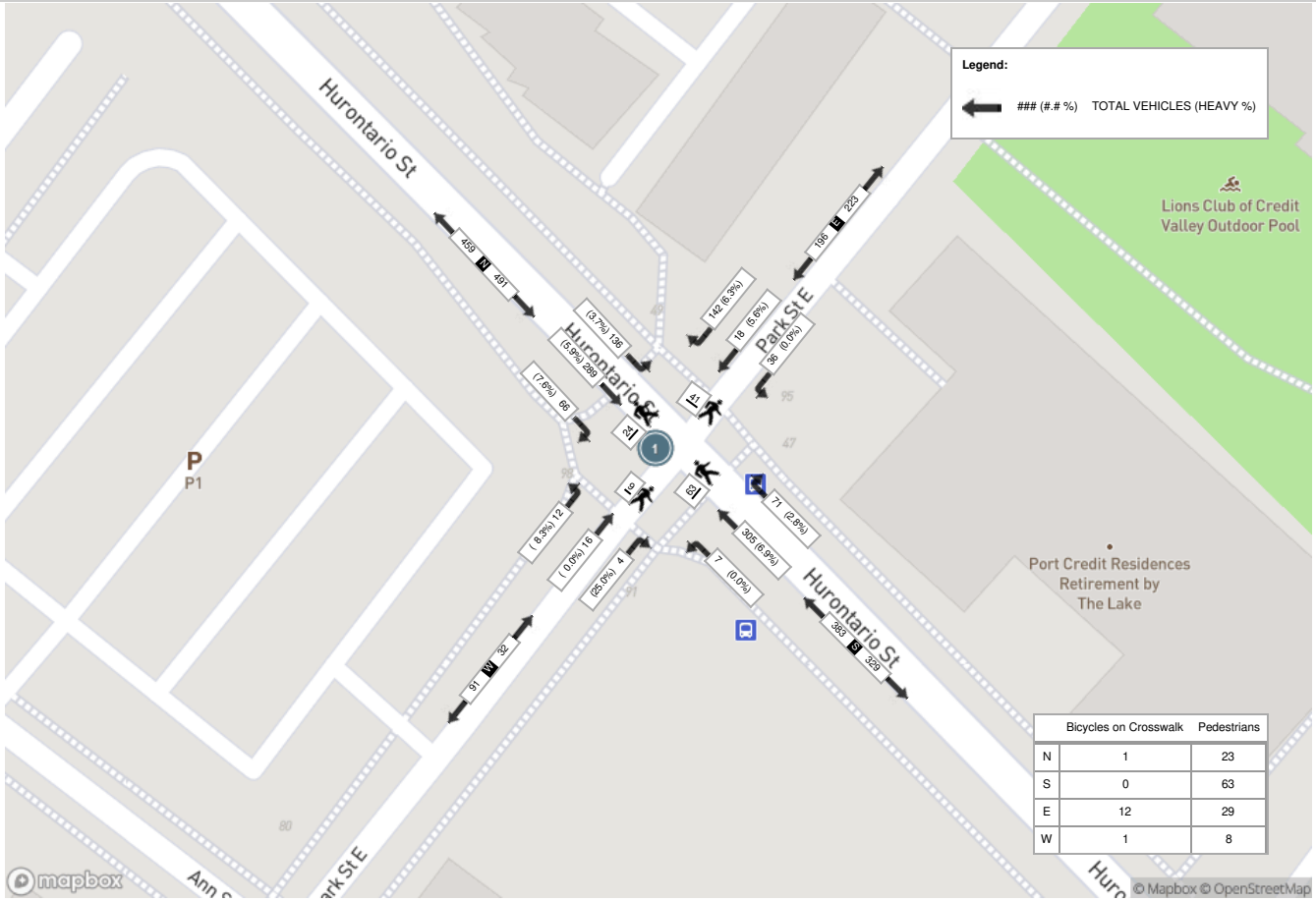
Turning Movement Count
Location Name: HURONTARIO ST & PARK ST E
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (28.05 °C)

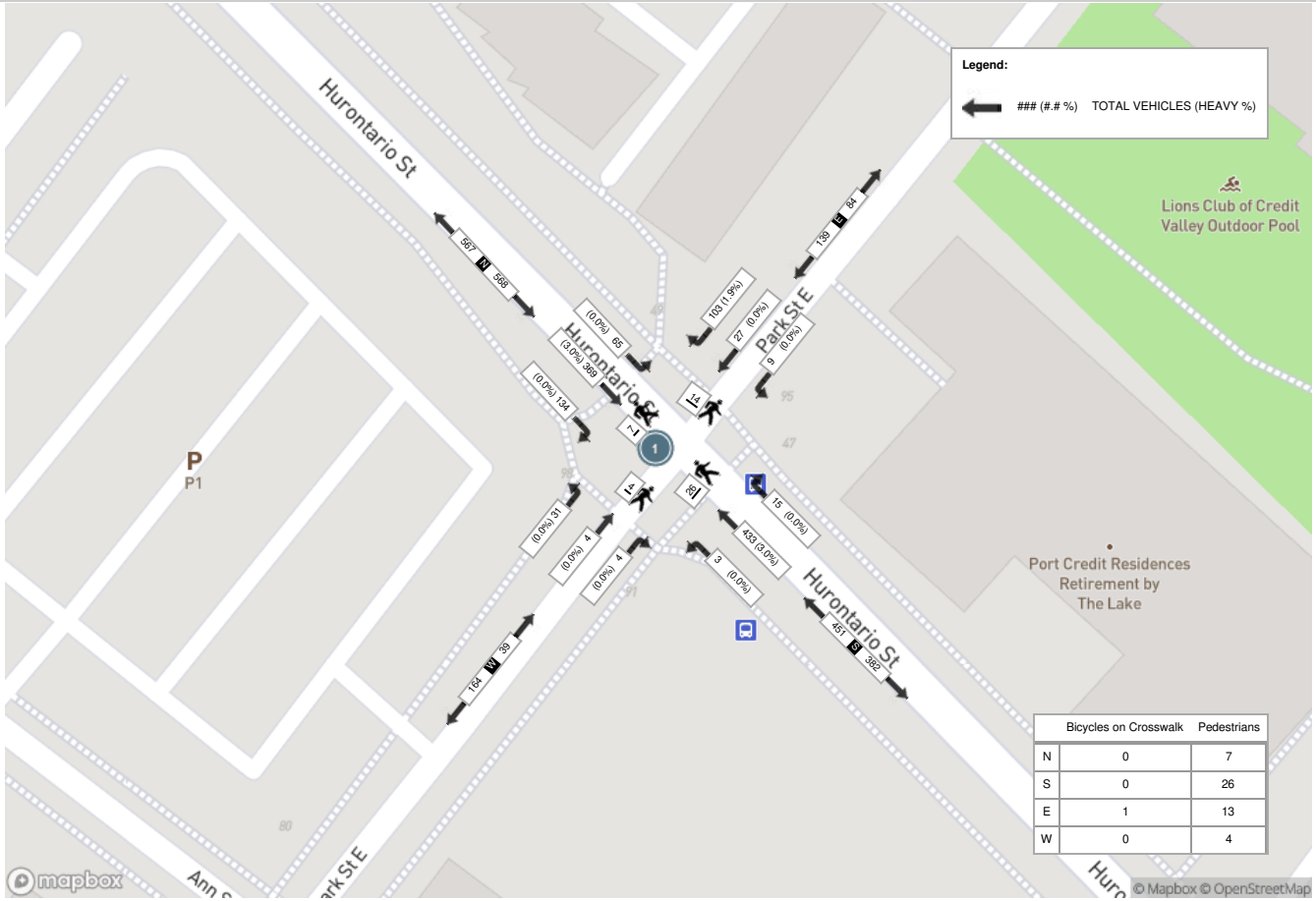
Start Time	N Approach HURONTARIO ST						E Approach PARK ST E						S Approach HURONTARIO ST						W Approach PARK ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	37	89	17	0	0	143	29	9	2	0	4	40	4	124	2	0	5	130	0	2	15	0	1	17	330
17:00:00	22	91	17	0	2	130	21	8	3	0	4	32	2	97	0	0	8	99	3	0	9	0	1	12	273
17:15:00	36	91	18	0	3	145	34	4	2	0	3	40	3	107	0	0	8	110	1	1	5	0	1	7	302
17:30:00	39	98	13	0	2	150	19	6	2	0	3	27	6	105	1	0	5	112	0	1	2	0	1	3	292
Grand Total	134	369	65	0	7	568	103	27	9	0	14	139	15	433	3	0	26	451	4	4	31	0	4	39	**1197**
Approach%	23.6%	65%	11.4%	0%		-	74.1%	19.4%	6.5%	0%		-	3.3%	96%	0.7%	0%		-	10.3%	10.3%	79.5%	0%		-	**-**
Totals %	11.2%	30.8%	5.4%	0%		47.5%	8.6%	2.3%	0.8%	0%		11.6%	1.3%	36.2%	0.3%	0%		37.7%	0.3%	0.3%	2.6%	0%		3.3%	**-**
PHF	0.86	0.94	0.9	0		0.95	0.76	0.75	0.75	0		0.87	0.63	0.87	0.38	0		0.87	0.33	0.5	0.52	0		0.57	**-**
Heavy	0	11	0	0		11	2	0	0	0		2	0	13	0	0		13	0	0	0	0		0	**-**
Heavy %	0%	3%	0%	0%		1.9%	1.9%	0%	0%	0%		1.4%	0%	3%	0%	0%		2.9%	0%	0%	0%	0%		0%	**-**
Lights	134	358	65	0		557	101	27	9	0		137	15	420	3	0		438	4	4	31	0		39	**-**
Lights %	100%	97%	100%	0%		98.1%	98.1%	100%	100%	0%		98.6%	100%	97%	100%	0%		97.1%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	2	0	0		2	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0.5%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.7%	0%	0%	0%	0%		0%	**-**
Buses	0	9	0	0		9	2	0	0	0		2	0	10	0	0		10	0	0	0	0		0	**-**
Buses %	0%	2.4%	0%	0%		1.6%	1.9%	0%	0%	0%		1.4%	0%	2.3%	0%	0%		2.2%	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	-	-	-	-	7	-	-	-	-	-	13	-	-	-	-	-	26	-	-	-	-	-	4	-	**-**
Pedestrians%	-	-	-	-	13.7%		-	-	-	-	25.5%		-	-	-	-	51%		-	-	-	-	7.8%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	1	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Scattered Clouds (15.9 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	23
S	0	63
E	12	29
W	1	8

Peak Hour: 04:45 PM - 05:45 PM **Weather: Overcast Clouds (28.05 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	7
S	0	26
E	1	13
W	0	4

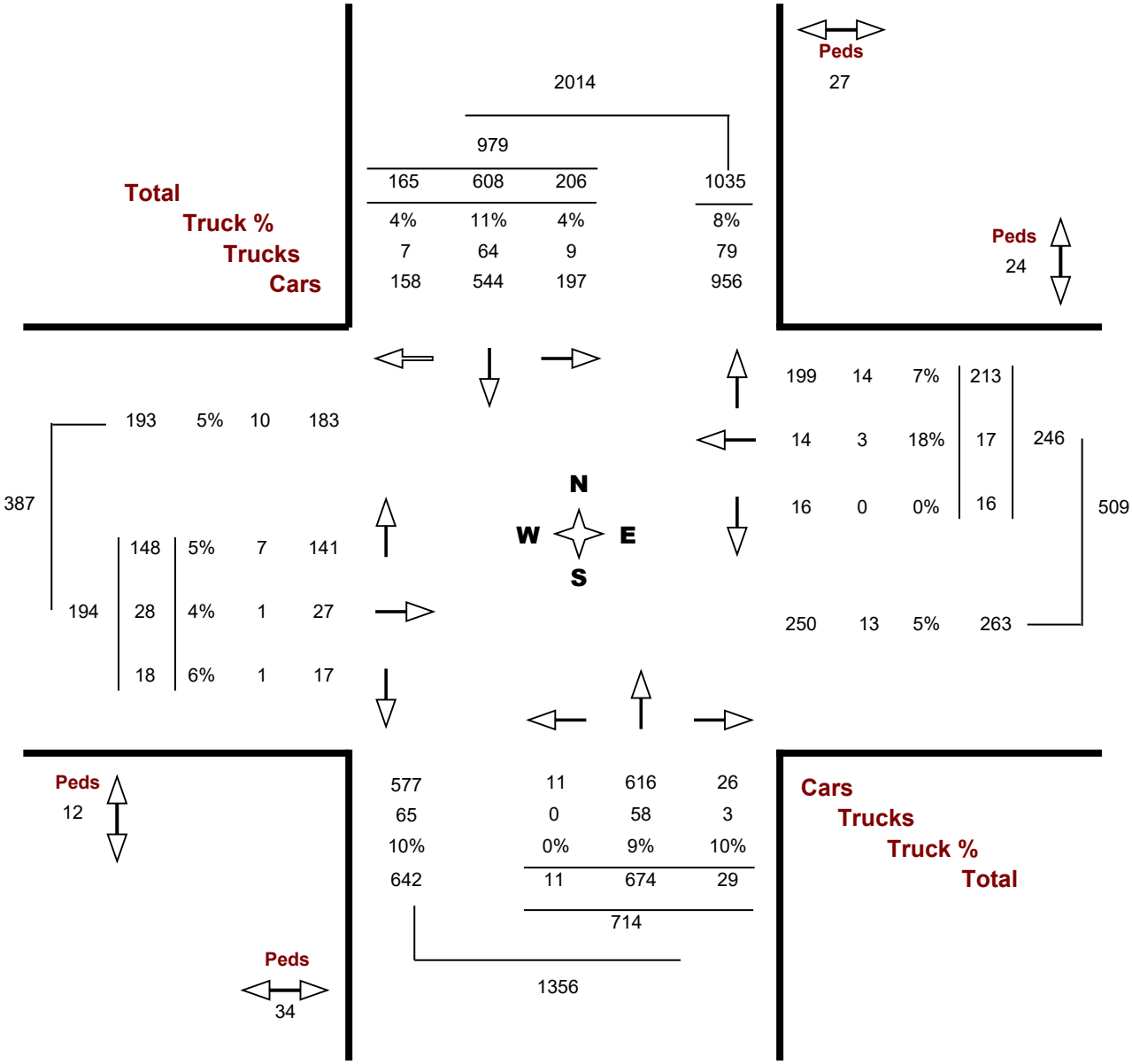
Turning Movements Report - AM Period

Location..... HURONTARIO ST @ PARK ST E

Municipality..... Mississauga **GeoID.....** 351173

Count Date..... Thursday, 04 June, 2015 **Peak Hour.....** 08:00 AM — 09:00 AM

Road 1 PARK ST E **Road 2** HURONTARIO ST



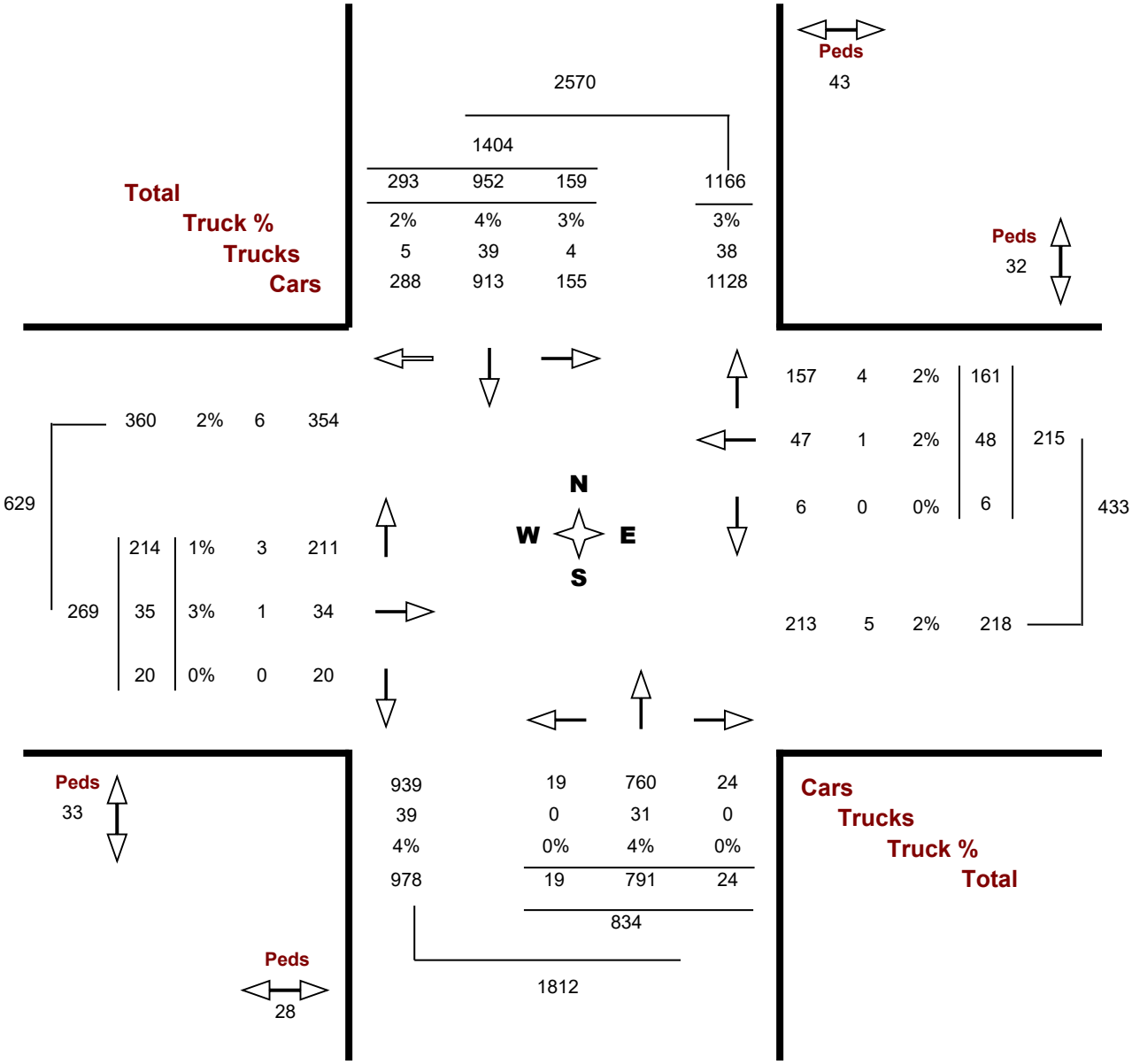
Turning Movements Report - PM Period

Location..... HURONTARIO ST @ PARK ST E

Municipality..... Mississauga **GeoID.....** 351173

Count Date..... Thursday, 04 June, 2015 **Peak Hour.....** 05:00 PM — 06:00 PM

Road 1 PARK ST E **Road 2** HURONTARIO ST



Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO EAST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (3 . PARK ST E & 70 PARK ST E (PUDO EAST ACCESS))

Start Time	N Approach 70 PARK ST E (PUDO EAST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						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	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
07:15:00	0	0	0	0	3	0	0	1	0	0	3	1	0	0	1	0	4	1	0	2	2	0	2	4	6	
07:30:00	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	3	0	0	3	3	
07:45:00	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	6	0	0	1	0	0	2	1	2	11
08:00:00	0	0	0	0	6	0	0	0	0	0	5	0	0	0	0	0	7	0	0	0	1	1	1	2	2	13
08:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	1	0	0	2	2	9
08:30:00	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	6
08:45:00	0	0	0	0	5	0	0	1	0	0	4	1	0	0	0	0	8	0	0	2	0	0	0	2	3	7
BREAK																										
16:00:00	0	0	0	0	4	0	0	1	0	0	1	1	0	0	0	0	3	0	0	0	1	0	1	1	2	
16:15:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	1	1	
16:30:00	0	0	0	0	5	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	1	1	0	2	2	
16:45:00	0	0	0	0	1	0	0	2	0	0	1	2	0	0	0	0	8	0	0	0	2	0	2	2	4	9
17:00:00	0	0	0	0	6	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	1	0	0	7
17:15:00	0	0	0	0	5	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	6
17:30:00	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4
17:45:00	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	8	0	0	0	0	0	1	0	0	0
Grand Total	0	0	0	0	54	0	0	6	0	0	36	6	0	0	1	0	88	1	1	5	12	2	10	20	**27**	-
Approach%	0%	0%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	100%	0%		-	5%	25%	60%	10%		-	**-**	-
Totals %	0%	0%	0%	0%		0%	0%	22.2%	0%	0%		22.2%	0%	0%	3.7%	0%		3.7%	3.7%	18.5%	44.4%	7.4%		74.1%	**-**	-
Heavy	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**	-
Heavy %	0%	0%	0%	0%		-	0%	16.7%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	0	0	0	0		-	1	0	0	0		-	0	0	0	0		-	0	2	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	40%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO EAST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach 70 PARK ST E (PUDO EAST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						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	
07:15:00	0	0	0	0	3	0	0	1	0	0	3	1	0	0	1	0	4	1	0	2	2	0	2	4	6
07:30:00	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	3	0	0	3	3
07:45:00	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	6	0	0	1	0	0	2	1	2
08:00:00	0	0	0	0	6	0	0	0	0	0	5	0	0	0	0	0	7	0	0	0	1	1	1	2	2
Grand Total	0	0	0	0	12	0	0	2	0	0	10	2	0	0	1	0	21	1	0	3	6	1	5	10	**13**
Approach%	0%	0%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	100%	0%		-	0%	30%	60%	10%		-	**-**
Totals %	0%	0%	0%	0%		0%	0%	15.4%	0%	0%		15.4%	0%	0%	7.7%	0%		7.7%	0%	23.1%	46.2%	7.7%		76.9%	**-**
PHF	0	0	0	0		0	0	0.5	0	0		0.5	0	0	0.25	0		0.25	0	0.38	0.5	0.25		0.63	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	0	0	0	0		0	0	2	0	0		2	0	0	1	0		1	0	3	6	1		10	**-**
Lights %	0%	0%	0%	0%		0%	0%	100%	0%	0%		100%	0%	0%	100%	0%		100%	0%	100%	100%	100%		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%	**-**
Pedestrians	-	-	-	-	11	-	-	-	-	-	9	-	-	-	-	-	21	-	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	-	22.9%		-	-	-	-	18.8%		-	-	-	-	43.8%		-	-	-	-	10.4%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.1%		-	-	-	-	2.1%		-	-	-	-	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

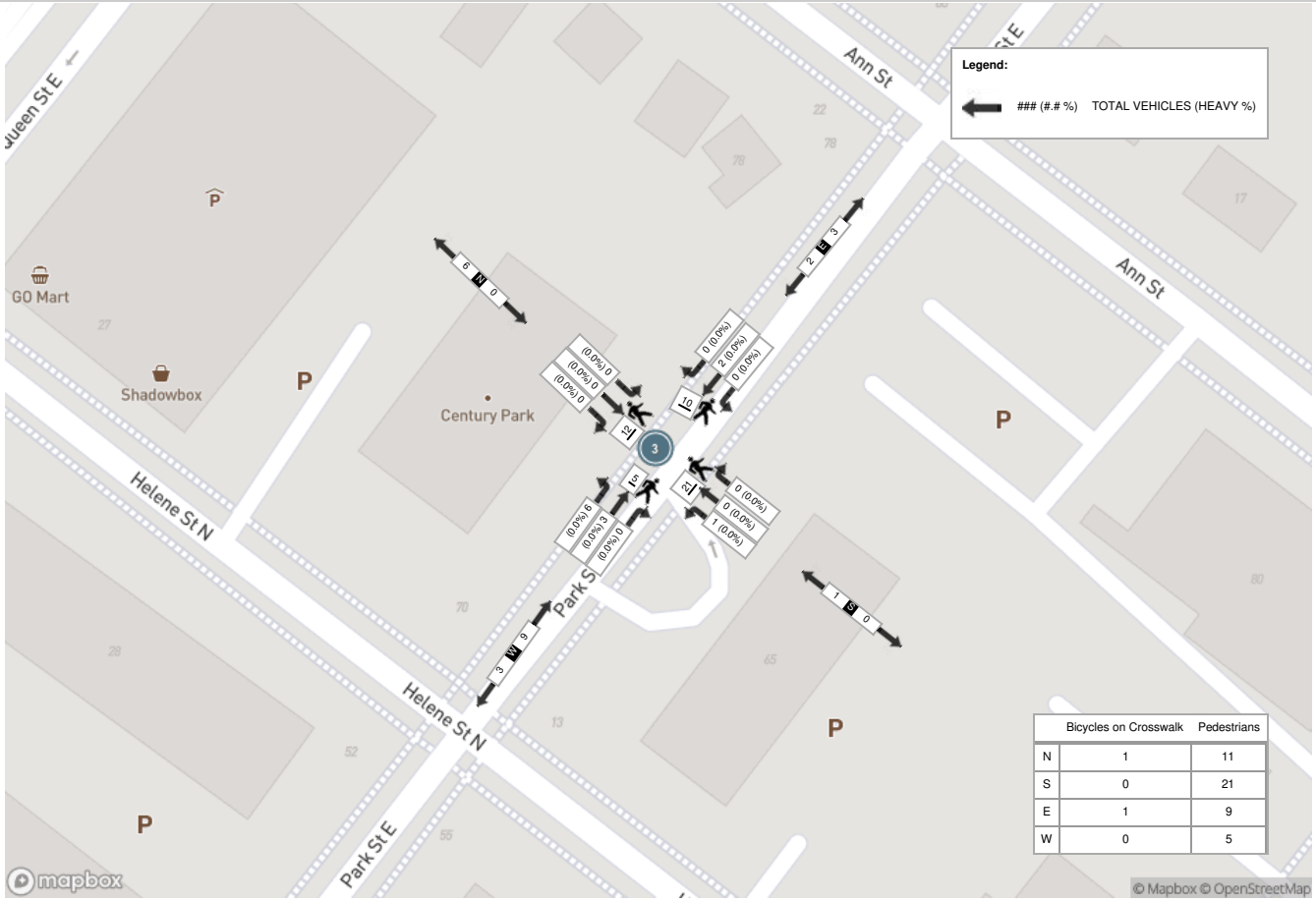
Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO EAST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (28.05 °C)

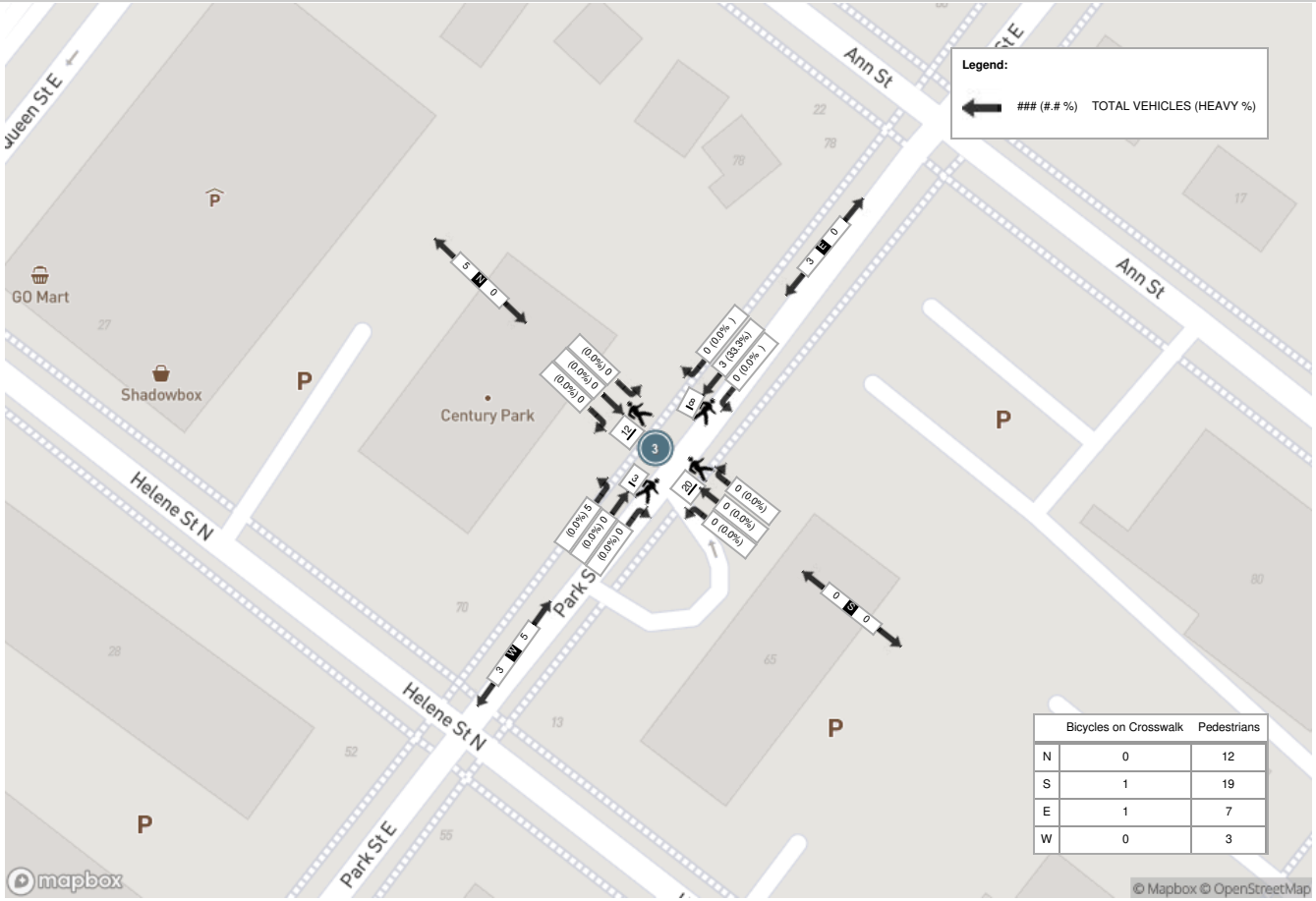
Start Time	N Approach 70 PARK ST E (PUDO EAST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	0	0	0	0	4	0	0	1	0	0	1	1	0	0	0	0	3	0	0	0	1	0	1	1	2
16:15:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	1	1
16:30:00	0	0	0	0	5	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	1	1	0	2	2
16:45:00	0	0	0	0	1	0	0	2	0	0	1	2	0	0	0	0	8	0	0	0	2	0	2	2	4
Grand Total	0	0	0	0	12	0	0	3	0	0	8	3	0	0	0	0	20	0	0	0	5	1	3	6	**9**
Approach%	0%	0%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	83.3%	16.7%		-	**-**
Totals %	0%	0%	0%	0%		0%	0%	33.3%	0%	0%		33.3%	0%	0%	0%	0%		0%	0%	0%	55.6%	11.1%		66.7%	**-**
PHF	0	0	0	0		0	0	0.38	0	0		0.38	0	0	0	0		0	0	0	0.63	0.25		0.75	**-**
Heavy	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	33.3%	0%	0%		33.3%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	5	1		6	**-**
Lights %	0%	0%	0%	0%		0%	0%	66.7%	0%	0%		66.7%	0%	0%	0%	0%		0%	0%	0%	100%	100%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	33.3%	0%	0%		33.3%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	12	-	-	-	-	-	7	-	-	-	-	-	19	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	27.9%		-	-	-	-	16.3%		-	-	-	-	44.2%		-	-	-	-	7%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2.3%		-	-	-	-	2.3%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:15 AM - 08:15 AM **Weather: Scattered Clouds (15.9 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	11
S	0	21
E	1	9
W	0	5

Peak Hour: 04:00 PM - 05:00 PM **Weather: Overcast Clouds (28.05 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	12
S	1	19
E	1	7
W	0	3

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO WEST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (4 . PARK ST E & 70 PARK ST E (PUDO WEST ACCESS))

Start Time	N Approach 70 PARK ST E (PUDO WEST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						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	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	
07:15:00	1	1	0	0	5	2	0	2	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	8	
07:30:00	3	0	0	0	1	3	0	0	0	0	1	0	0	0	0	0	7	0	0	3	0	0	0	3	6	
07:45:00	0	0	0	0	4	0	0	1	0	0	3	1	0	0	0	0	16	0	0	2	0	0	3	2	3	17
08:00:00	1	0	0	0	3	1	0	1	0	0	3	1	0	0	0	0	13	0	0	1	0	0	1	1	3	20
08:15:00	1	0	0	0	7	1	0	0	0	0	2	0	0	0	1	0	6	1	0	2	0	0	0	2	4	16
08:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	10
08:45:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	3	3	10
BREAK																										
16:00:00	1	0	0	0	2	1	0	1	0	0	0	1	0	0	0	0	3	0	0	1	0	0	1	1	3	
16:15:00	1	0	0	0	5	1	0	0	0	0	1	0	0	0	0	0	4	0	0	1	0	0	3	1	2	
16:30:00	1	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	4	0	0	2	0	0	0	2	3	
16:45:00	2	0	0	0	4	2	0	3	0	0	2	3	0	0	0	0	6	0	0	2	0	1	1	3	8	16
17:00:00	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	13
17:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	11
17:30:00	0	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	8
17:45:00	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Grand Total	11	1	0	0	54	12	0	8	0	0	15	8	0	0	1	0	91	1	0	21	0	1	10	22	**43**	-
Approach%	91.7%	8.3%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	100%	0%		-	0%	95.5%	0%	4.5%		-	**-**	-
Totals %	25.6%	2.3%	0%	0%		27.9%	0%	18.6%	0%	0%		18.6%	0%	0%	2.3%	0%		2.3%	0%	48.8%	0%	2.3%		51.2%	**-**	-
Heavy	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**	-
Heavy %	0%	0%	0%	0%		-	0%	12.5%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	0	0	0	0		-	0	1	0	0		-	0	0	1	0		-	3	1	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	12.5%	0%	0%		-	0%	0%	100%	0%		-	0%	4.8%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO WEST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach 70 PARK ST E (PUDO WEST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						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	
07:15:00	1	1	0	0	5	2	0	2	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	8
07:30:00	3	0	0	0	1	3	0	0	0	0	1	0	0	0	0	0	7	0	0	3	0	0	0	3	6
07:45:00	0	0	0	0	4	0	0	1	0	0	3	1	0	0	0	0	16	0	0	2	0	0	3	2	3
08:00:00	1	0	0	0	3	1	0	1	0	0	3	1	0	0	0	0	13	0	0	1	0	0	1	1	3
Grand Total	5	1	0	0	13	6	0	4	0	0	7	4	0	0	0	0	36	0	0	10	0	0	4	10	**20**
Approach%	83.3%	16.7%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	0%	0%		-	0%	100%	0%	0%		-	**-**
Totals %	25%	5%	0%	0%		30%	0%	20%	0%	0%		20%	0%	0%	0%	0%		0%	0%	50%	0%	0%		50%	**-**
PHF	0.42	0.25	0	0		0.5	0	0.5	0	0		0.5	0	0	0	0		0	0	0.63	0	0		0.63	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	5	1	0	0		6	0	4	0	0		4	0	0	0	0		0	0	10	0	0		10	**-**
Lights %	100%	100%	0%	0%		100%	0%	100%	0%	0%		100%	0%	0%	0%	0%		0%	0%	100%	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%	**-**
Pedestrians	-	-	-	-	13	-	-	-	-	-	7	-	-	-	-	-	36	-	-	-	-	-	4	-	**-**
Pedestrians%	-	-	-	-	21.7%		-	-	-	-	11.7%		-	-	-	-	60%		-	-	-	-	6.7%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO WEST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (28.05 °C)

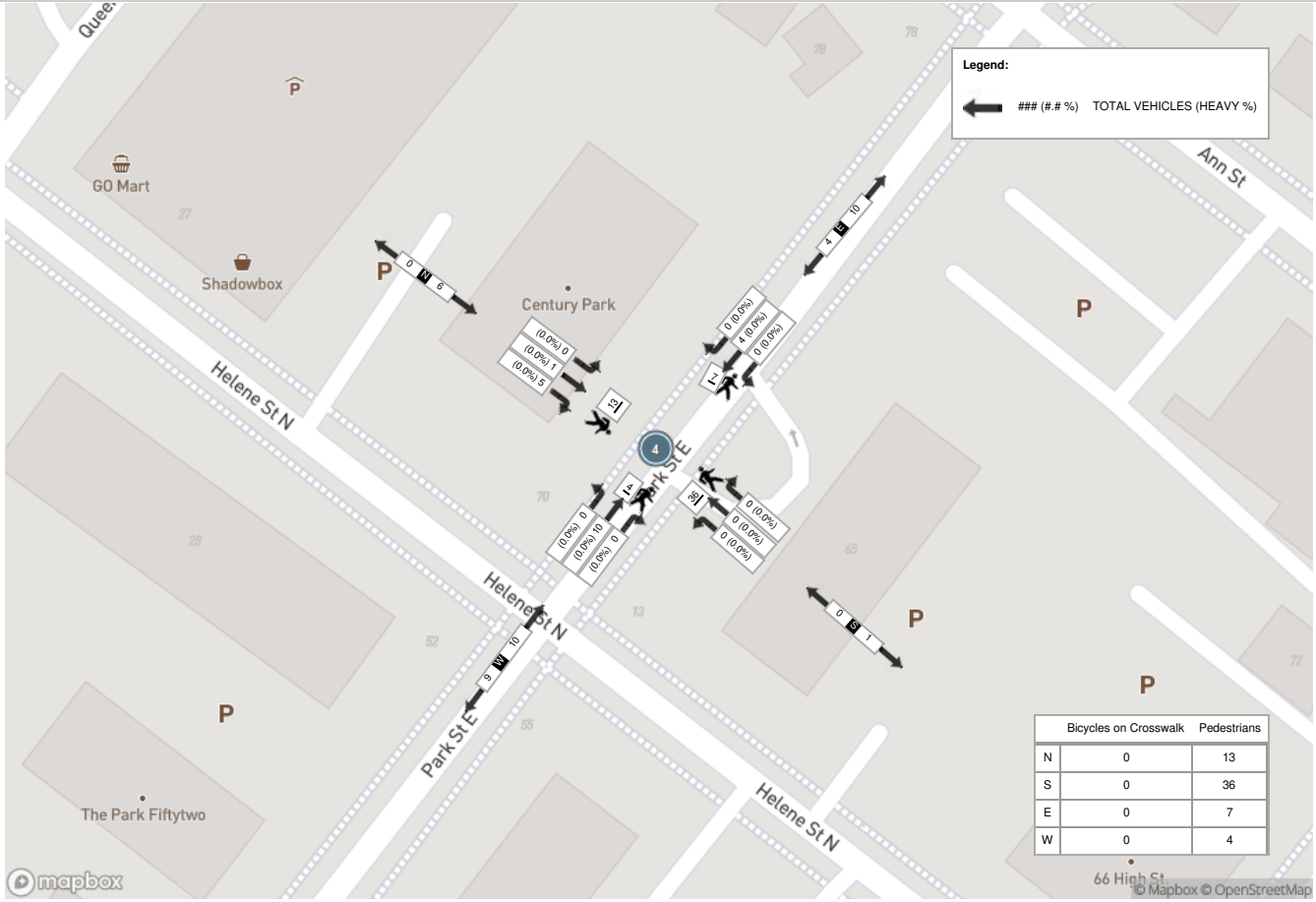
Start Time	N Approach 70 PARK ST E (PUDO WEST ACCESS)						E Approach PARK ST E						S Approach 65 PARK ST E ACCESS						W Approach PARK ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	1	0	0	0	2	1	0	1	0	0	0	1	0	0	0	0	3	0	0	1	0	0	1	1	3
16:15:00	1	0	0	0	5	1	0	0	0	0	1	0	0	0	0	0	4	0	0	1	0	0	3	1	2
16:30:00	1	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	4	0	0	2	0	0	0	2	3
16:45:00	2	0	0	0	4	2	0	3	0	0	2	3	0	0	0	0	6	0	0	2	0	1	1	3	8
Grand Total	5	0	0	0	13	5	0	4	0	0	4	4	0	0	0	0	17	0	0	6	0	1	5	7	**16**
Approach%	100%	0%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	0%	0%		-	0%	85.7%	0%	14.3%		-	**-**
Totals %	31.3%	0%	0%	0%		31.3%	0%	25%	0%	0%		25%	0%	0%	0%	0%		0%	0%	37.5%	0%	6.3%		43.8%	**-**
PHF	0.63	0	0	0		0.63	0	0.33	0	0		0.33	0	0	0	0		0	0	0.75	0	0.25		0.58	**-**
Heavy	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	25%	0%	0%		25%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	5	0	0	0		5	0	3	0	0		3	0	0	0	0		0	0	6	0	1		7	**-**
Lights %	100%	0%	0%	0%		100%	0%	75%	0%	0%		75%	0%	0%	0%	0%		0%	0%	100%	0%	100%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	25%	0%	0%		25%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	12	-	-	-	-	-	4	-	-	-	-	-	17	-	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	-	30.8%		-	-	-	-	10.3%		-	-	-	-	43.6%		-	-	-	-	12.8%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.6%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	2	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO WEST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 07:15 AM - 08:15 AM **Weather: Scattered Clouds (15.9 °C)**



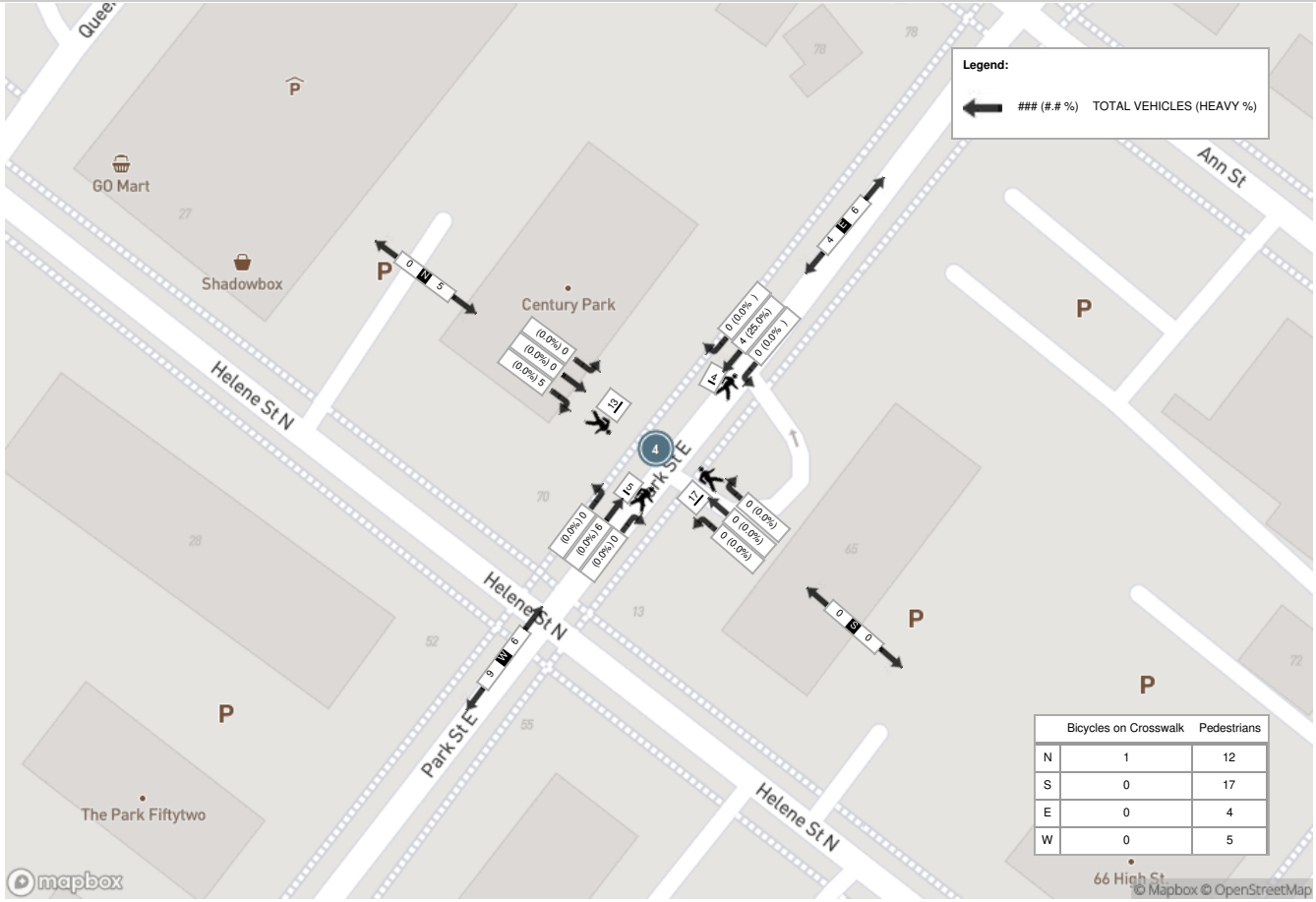
	Bicycles on Crosswalk	Pedestrians
N	0	13
S	0	36
E	0	7
W	0	4

Spectrum

Turning Movement Count
Location Name: PARK ST E & 70 PARK ST E (PUDO WEST ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 04:00 PM - 05:00 PM **Weather: Overcast Clouds (28.05 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	12
S	0	17
E	0	4
W	0	5

Spectrum

Turning Movement Count
Location Name: PARK ST E & ANN ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (2 . PARK ST E & ANN ST)

Start Time	N Approach ANN ST						E Approach PARK ST E						S Approach ANN ST						W Approach PARK ST E						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	1	0	3	0	15	4	13	0	5	0	3	18	6	10	0	0	1	16	0	0	0	0	12	0	38	
07:15:00	1	0	5	0	5	6	29	0	4	0	7	33	7	15	0	0	7	22	0	0	1	0	4	1	62	
07:30:00	0	0	3	0	2	3	19	0	3	0	8	22	4	14	0	0	5	18	0	0	1	0	0	1	44	
07:45:00	0	1	5	1	1	7	25	0	5	0	7	30	4	19	0	0	6	23	0	0	0	0	4	0	60	204
08:00:00	0	0	1	1	3	2	23	0	1	0	13	24	6	20	0	0	11	26	0	0	0	0	3	0	52	218
08:15:00	0	0	1	1	3	2	11	0	7	0	6	18	8	9	0	0	7	17	0	0	0	0	3	0	37	193
08:30:00	0	1	4	0	4	5	8	0	14	0	6	22	5	15	0	0	12	20	0	0	0	0	6	0	47	196
08:45:00	0	0	2	0	2	2	10	0	16	0	10	26	5	20	0	1	13	26	0	0	0	0	6	0	54	190
BREAK																										
16:00:00	0	0	1	0	0	1	19	0	13	0	4	32	2	14	1	0	6	17	0	0	0	0	6	0	50	
16:15:00	0	2	2	0	0	4	9	0	20	0	11	29	2	10	0	0	2	12	0	0	0	0	8	0	45	
16:30:00	0	0	1	0	0	1	27	0	9	0	7	36	0	15	0	0	8	15	0	0	0	0	4	0	52	
16:45:00	0	1	5	0	1	6	30	0	17	0	10	47	13	15	0	0	5	28	0	0	0	0	1	0	81	228
17:00:00	0	0	8	0	0	8	19	0	13	0	5	32	4	16	0	0	6	20	0	0	0	0	1	0	60	238
17:15:00	0	0	5	0	0	5	23	0	17	0	10	40	1	17	0	0	5	18	0	0	0	0	2	0	63	256
17:30:00	0	0	1	0	3	1	25	0	21	0	2	46	2	16	0	0	4	18	0	0	0	0	1	0	65	269
17:45:00	0	4	6	0	0	10	28	0	23	0	12	51	6	20	0	0	5	26	0	0	0	0	0	0	87	275
Grand Total	2	9	53	3	39	67	318	0	188	0	121	506	75	245	1	1	103	322	0	0	2	0	61	2	**897**	-
Approach%	3%	13.4%	79.1%	4.5%		-	62.8%	0%	37.2%	0%		-	23.3%	76.1%	0.3%	0.3%		-	0%	0%	100%	0%		-	-	-
Totals %	0.2%	1%	5.9%	0.3%		7.5%	35.5%	0%	21%	0%		56.4%	8.4%	27.3%	0.1%	0.1%		35.9%	0%	0%	0.2%	0%		0.2%	-	-
Heavy	0	1	2	0		-	8	0	3	0		-	0	71	1	0		-	0	0	0	0		-	-	-
Heavy %	0%	11.1%	3.8%	0%		-	2.5%	0%	1.6%	0%		-	0%	29%	100%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	0	1	2	0		-	3	0	0	0		-	1	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	11.1%	3.8%	0%		-	0.9%	0%	0%	0%		-	1.3%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: PARK ST E & ANN ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach ANN ST						E Approach PARK ST E						S Approach ANN ST						W Approach PARK ST E						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	
07:15:00	1	0	5	0	5	6	29	0	4	0	7	33	7	15	0	0	7	22	0	0	1	0	4	1	62
07:30:00	0	0	3	0	2	3	19	0	3	0	8	22	4	14	0	0	5	18	0	0	1	0	0	1	44
07:45:00	0	1	5	1	1	7	25	0	5	0	7	30	4	19	0	0	6	23	0	0	0	0	4	0	60
08:00:00	0	0	1	1	3	2	23	0	1	0	13	24	6	20	0	0	11	26	0	0	0	0	3	0	52
Grand Total	1	1	14	2	11	18	96	0	13	0	35	109	21	68	0	0	29	89	0	0	2	0	11	2	**218**
Approach%	5.6%	5.6%	77.8%	11.1%		-	88.1%	0%	11.9%	0%		-	23.6%	76.4%	0%	0%		-	0%	0%	100%	0%		-	**-**
Totals %	0.5%	0.5%	6.4%	0.9%		8.3%	44%	0%	6%	0%		50%	9.6%	31.2%	0%	0%		40.8%	0%	0%	0.9%	0%		0.9%	**-**
PHF	0.25	0.25	0.7	0.5		0.64	0.83	0	0.65	0		0.83	0.75	0.85	0	0		0.86	0	0	0.5	0		0.5	**-**
Heavy	0	1	0	0		1	2	0	0	0		2	0	16	0	0		16	0	0	0	0		0	**-**
Heavy %	0%	100%	0%	0%		5.6%	2.1%	0%	0%	0%		1.8%	0%	23.5%	0%	0%		18%	0%	0%	0%	0%		0%	**-**
Lights	1	0	14	2		17	94	0	13	0		107	21	52	0	0		73	0	0	2	0		2	**-**
Lights %	100%	0%	100%	100%		94.4%	97.9%	0%	100%	0%		98.2%	100%	76.5%	0%	0%		82%	0%	0%	100%	0%		100%	**-**
Single-Unit Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	100%	0%	0%		5.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	2	0	0	0		2	0	16	0	0		16	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	2.1%	0%	0%	0%		1.8%	0%	23.5%	0%	0%		18%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	11	-	-	-	-	-	34	-	-	-	-	-	28	-	-	-	-	-	11	-	**-**
Pedestrians%	-	-	-	-	12.8%		-	-	-	-	39.5%		-	-	-	-	32.6%		-	-	-	-	12.8%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	1.2%		-	-	-	-	1.2%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	0	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

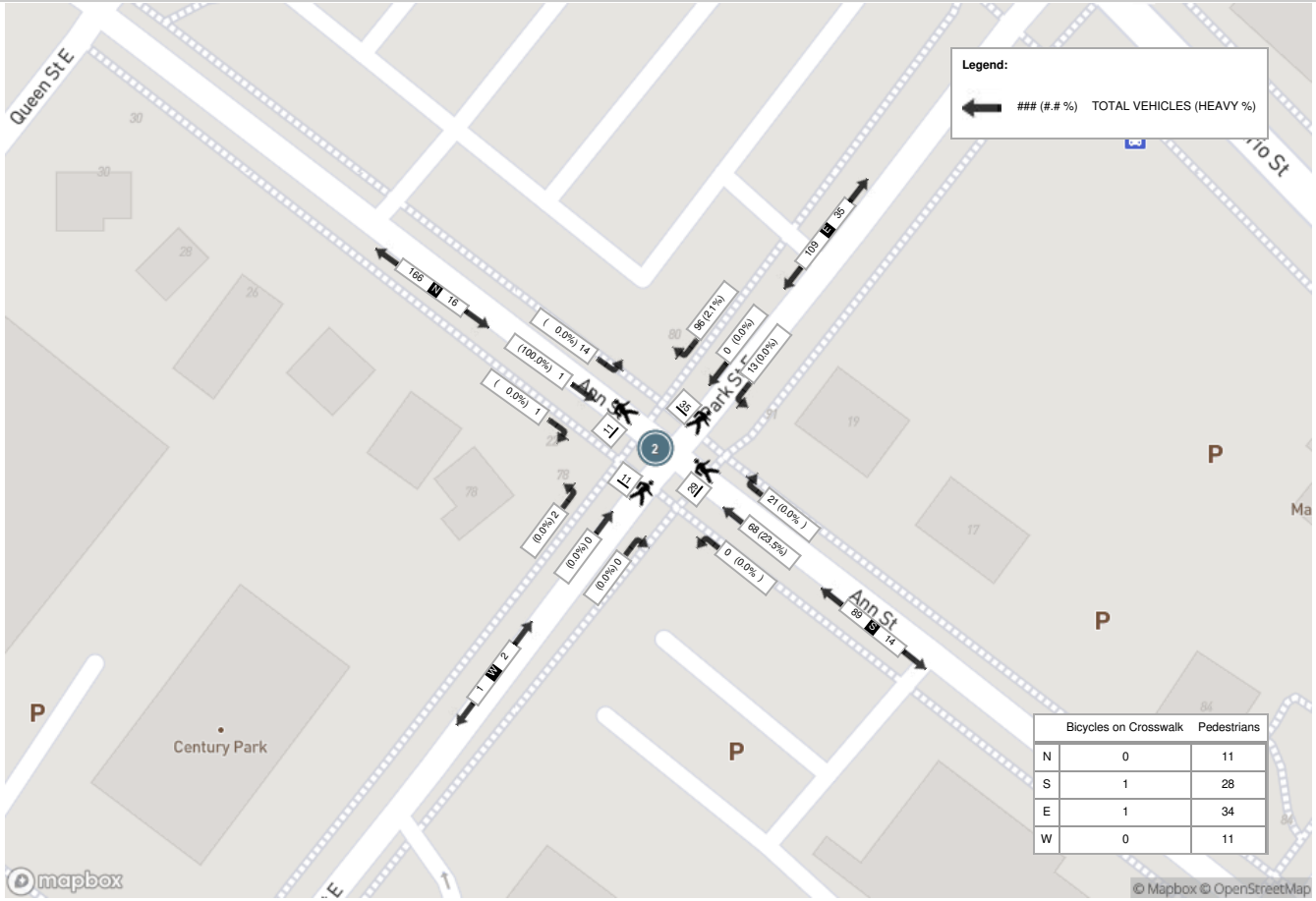
Turning Movement Count
Location Name: PARK ST E & ANN ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)

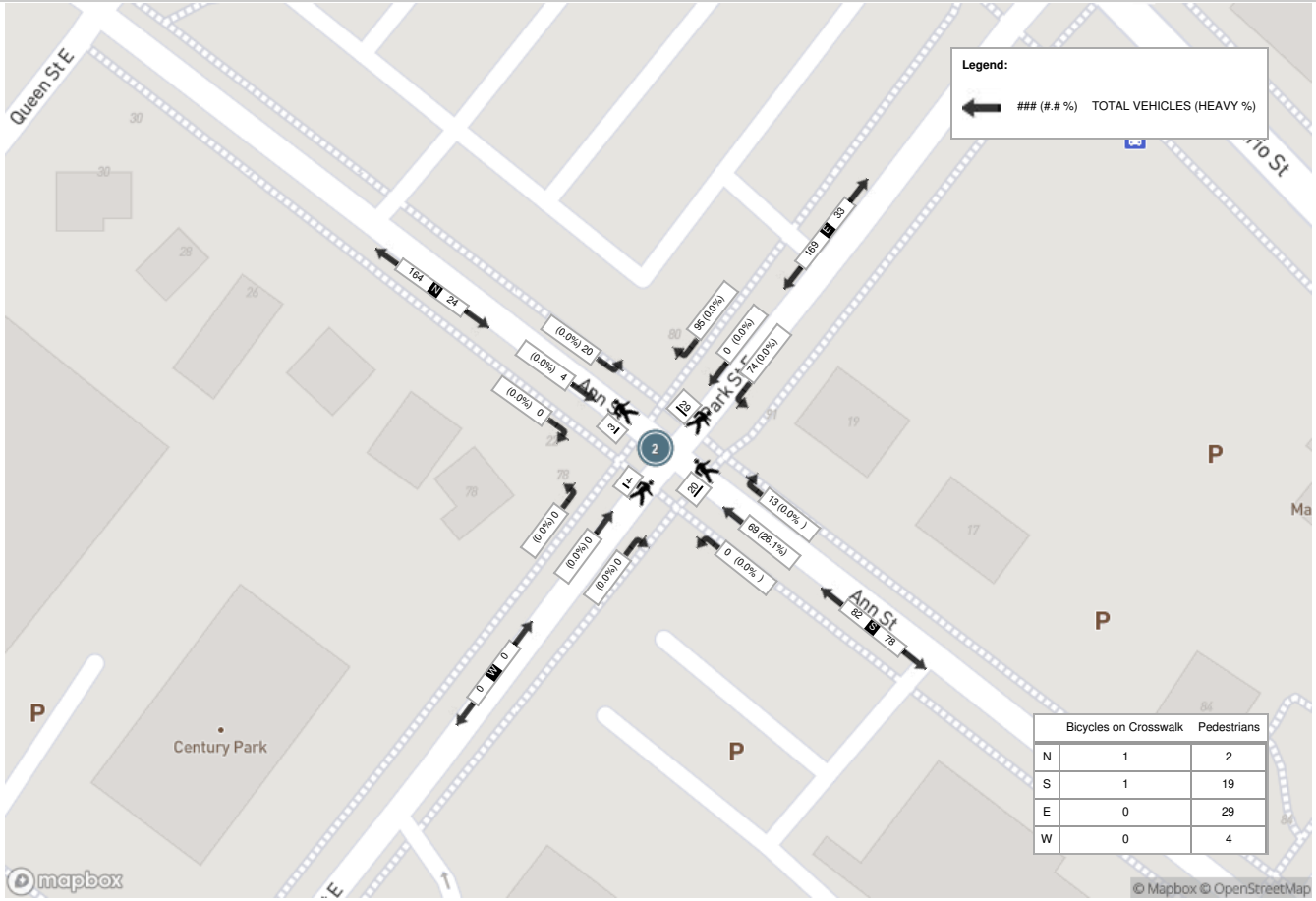
Start Time	N Approach ANN ST						E Approach PARK ST E						S Approach ANN ST						W Approach PARK ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	0	0	8	0	0	8	19	0	13	0	5	32	4	16	0	0	6	20	0	0	0	0	1	0	60
17:15:00	0	0	5	0	0	5	23	0	17	0	10	40	1	17	0	0	5	18	0	0	0	0	2	0	63
17:30:00	0	0	1	0	3	1	25	0	21	0	2	46	2	16	0	0	4	18	0	0	0	0	1	0	65
17:45:00	0	4	6	0	0	10	28	0	23	0	12	51	6	20	0	0	5	26	0	0	0	0	0	0	87
Grand Total	0	4	20	0	3	24	95	0	74	0	29	169	13	69	0	0	20	82	0	0	0	0	4	0	**275**
Approach%	0%	16.7%	83.3%	0%		-	56.2%	0%	43.8%	0%		-	15.9%	84.1%	0%	0%		-	0%	0%	0%	0%		-	**-**
Totals %	0%	1.5%	7.3%	0%		8.7%	34.5%	0%	26.9%	0%		61.5%	4.7%	25.1%	0%	0%		29.8%	0%	0%	0%	0%		0%	**-**
PHF	0	0.25	0.63	0		0.6	0.85	0	0.8	0		0.83	0.54	0.86	0	0		0.79	0	0	0	0		0	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	18	0	0		18	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	26.1%	0%	0%		22%	0%	0%	0%	0%		0%	**-**
Lights	0	4	20	0		24	95	0	74	0		169	13	51	0	0		64	0	0	0	0		0	**-**
Lights %	0%	100%	100%	0%		100%	100%	0%	100%	0%		100%	100%	73.9%	0%	0%		78%	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	**-**
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	18	0	0		18	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	26.1%	0%	0%		22%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	2	-	-	-	-	-	29	-	-	-	-	-	19	-	-	-	-	-	4	-	**-**
Pedestrians%	-	-	-	-	3.6%		-	-	-	-	51.8%		-	-	-	-	33.9%		-	-	-	-	7.1%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.8%		-	-	-	-	0%		-	-	-	-	1.8%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	2	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: 07:15 AM - 08:15 AM **Weather: Scattered Clouds (15.9 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	11
S	1	28
E	1	34
W	0	11

Peak Hour: 05:00 PM - 06:00 PM **Weather: Overcast Clouds (28.05 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	2
S	1	19
E	0	29
W	0	4

Spectrum

Turning Movement Count
Location Name: PARK ST E & HELENE ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (5 . PARK ST E & HELENE ST)

Start Time	N Approach HELENE ST						E Approach PARK ST E						S Approach HELENE ST						W Approach PARK ST E						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	0	9	0	0	6	9	0	0	0	0	3	0	0	5	0	0	2	5	9	0	0	0	5	9	23	
07:15:00	1	21	1	0	4	23	1	0	2	0	4	3	3	7	1	0	1	11	12	0	3	0	1	15	52	
07:30:00	3	12	0	0	5	15	0	0	3	0	6	3	3	8	3	0	2	14	15	0	1	0	8	16	48	
07:45:00	3	18	1	0	2	22	1	0	0	0	3	1	1	11	1	0	6	13	13	0	5	0	10	18	54	177
08:00:00	1	15	1	0	3	17	1	0	1	0	4	2	0	4	3	0	8	7	7	0	4	0	4	11	37	191
08:15:00	2	12	2	0	6	16	0	1	0	0	2	1	0	6	1	0	6	7	13	0	3	0	7	16	40	179
08:30:00	0	6	0	0	0	6	0	0	1	0	1	1	0	5	9	0	5	14	6	0	1	0	6	7	28	159
08:45:00	0	19	0	0	3	19	0	0	0	0	5	0	3	6	5	0	2	14	13	0	3	0	7	16	49	154
BREAK																										
16:00:00	0	9	0	0	1	9	0	0	2	0	4	2	1	5	7	2	4	15	7	0	2	0	2	9	35	
16:15:00	4	18	0	0	6	22	0	0	1	0	14	1	1	7	4	0	3	12	8	0	1	0	7	9	44	
16:30:00	1	12	2	0	4	15	0	0	1	0	4	1	0	8	5	1	2	14	8	0	5	0	6	13	43	
16:45:00	4	23	1	0	2	28	1	0	5	0	5	6	1	12	4	0	3	17	12	0	2	0	2	14	65	187
17:00:00	1	15	0	0	0	16	0	0	0	0	7	0	0	7	7	0	3	14	6	0	1	0	5	7	37	189
17:15:00	4	18	0	0	4	22	0	0	0	0	4	0	0	2	6	2	2	10	10	0	3	0	6	13	45	190
17:30:00	3	8	0	0	3	11	0	0	0	0	3	0	0	4	4	2	4	10	5	0	0	0	2	5	26	173
17:45:00	0	27	0	0	3	27	0	0	0	0	5	0	0	9	4	0	3	13	10	0	3	0	12	13	53	161
Grand Total	27	242	8	0	52	277	4	1	16	0	74	21	13	106	64	7	56	190	154	0	37	0	90	191	**679**	-
Approach%	9.7%	87.4%	2.9%	0%		-	19%	4.8%	76.2%	0%		-	6.8%	55.8%	33.7%	3.7%		-	80.6%	0%	19.4%	0%		-	-	-
Totals %	4%	35.6%	1.2%	0%		40.8%	0.6%	0.1%	2.4%	0%		3.1%	1.9%	15.6%	9.4%	1%		28%	22.7%	0%	5.4%	0%		28.1%	-	-
Heavy	0	4	0	0		-	0	0	1	0		-	0	2	4	0		-	2	0	1	0		-	-	-
Heavy %	0%	1.7%	0%	0%		-	0%	0%	6.3%	0%		-	0%	1.9%	6.3%	0%		-	1.3%	0%	2.7%	0%		-	-	-
Bicycles	0	2	2	0		-	2	0	0	0		-	0	2	0	0		-	2	1	2	0		-	-	-
Bicycle %	0%	0.8%	25%	0%		-	50%	0%	0%	0%		-	0%	1.9%	0%	0%		-	1.3%	0%	5.4%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: PARK ST E & HELENE ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

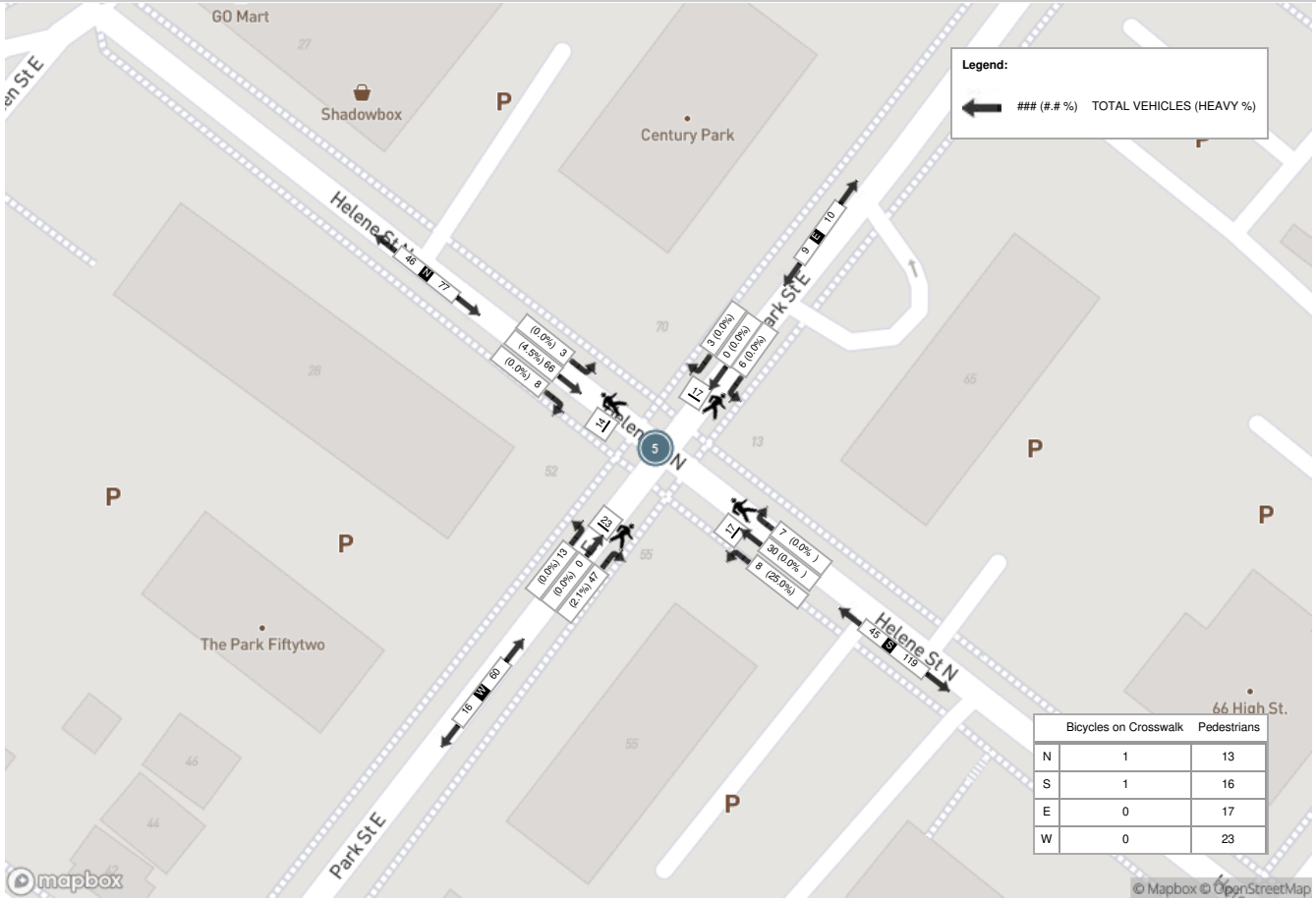
Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach HELENE ST						E Approach PARK ST E						S Approach HELENE ST						W Approach PARK ST E						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	
07:15:00	1	21	1	0	4	23	1	0	2	0	4	3	3	7	1	0	1	11	12	0	3	0	1	15	52
07:30:00	3	12	0	0	5	15	0	0	3	0	6	3	3	8	3	0	2	14	15	0	1	0	8	16	48
07:45:00	3	18	1	0	2	22	1	0	0	0	3	1	1	11	1	0	6	13	13	0	5	0	10	18	54
08:00:00	1	15	1	0	3	17	1	0	1	0	4	2	0	4	3	0	8	7	7	0	4	0	4	11	37
Grand Total	8	66	3	0	14	77	3	0	6	0	17	9	7	30	8	0	17	45	47	0	13	0	23	60	**191**
Approach%	10.4%	85.7%	3.9%	0%		-	33.3%	0%	66.7%	0%		-	15.6%	66.7%	17.8%	0%		-	78.3%	0%	21.7%	0%		-	**-**
Totals %	4.2%	34.6%	1.6%	0%		40.3%	1.6%	0%	3.1%	0%		4.7%	3.7%	15.7%	4.2%	0%		23.6%	24.6%	0%	6.8%	0%		31.4%	**-**
PHF	0.67	0.79	0.75	0		0.84	0.75	0	0.5	0		0.75	0.58	0.68	0.67	0		0.8	0.78	0	0.65	0		0.83	**-**
Heavy	0	3	0	0		3	0	0	0	0		0	0	0	2	0		2	1	0	0	0		1	**-**
Heavy %	0%	4.5%	0%	0%		3.9%	0%	0%	0%	0%		0%	0%	0%	25%	0%		4.4%	2.1%	0%	0%	0%		1.7%	**-**
Lights	8	63	3	0		74	3	0	6	0		9	7	30	6	0		43	46	0	13	0		59	**-**
Lights %	100%	95.5%	100%	0%		96.1%	100%	0%	100%	0%		100%	100%	100%	75%	0%		95.6%	97.9%	0%	100%	0%		98.3%	**-**
Single-Unit Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	1.5%	0%	0%		1.3%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	2	0	0		2	0	0	0	0		0	0	0	2	0		2	1	0	0	0		1	**-**
Buses %	0%	3%	0%	0%		2.6%	0%	0%	0%	0%		0%	0%	0%	25%	0%		4.4%	2.1%	0%	0%	0%		1.7%	**-**
Pedestrians	-	-	-	-	13	-	-	-	-	-	17	-	-	-	-	-	16	-	-	-	-	-	23	-	**-**
Pedestrians%	-	-	-	-	18.3%		-	-	-	-	23.9%		-	-	-	-	22.5%		-	-	-	-	32.4%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.4%		-	-	-	-	0%		-	-	-	-	1.4%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	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: 04:30 PM - 05:30 PM Weather: Overcast Clouds (28.05 °C)

Start Time	N Approach HELENE ST						E Approach PARK ST E						S Approach HELENE ST						W Approach PARK ST E						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	
16:30:00	1	12	2	0	4	15	0	0	1	0	4	1	0	8	5	1	2	14	8	0	5	0	6	13	43
16:45:00	4	23	1	0	2	28	1	0	5	0	5	6	1	12	4	0	3	17	12	0	2	0	2	14	65
17:00:00	1	15	0	0	0	16	0	0	0	0	7	0	0	7	7	0	3	14	6	0	1	0	5	7	37
17:15:00	4	18	0	0	4	22	0	0	0	0	4	0	0	2	6	2	2	10	10	0	3	0	6	13	45
Grand Total	10	68	3	0	10	81	1	0	6	0	20	7	1	29	22	3	10	55	36	0	11	0	19	47	**190**
Approach%	12.3%	84%	3.7%	0%		-	14.3%	0%	85.7%	0%		-	1.8%	52.7%	40%	5.5%		-	76.6%	0%	23.4%	0%		-	**-**
Totals %	5.3%	35.8%	1.6%	0%		42.6%	0.5%	0%	3.2%	0%		3.7%	0.5%	15.3%	11.6%	1.6%		28.9%	18.9%	0%	5.8%	0%		24.7%	**-**
PHF	0.63	0.74	0.38	0		0.72	0.25	0	0.3	0		0.29	0.25	0.6	0.79	0.38		0.81	0.75	0	0.55	0		0.84	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	10	68	3	0		81	1	0	6	0		7	1	29	22	3		55	36	0	11	0		47	**-**
Lights %	100%	100%	100%	0%		100%	100%	0%	100%	0%		100%	100%	100%	100%	100%		100%	100%	0%	100%	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%	**-**
Pedestrians	-	-	-	-	10	-	-	-	-	-	20	-	-	-	-	-	8	-	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	-	16.9%		-	-	-	-	33.9%		-	-	-	-	13.6%		-	-	-	-	32.2%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	3.4%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	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%		**-**

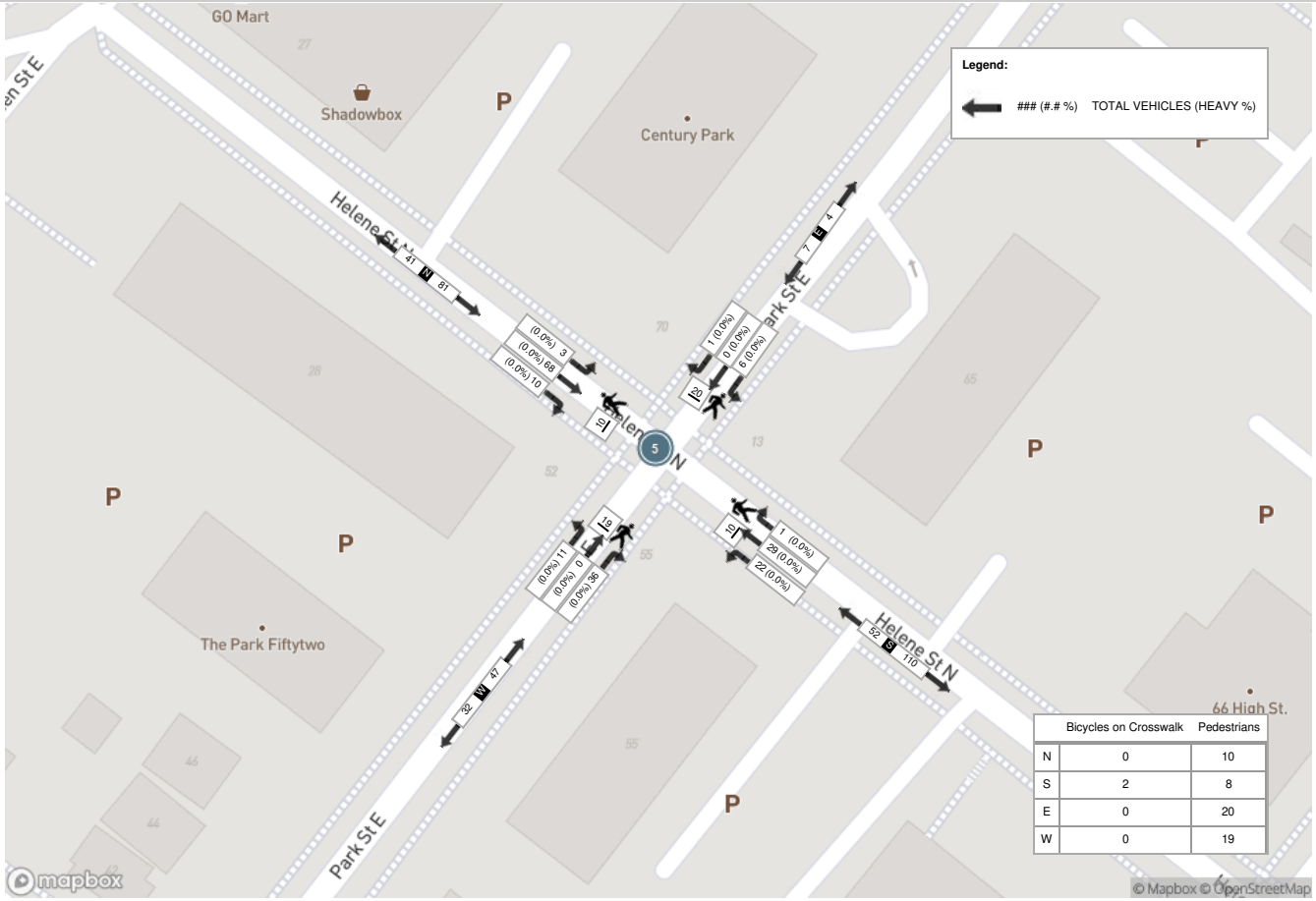
Peak Hour: 07:15 AM - 08:15 AM **Weather: Scattered Clouds (15.9 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	13
S	1	16
E	0	17
W	0	23

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

Peak Hour: 04:30 PM - 05:30 PM **Weather: Overcast Clouds (28.05 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	10
S	2	8
E	0	20
W	0	19

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

Turning Movement Count (6 . HELENE ST & CENTURY PARK PLAZA SURFACE LOT ACCESS)

Start Time	N Approach HELENE ST					E Approach CENTURY PARK PLAZA SURFACE LOT ACCESS					S Approach HELENE ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	8	0	0	3	8	0	1	0	2	1	2	3	0	0	5	14	
07:15:00	20	0	0	1	20	0	3	0	2	3	0	11	0	0	11	34	
07:30:00	15	1	0	2	16	0	1	0	9	1	0	9	0	3	9	26	
07:45:00	21	0	0	0	21	0	0	0	6	0	0	15	0	2	15	36	110
08:00:00	17	0	0	1	17	0	0	0	6	0	2	7	0	2	9	26	122
08:15:00	14	1	0	2	15	0	2	0	6	2	0	9	0	1	9	26	114
08:30:00	7	2	0	0	9	0	0	0	2	0	0	6	0	1	6	15	103
08:45:00	18	0	1	1	19	1	1	0	3	2	0	9	0	0	9	30	97
BREAK																	
16:00:00	7	2	0	1	9	0	2	0	5	2	1	6	0	4	7	18	
16:15:00	19	1	0	3	20	1	2	0	15	3	1	7	0	0	8	31	
16:30:00	13	1	0	3	14	0	3	0	5	3	2	11	0	1	13	30	
16:45:00	28	0	0	1	28	0	0	0	8	0	1	13	1	2	15	43	122
17:00:00	12	2	0	1	14	1	2	0	7	3	0	6	1	2	7	24	128
17:15:00	19	2	0	3	21	1	3	0	7	4	2	3	0	0	5	30	127
17:30:00	11	1	0	0	12	0	0	0	8	0	0	4	0	0	4	16	113
17:45:00	25	0	0	2	25	0	1	0	9	1	1	10	1	2	12	38	108
Grand Total	254	13	1	24	268	4	21	0	100	25	12	129	3	20	144	**437**	-
Approach%	94.8%	4.9%	0.4%		-	16%	84%	0%		-	8.3%	89.6%	2.1%		-	**-**	-
Totals %	58.1%	3%	0.2%		61.3%	0.9%	4.8%	0%		5.7%	2.7%	29.5%	0.7%		33%	**-**	-
Heavy	3	0	0		-	0	1	0		-	1	2	0		-	**-**	-
Heavy %	1.2%	0%	0%		-	0%	4.8%	0%		-	8.3%	1.6%	0%		-	**-**	-
Bicycles	4	1	0		-	2	0	0		-	0	6	0		-	**-**	-
Bicycle %	1.6%	7.7%	0%		-	50%	0%	0%		-	0%	4.7%	0%		-	**-**	-

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach HELENE ST					E Approach CENTURY PARK PLAZA SURFACE LOT ACCESS					S Approach HELENE ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	20	0	0	1	20	0	3	0	2	3	0	11	0	0	11	34
07:30:00	15	1	0	2	16	0	1	0	9	1	0	9	0	3	9	26
07:45:00	21	0	0	0	21	0	0	0	6	0	0	15	0	2	15	36
08:00:00	17	0	0	1	17	0	0	0	6	0	2	7	0	2	9	26
Grand Total	73	1	0	4	74	0	4	0	23	4	2	42	0	7	44	**122**
Approach%	98.6%	1.4%	0%		-	0%	100%	0%		-	4.5%	95.5%	0%		-	**-**
Totals %	59.8%	0.8%	0%		60.7%	0%	3.3%	0%		3.3%	1.6%	34.4%	0%		36.1%	**-**
PHF	0.87	0.25	0		0.88	0	0.33	0		0.33	0.25	0.7	0		0.73	**-**
Heavy	2	0	0		2	0	1	0		1	0	0	0		0	**-**
Heavy %	2.7%	0%	0%		2.7%	0%	25%	0%		25%	0%	0%	0%		0%	**-**
Lights	71	1	0		72	0	3	0		3	2	42	0		44	**-**
Lights %	97.3%	100%	0%		97.3%	0%	75%	0%		75%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	25%	0%		25%	0%	0%	0%		0%	**-**
Buses	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Buses %	2.7%	0%	0%		2.7%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	4	-	-	-	-	21	-	-	-	-	6	-	**-**
Pedestrians%	-	-	-	11.8%		-	-	-	61.8%		-	-	-	17.6%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	5.9%		-	-	-	2.9%		**-**
Bicycles on Road	0	0	0	0	-	1	0	0	0	-	0	2	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

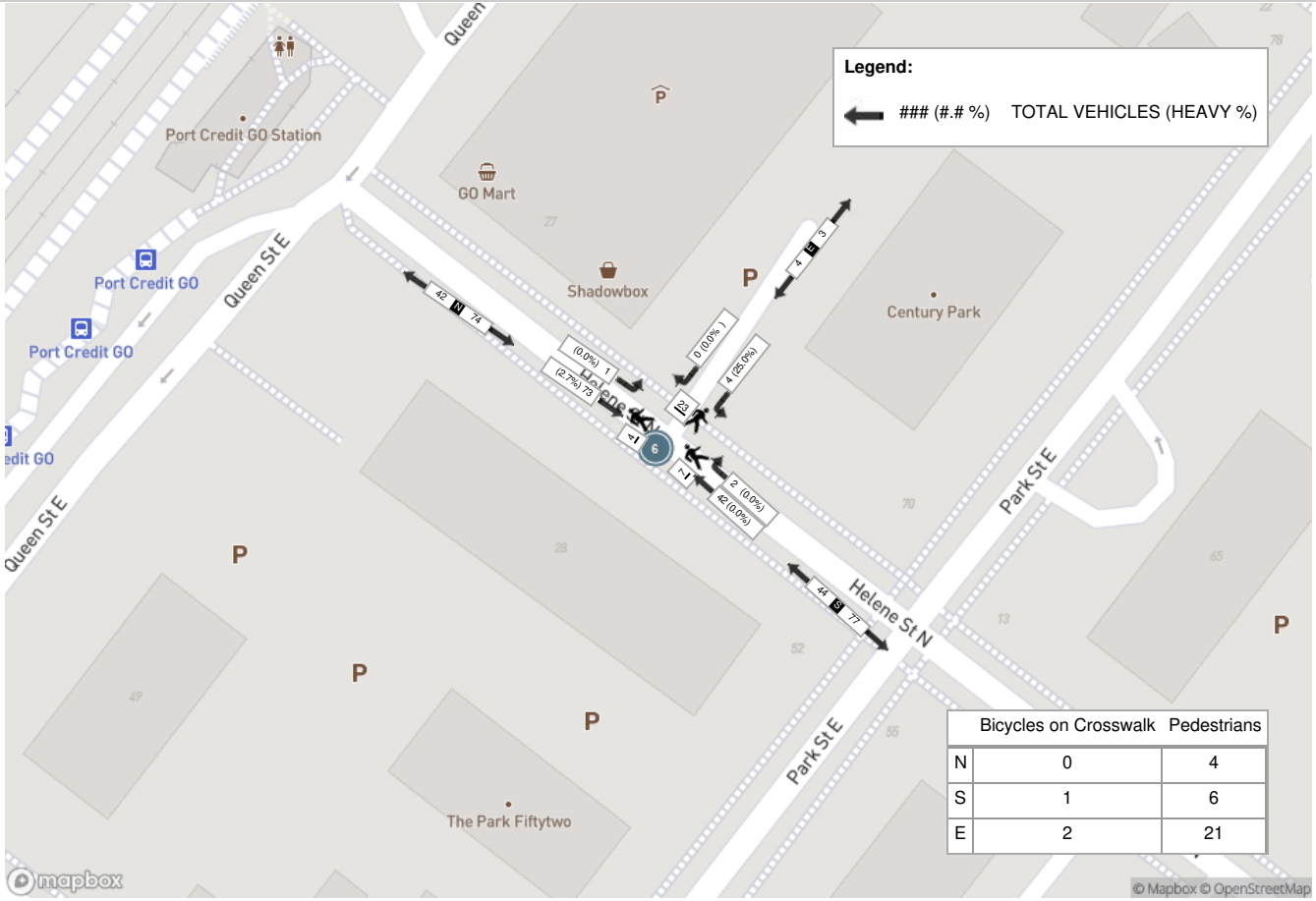
BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:15 PM - 05:15 PM Weather: Overcast Clouds (28.05 °C)

Start Time	N Approach HELENE ST					E Approach CENTURY PARK PLAZA SURFACE LOT ACCESS					S Approach HELENE ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:15:00	19	1	0	3	20	1	2	0	15	3	1	7	0	0	8	31
16:30:00	13	1	0	3	14	0	3	0	5	3	2	11	0	1	13	30
16:45:00	28	0	0	1	28	0	0	0	8	0	1	13	1	2	15	43
17:00:00	12	2	0	1	14	1	2	0	7	3	0	6	1	2	7	24
Grand Total	72	4	0	8	76	2	7	0	35	9	4	37	2	5	43	**128**
Approach%	94.7%	5.3%	0%		-	22.2%	77.8%	0%		-	9.3%	86%	4.7%		-	**-**
Totals %	56.3%	3.1%	0%		59.4%	1.6%	5.5%	0%		7%	3.1%	28.9%	1.6%		33.6%	**-**
PHF	0.64	0.5	0		0.68	0.5	0.58	0		0.75	0.5	0.71	0.5		0.72	**-**
Heavy	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	2.7%	0%		2.3%	**-**
Lights	72	4	0		76	2	7	0		9	4	36	2		42	**-**
Lights %	100%	100%	0%		100%	100%	100%	0%		100%	100%	97.3%	100%		97.7%	**-**
Single-Unit Trucks	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%	**-**
Buses	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	2.7%	0%		2.3%	**-**
Pedestrians	-	-	-	8	-	-	-	-	35	-	-	-	-	5	-	**-**
Pedestrians%	-	-	-	16.7%		-	-	-	72.9%		-	-	-	10.4%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	1	0	0	0	-	0	1	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

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

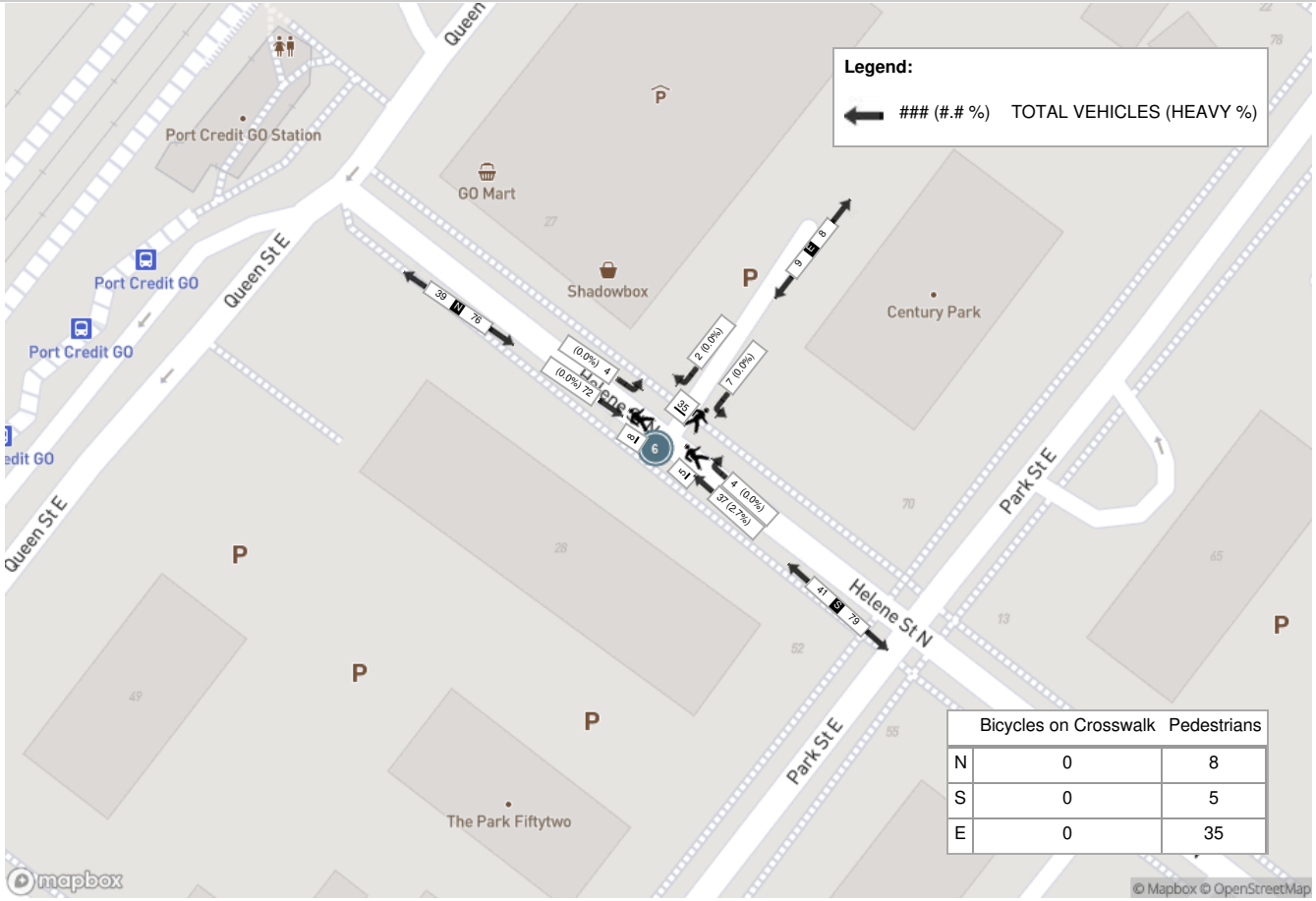
Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	4
S	1	6
E	2	21

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

Peak Hour: 04:15 PM - 05:15 PM Weather: Overcast Clouds (28.05 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	8
S	0	5
E	0	35

Spectrum

Turning Movement Count
Location Name: QUEEN ST E & 70 PARK ST E (GARAGE ACCESS)
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (9 . QUEEN ST E & 70 PARK ST E (GARAGE ACCESS))

Start Time	E Approach QUEEN ST E					S Approach 70 PARK ST E (GARAGE ACCESS)					W Approach QUEEN ST E					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	12	2	0	0	14	0	3	0	2	3	0	1	0	0	1	18	
07:15:00	19	0	0	0	19	0	4	0	2	4	0	3	0	1	3	26	
07:30:00	23	0	0	3	23	0	6	0	0	6	0	0	0	0	0	29	
07:45:00	26	0	0	0	26	0	8	0	0	8	0	2	0	0	2	36	109
08:00:00	22	2	0	2	24	0	5	0	2	5	0	0	0	2	0	29	120
08:15:00	13	1	0	0	14	0	6	0	0	6	0	2	0	0	2	22	116
08:30:00	11	0	0	0	11	1	7	0	0	8	0	0	0	0	0	19	106
08:45:00	12	1	0	0	13	0	5	0	2	5	0	1	0	0	1	19	89
BREAK																	
16:00:00	20	4	0	0	24	0	1	0	1	1	0	0	0	0	0	25	
16:15:00	9	2	0	2	11	0	1	0	6	1	0	1	0	0	1	13	
16:30:00	23	3	0	1	26	0	2	0	2	2	0	1	0	0	1	29	
16:45:00	20	5	0	2	25	0	3	0	11	3	0	1	0	4	1	29	96
17:00:00	17	5	0	1	22	0	0	0	5	0	0	4	0	1	4	26	97
17:15:00	24	5	0	2	29	0	2	0	4	2	0	0	0	1	0	31	115
17:30:00	25	4	0	1	29	0	0	0	10	0	0	1	0	1	1	30	116
17:45:00	25	4	0	2	29	0	0	0	3	0	0	1	0	1	1	30	117
Grand Total	301	38	0	16	339	1	53	0	50	54	0	18	0	11	18	**411**	-
Approach%	88.8%	11.2%	0%		-	1.9%	98.1%	0%		-	0%	100%	0%		-	**-**	-
Totals %	73.2%	9.2%	0%		82.5%	0.2%	12.9%	0%		13.1%	0%	4.4%	0%		4.4%	**-**	-
Heavy	76	0	0		-	0	0	0		-	0	0	0		-	**-**	-
Heavy %	25.2%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-
Bicycles	1	0	0		-	0	0	0		-	0	3	0		-	**-**	-
Bicycle %	0.3%	0%	0%		-	0%	0%	0%		-	0%	16.7%	0%		-	**-**	-

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

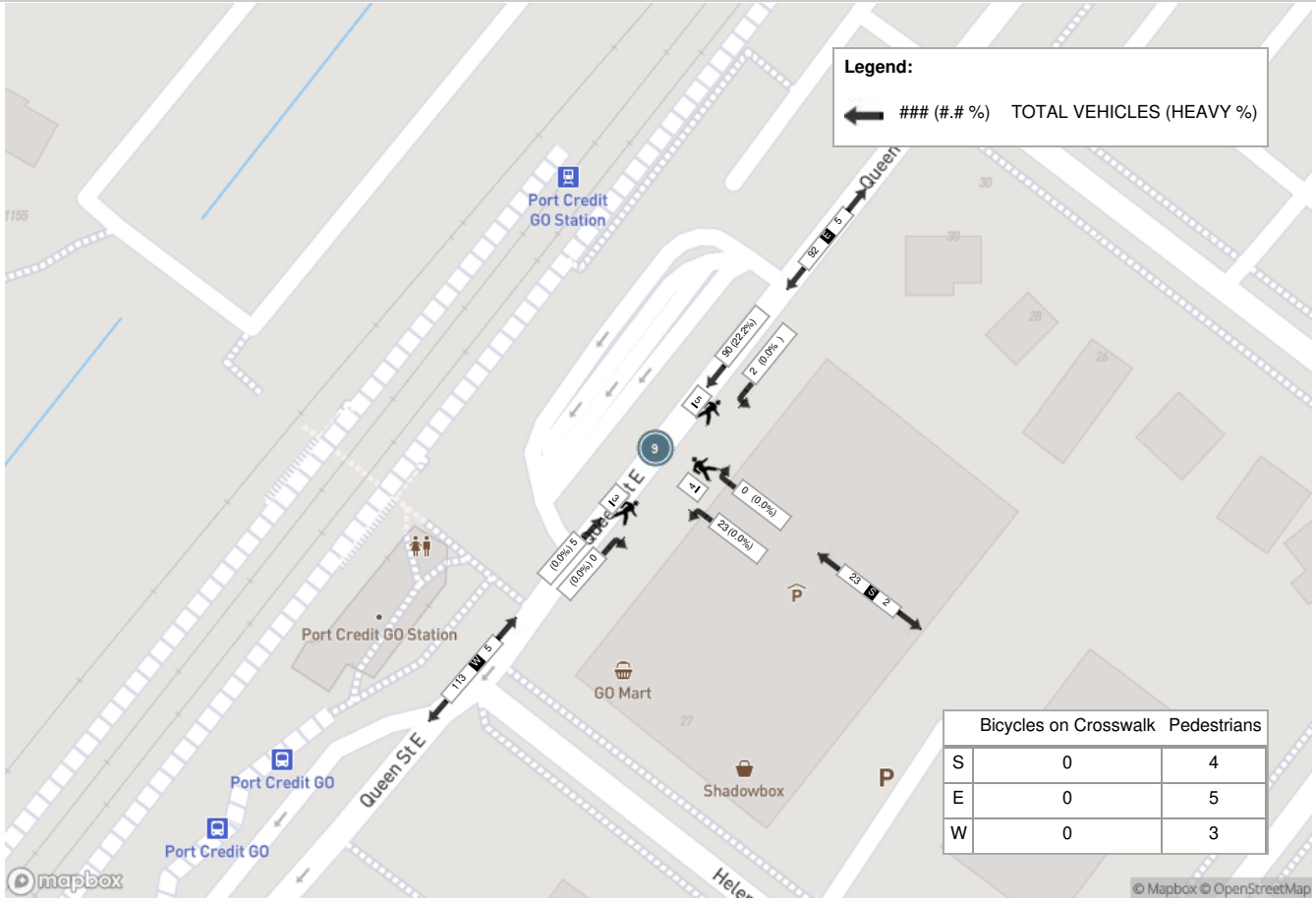
Start Time	E Approach QUEEN ST E					S Approach 70 PARK ST E (GARAGE ACCESS)					W Approach QUEEN ST E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	19	0	0	0	19	0	4	0	2	4	0	3	0	1	3	26
07:30:00	23	0	0	3	23	0	6	0	0	6	0	0	0	0	0	29
07:45:00	26	0	0	0	26	0	8	0	0	8	0	2	0	0	2	36
08:00:00	22	2	0	2	24	0	5	0	2	5	0	0	0	2	0	29
Grand Total	90	2	0	5	92	0	23	0	4	23	0	5	0	3	5	**120**
Approach%	97.8%	2.2%	0%		-	0%	100%	0%		-	0%	100%	0%		-	**-**
Totals %	75%	1.7%	0%		76.7%	0%	19.2%	0%		19.2%	0%	4.2%	0%		4.2%	**-**
PHF	0.87	0.25	0		0.88	0	0.72	0		0.72	0	0.42	0		0.42	**-**
Heavy	20	0	0		20	0	0	0		0	0	0	0		0	**-**
Heavy %	22.2%	0%	0%		21.7%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	70	2	0		72	0	23	0		23	0	5	0		5	**-**
Lights %	77.8%	100%	0%		78.3%	0%	100%	0%		100%	0%	100%	0%		100%	**-**
Single-Unit Trucks	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	2.2%	0%	0%		2.2%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	18	0	0		18	0	0	0		0	0	0	0		0	**-**
Buses %	20%	0%	0%		19.6%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	5	-	-	-	-	4	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	41.7%		-	-	-	33.3%		-	-	-	25%		**-**
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%		**-**

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

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)

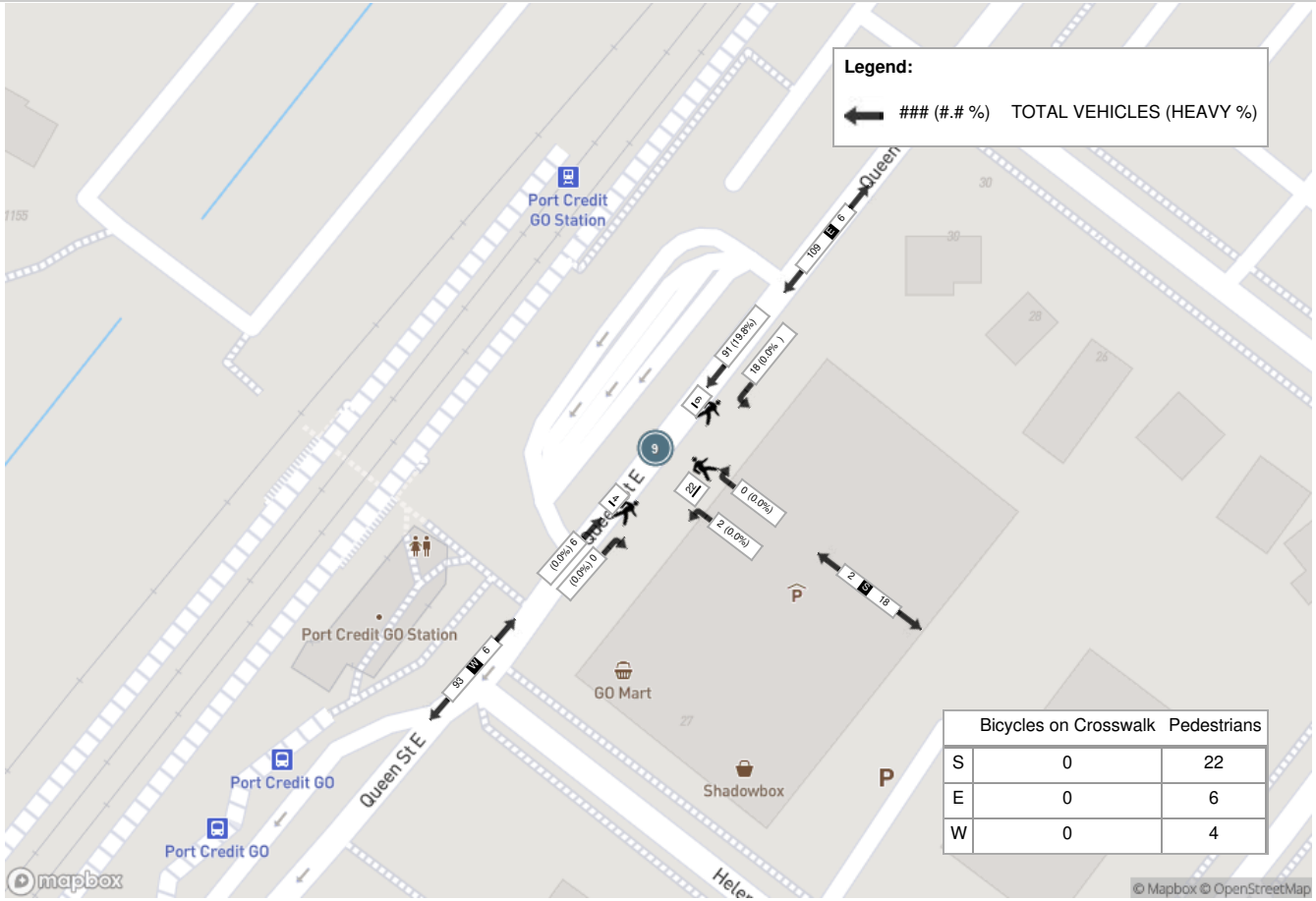
Start Time	E Approach QUEEN ST E					S Approach 70 PARK ST E (GARAGE ACCESS)					W Approach QUEEN ST E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:00:00	17	5	0	1	22	0	0	0	5	0	0	4	0	1	4	26
17:15:00	24	5	0	2	29	0	2	0	4	2	0	0	0	1	0	31
17:30:00	25	4	0	1	29	0	0	0	10	0	0	1	0	1	1	30
17:45:00	25	4	0	2	29	0	0	0	3	0	0	1	0	1	1	30
Grand Total	91	18	0	6	109	0	2	0	22	2	0	6	0	4	6	**117**
Approach%	83.5%	16.5%	0%		-	0%	100%	0%		-	0%	100%	0%		-	**-**
Totals %	77.8%	15.4%	0%		93.2%	0%	1.7%	0%		1.7%	0%	5.1%	0%		5.1%	**-**
PHF	0.91	0.9	0		0.94	0	0.25	0		0.25	0	0.38	0		0.38	**-**
Heavy	18	0	0		18	0	0	0		0	0	0	0		0	**-**
Heavy %	19.8%	0%	0%		16.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	73	18	0		91	0	2	0		2	0	6	0		6	**-**
Lights %	80.2%	100%	0%		83.5%	0%	100%	0%		100%	0%	100%	0%		100%	**-**
Single-Unit Trucks	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%	**-**
Buses	18	0	0		18	0	0	0		0	0	0	0		0	**-**
Buses %	19.8%	0%	0%		16.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	6	-	-	-	-	22	-	-	-	-	4	-	**-**
Pedestrians%	-	-	-	18.8%		-	-	-	68.8%		-	-	-	12.5%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	2	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)



	Bicycles on Crosswalk	Pedestrians
S	0	4
E	0	5
W	0	3

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)



	Bicycles on Crosswalk	Pedestrians
S	0	22
E	0	6
W	0	4

Spectrum

Turning Movement Count
Location Name: QUEEN ST E & ANN ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Turning Movement Count (10 . QUEEN ST E & ANN ST)

Start Time	N Approach NORTH DRIVEWAY						E Approach QUEEN ST E						S Approach ANN ST						W Approach QUEEN ST E						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	2	2	0	0	3	4	0	0	0	0	4	0	0	3	14	0	0	17	0	0	1	0	1	1	22	
07:15:00	1	1	2	0	12	4	0	0	0	0	11	0	0	4	32	0	2	36	2	0	0	0	4	2	42	
07:30:00	1	1	0	0	0	2	0	0	2	0	7	2	0	3	27	0	3	30	0	0	0	0	0	0	34	
07:45:00	2	4	0	0	6	6	0	0	0	0	18	0	2	5	37	0	0	44	1	0	0	0	1	1	51	149
08:00:00	1	2	0	0	15	3	0	0	0	0	17	0	2	5	31	0	3	38	0	0	0	0	3	0	41	168
08:15:00	0	0	0	0	2	0	0	0	2	0	10	2	2	2	16	0	1	20	1	1	0	0	3	2	24	150
08:30:00	1	1	0	0	1	2	0	0	4	1	6	5	2	2	20	0	2	24	1	1	0	0	0	2	33	149
08:45:00	1	2	0	0	4	3	0	0	1	0	9	1	0	3	24	0	6	27	0	1	0	0	2	1	32	130
BREAK																										
16:00:00	1	1	0	0	3	2	0	0	0	0	8	0	0	1	30	0	2	31	0	0	0	0	1	0	33	
16:15:00	0	0	0	0	1	0	0	1	0	0	2	1	0	0	16	0	2	16	1	0	0	0	1	1	18	
16:30:00	1	0	0	0	6	1	0	0	0	0	7	0	1	1	37	0	1	39	1	0	0	0	2	1	41	
16:45:00	0	1	0	0	7	1	0	2	0	0	12	2	0	2	37	0	6	39	1	0	0	0	3	1	43	135
17:00:00	0	1	0	0	0	1	0	2	0	0	3	2	0	1	33	0	1	34	3	0	0	0	0	3	40	142
17:15:00	0	1	0	0	3	1	0	1	1	0	6	2	0	3	34	0	5	37	0	0	0	0	2	0	40	164
17:30:00	2	0	0	0	3	2	0	0	0	0	2	0	0	0	41	0	3	41	1	0	0	0	3	1	44	167
17:45:00	1	2	0	0	7	3	0	2	3	0	12	5	1	2	38	0	14	41	1	0	0	0	8	1	50	174
Grand Total	14	19	2	0	73	35	0	8	13	1	134	22	10	37	467	0	51	514	13	3	1	0	34	17	**588**	-
Approach%	40%	54.3%	5.7%	0%		-	0%	36.4%	59.1%	4.5%		-	1.9%	7.2%	90.9%	0%		-	76.5%	17.6%	5.9%	0%		-	**-**	-
Totals %	2.4%	3.2%	0.3%	0%		6%	0%	1.4%	2.2%	0.2%		3.7%	1.7%	6.3%	79.4%	0%		87.4%	2.2%	0.5%	0.2%	0%		2.9%	**-**	-
Heavy	0	0	0	0		-	0	0	5	0		-	2	1	77	0		-	0	2	0	0		-	**-**	-
Heavy %	0%	0%	0%	0%		-	0%	0%	38.5%	0%		-	20%	2.7%	16.5%	0%		-	0%	66.7%	0%	0%		-	**-**	-
Bicycles	0	1	0	0		-	0	0	0	0		-	0	1	3	0		-	3	0	2	0		-	**-**	-
Bicycle %	0%	5.3%	0%	0%		-	0%	0%	0%	0%		-	0%	2.7%	0.6%	0%		-	23.1%	0%	200%	0%		-	**-**	-

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach NORTH DRIVEWAY						E Approach QUEEN ST E						S Approach ANN ST						W Approach QUEEN ST E						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	
07:15:00	1	1	2	0	12	4	0	0	0	0	11	0	0	4	32	0	2	36	2	0	0	0	4	2	42
07:30:00	1	1	0	0	0	2	0	0	2	0	7	2	0	3	27	0	3	30	0	0	0	0	0	0	34
07:45:00	2	4	0	0	6	6	0	0	0	0	18	0	2	5	37	0	0	44	1	0	0	0	1	1	51
08:00:00	1	2	0	0	15	3	0	0	0	0	17	0	2	5	31	0	3	38	0	0	0	0	3	0	41
Grand Total	5	8	2	0	33	15	0	0	2	0	53	2	4	17	127	0	8	148	3	0	0	0	8	3	**168**
Approach%	33.3%	53.3%	13.3%	0%		-	0%	0%	100%	0%		-	2.7%	11.5%	85.8%	0%		-	100%	0%	0%	0%		-	**-**
Totals %	3%	4.8%	1.2%	0%		8.9%	0%	0%	1.2%	0%		1.2%	2.4%	10.1%	75.6%	0%		88.1%	1.8%	0%	0%	0%		1.8%	**-**
PHF	0.63	0.5	0.25	0		0.63	0	0	0.25	0		0.25	0.5	0.85	0.86	0		0.84	0.38	0	0	0		0.38	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	1	18	0		19	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	5.9%	14.2%	0%		12.8%	0%	0%	0%	0%		0%	**-**
Lights	5	8	2	0		15	0	0	2	0		2	4	16	109	0		129	3	0	0	0		3	**-**
Lights %	100%	100%	100%	0%		100%	0%	0%	100%	0%		100%	100%	94.1%	85.8%	0%		87.2%	100%	0%	0%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	5.9%	0%	0%		0.7%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	18	0		18	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	14.2%	0%		12.2%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	33	-	-	-	-	-	53	-	-	-	-	-	8	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	32.4%		-	-	-	-	52%		-	-	-	-	7.8%		-	-	-	-	7.8%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

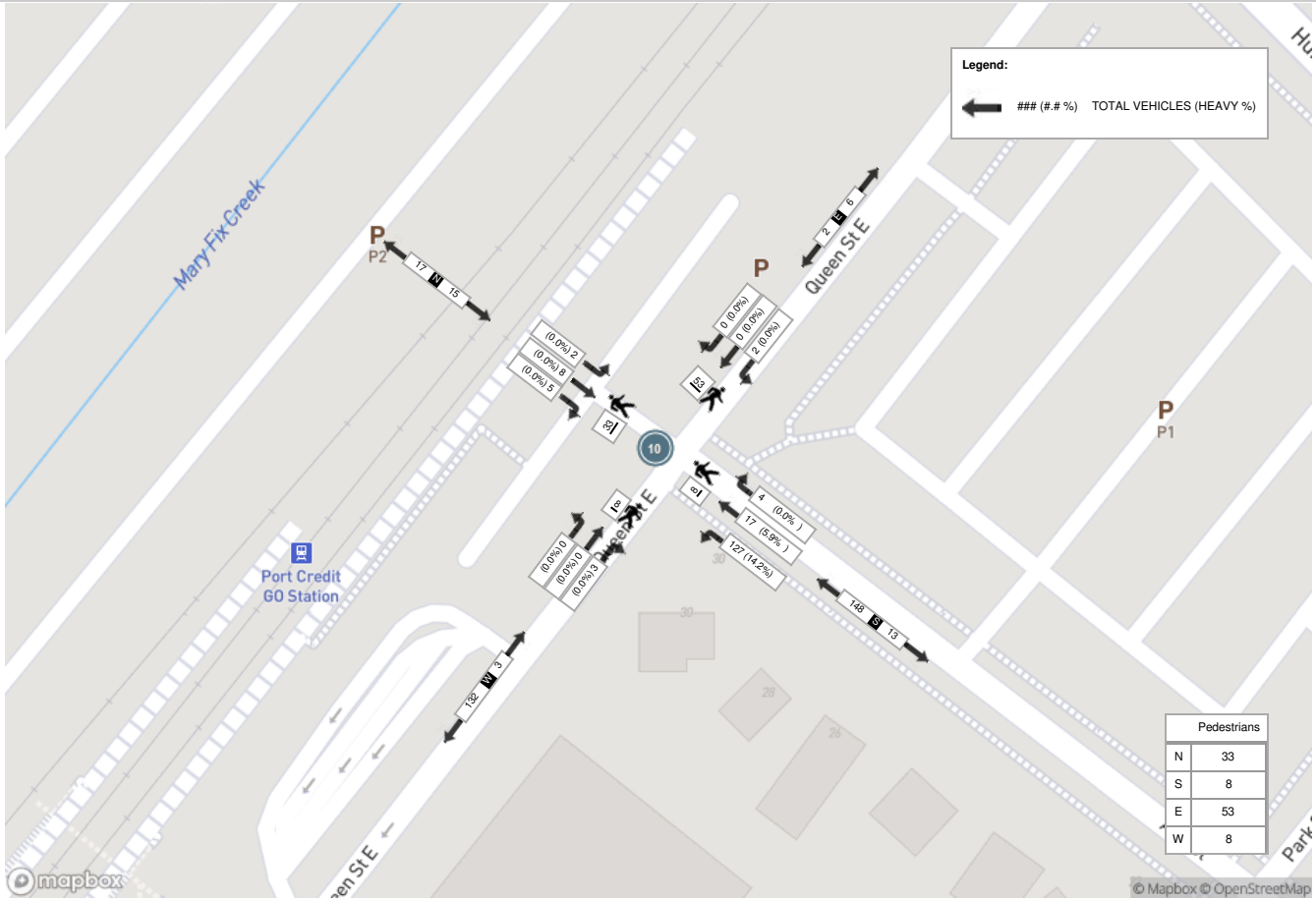
Turning Movement Count
Location Name: QUEEN ST E & ANN ST
Date: Wed, Sep 21, 2022 Deployment Lead: Peter Ilias

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

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)

Start Time	N Approach NORTH DRIVEWAY						E Approach QUEEN ST E						S Approach ANN ST						W Approach QUEEN ST E						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	
17:00:00	0	1	0	0	0	1	0	2	0	0	3	2	0	1	33	0	1	34	3	0	0	0	0	3	40
17:15:00	0	1	0	0	3	1	0	1	1	0	6	2	0	3	34	0	5	37	0	0	0	0	2	0	40
17:30:00	2	0	0	0	3	2	0	0	0	0	2	0	0	0	41	0	3	41	1	0	0	0	3	1	44
17:45:00	1	2	0	0	7	3	0	2	3	0	12	5	1	2	38	0	14	41	1	0	0	0	8	1	50
Grand Total	3	4	0	0	13	7	0	5	4	0	23	9	1	6	146	0	23	153	5	0	0	0	13	5	**174**
Approach%	42.9%	57.1%	0%	0%		-	0%	55.6%	44.4%	0%		-	0.7%	3.9%	95.4%	0%		-	100%	0%	0%	0%		-	**-**
Totals %	1.7%	2.3%	0%	0%		4%	0%	2.9%	2.3%	0%		5.2%	0.6%	3.4%	83.9%	0%		87.9%	2.9%	0%	0%	0%		2.9%	**-**
PHF	0.38	0.5	0	0		0.58	0	0.63	0.33	0		0.45	0.25	0.5	0.89	0		0.93	0.42	0	0	0		0.42	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	18	0		18	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	12.3%	0%		11.8%	0%	0%	0%	0%		0%	**-**
Lights	3	4	0	0		7	0	5	4	0		9	1	6	128	0		135	5	0	0	0		5	**-**
Lights %	100%	100%	0%	0%		100%	0%	100%	100%	0%		100%	100%	100%	87.7%	0%		88.2%	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	18	0		18	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	12.3%	0%		11.8%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	13	-	-	-	-	-	23	-	-	-	-	-	23	-	-	-	-	-	13	-	**-**
Pedestrians%	-	-	-	-	18.1%		-	-	-	-	31.9%		-	-	-	-	31.9%		-	-	-	-	18.1%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	2	0	1	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:15 AM - 08:15 AM **Weather: Scattered Clouds (15.9 °C)**

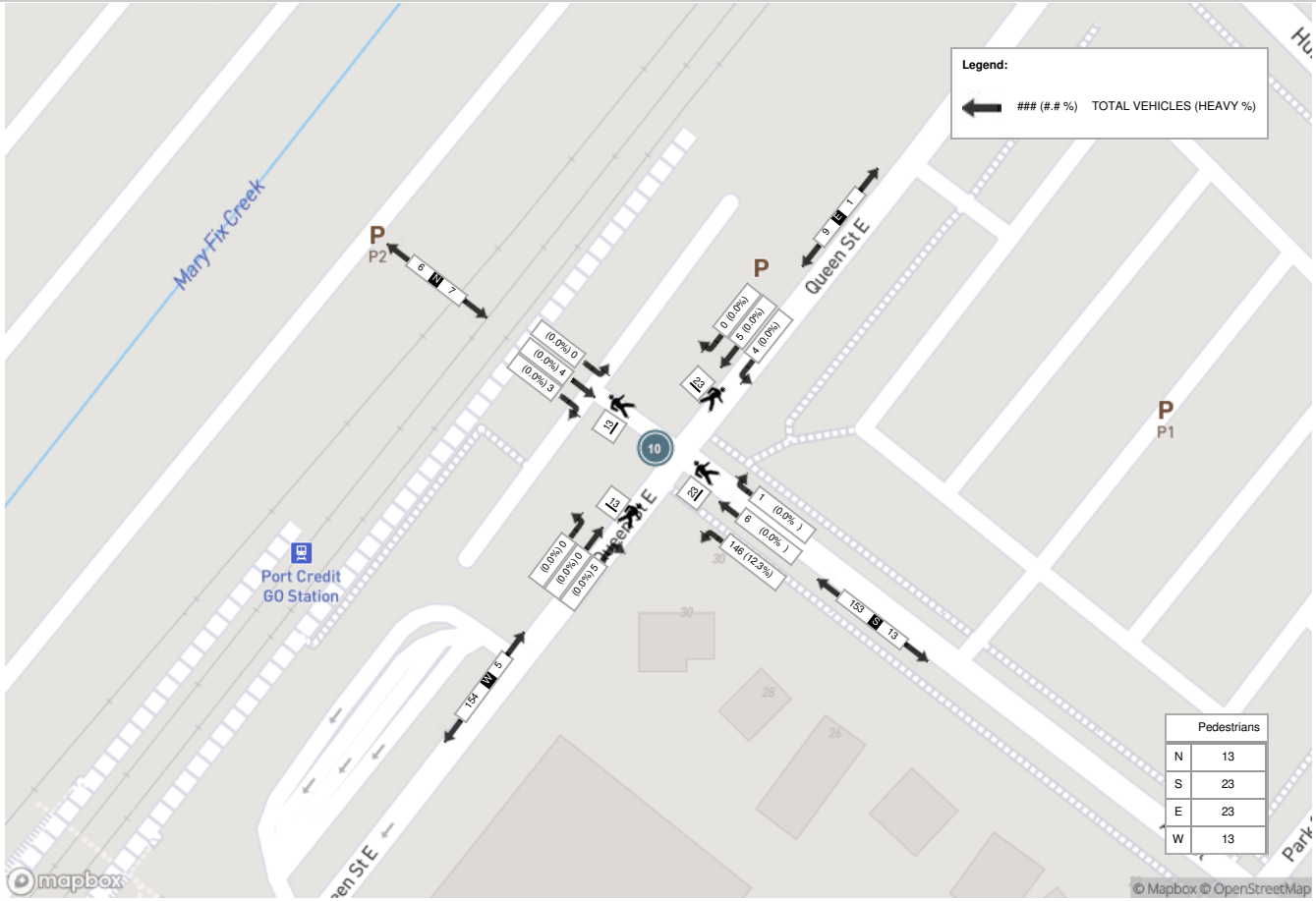


Spectrum

Turning Movement Count
Location Name: QUEEN ST E & ANN ST
Date: Wed, Sep 21, 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: Overcast Clouds (28.05 °C)



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

Turning Movement Count (7 . QUEEN ST E & HELENE ST)

Start Time	E Approach QUEEN ST E					S Approach HELENE ST					W Approach QUEEN ST E					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	9	8	0	3	17	0	3	0	0	3	0	1	0	4	1	21	
07:15:00	17	21	0	4	38	2	9	0	0	11	0	0	0	6	0	49	
07:30:00	16	17	0	6	33	0	9	0	0	9	0	0	0	7	0	42	
07:45:00	27	21	0	9	48	2	13	0	1	15	0	0	0	5	0	63	175
08:00:00	20	15	0	5	35	0	9	0	1	9	1	0	0	13	1	45	199
08:15:00	9	15	0	10	24	1	6	0	2	7	0	0	0	13	0	31	181
08:30:00	14	10	0	4	24	0	6	0	2	6	0	0	0	7	0	30	169
08:45:00	11	17	0	9	28	1	11	0	1	12	0	0	0	7	0	40	146
BREAK																	
16:00:00	15	10	0	4	25	0	4	0	3	4	0	0	0	3	0	29	
16:15:00	6	17	0	12	23	1	8	1	1	10	2	0	0	4	2	35	
16:30:00	16	11	0	5	27	1	6	0	2	7	1	0	0	7	1	35	
16:45:00	16	25	0	11	41	1	13	2	1	16	1	0	0	15	1	58	157
17:00:00	15	13	0	6	28	4	3	0	0	7	0	0	0	8	0	35	163
17:15:00	15	20	0	3	35	0	2	0	2	2	0	0	0	11	0	37	165
17:30:00	19	12	1	12	32	0	5	0	2	5	0	0	0	12	0	37	167
17:45:00	20	26	0	4	46	1	8	0	2	9	0	0	0	7	0	55	164
Grand Total	245	258	1	107	504	14	115	3	20	132	5	1	0	129	6	**642**	-
Approach%	48.6%	51.2%	0.2%		-	10.6%	87.1%	2.3%		-	83.3%	16.7%	0%		-	**-**	-
Totals %	38.2%	40.2%	0.2%		78.5%	2.2%	17.9%	0.5%		20.6%	0.8%	0.2%	0%		0.9%	**-**	-
Heavy	72	3	0		-	0	2	0		-	1	0	0		-	**-**	-
Heavy %	29.4%	1.2%	0%		-	0%	1.7%	0%		-	20%	0%	0%		-	**-**	-
Bicycles	2	0	0		-	4	1	0		-	1	0	0		-	**-**	-
Bicycle %	0.8%	0%	0%		-	28.6%	0.9%	0%		-	20%	0%	0%		-	**-**	-

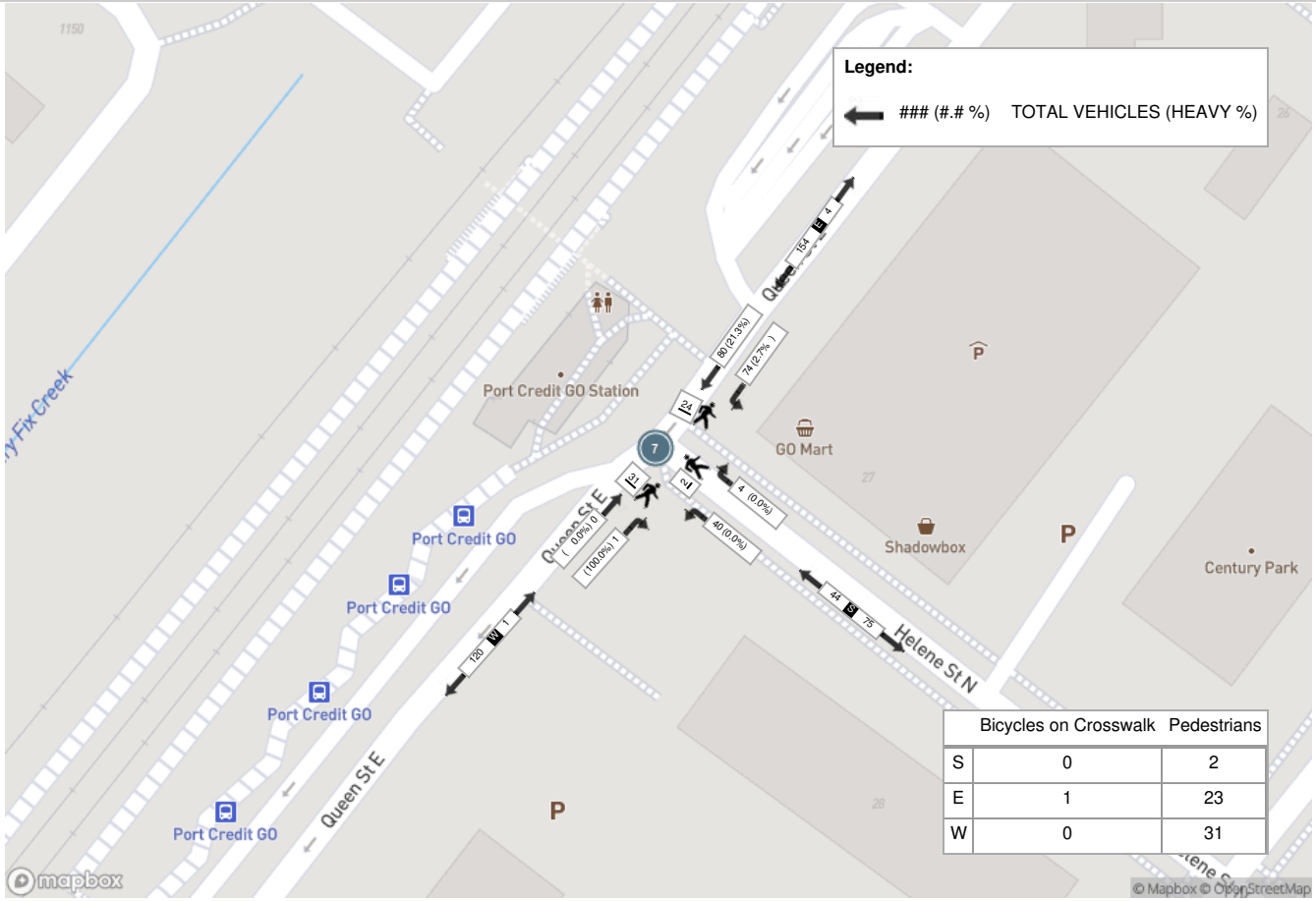
Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	E Approach QUEEN ST E					S Approach HELENE ST					W Approach QUEEN ST E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	17	21	0	4	38	2	9	0	0	11	0	0	0	6	0	49
07:30:00	16	17	0	6	33	0	9	0	0	9	0	0	0	7	0	42
07:45:00	27	21	0	9	48	2	13	0	1	15	0	0	0	5	0	63
08:00:00	20	15	0	5	35	0	9	0	1	9	1	0	0	13	1	45
Grand Total	80	74	0	24	154	4	40	0	2	44	1	0	0	31	1	**199**
Approach%	51.9%	48.1%	0%		-	9.1%	90.9%	0%		-	100%	0%	0%		-	**-**
Totals %	40.2%	37.2%	0%		77.4%	2%	20.1%	0%		22.1%	0.5%	0%	0%		0.5%	**-**
PHF	0.74	0.88	0		0.8	0.5	0.77	0		0.73	0.25	0	0		0.25	**-**
Heavy	17	2	0		19	0	0	0		0	1	0	0		1	**-**
Heavy %	21.3%	2.7%	0%		12.3%	0%	0%	0%		0%	100%	0%	0%		100%	**-**
Lights	63	72	0		135	4	40	0		44	0	0	0		0	**-**
Lights %	78.8%	97.3%	0%		87.7%	100%	100%	0%		100%	0%	0%	0%		0%	**-**
Single-Unit Trucks	0	1	0		1	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0%	1.4%	0%		0.6%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	17	1	0		18	0	0	0		0	1	0	0		1	**-**
Buses %	21.3%	1.4%	0%		11.7%	0%	0%	0%		0%	100%	0%	0%		100%	**-**
Pedestrians	-	-	-	23	-	-	-	-	2	-	-	-	-	31	-	**-**
Pedestrians%	-	-	-	40.4%		-	-	-	3.5%		-	-	-	54.4%		**-**
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	1.8%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	1	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

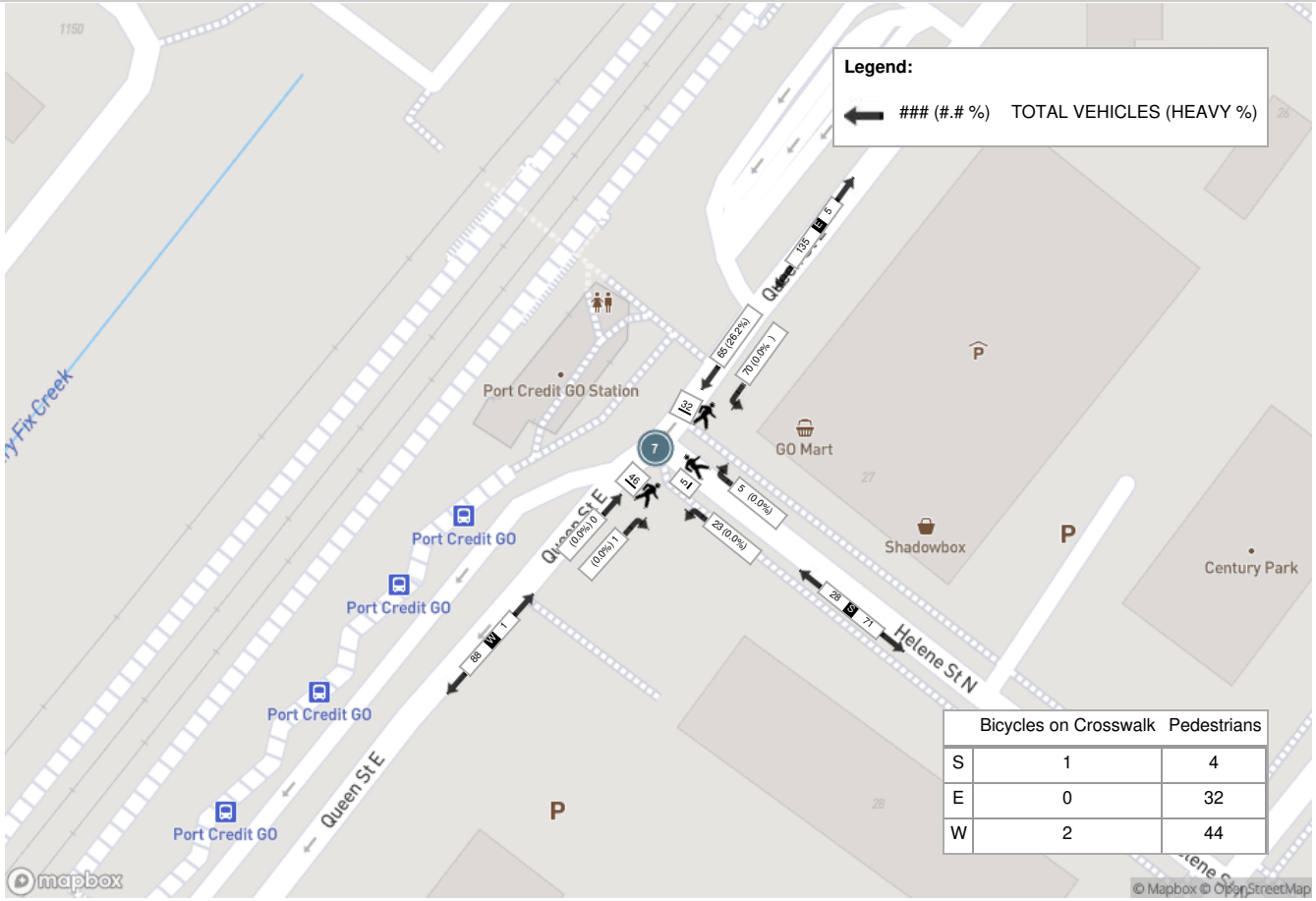
Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (28.05 °C)

Start Time	E Approach QUEEN ST E					S Approach HELENE ST					W Approach QUEEN ST E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:45:00	16	25	0	11	41	1	13	2	1	16	1	0	0	15	1	58
17:00:00	15	13	0	6	28	4	3	0	0	7	0	0	0	8	0	35
17:15:00	15	20	0	3	35	0	2	0	2	2	0	0	0	11	0	37
17:30:00	19	12	1	12	32	0	5	0	2	5	0	0	0	12	0	37
Grand Total	65	70	1	32	136	5	23	2	5	30	1	0	0	46	1	**167**
Approach%	47.8%	51.5%	0.7%		-	16.7%	76.7%	6.7%		-	100%	0%	0%		-	**-**
Totals %	38.9%	41.9%	0.6%		81.4%	3%	13.8%	1.2%		18%	0.6%	0%	0%		0.6%	**-**
PHF	0.86	0.7	0.25		0.83	0.31	0.44	0.25		0.47	0.25	0	0		0.25	**-**
Heavy	17	0	0		17	0	0	0		0	0	0	0		0	**-**
Heavy %	26.2%	0%	0%		12.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	48	70	1		119	5	23	2		30	1	0	0		1	**-**
Lights %	73.8%	100%	100%		87.5%	100%	100%	100%		100%	100%	0%	0%		100%	**-**
Single-Unit Trucks	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%	**-**
Buses	17	0	0		17	0	0	0		0	0	0	0		0	**-**
Buses %	26.2%	0%	0%		12.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	32	-	-	-	-	4	-	-	-	-	44	-	**-**
Pedestrians%	-	-	-	38.6%		-	-	-	4.8%		-	-	-	53%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	1.2%		-	-	-	2.4%		**-**
Bicycles on Road	1	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: Scattered Clouds (15.9 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (28.05 °C)



	Bicycles on Crosswalk	Pedestrians
S	1	4
E	0	32
W	2	44

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

Turning Movement Count (8 . QUEEN ST E & PORT CREDIT GO STATION PARKING EXIT (NEAR HELENE ST))

Start Time	N Approach PORT CREDIT GO STATION PARKING EXIT (NEAR HELENE S					E Approach QUEEN ST E					W Approach QUEEN ST E					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	1	0	0	1	1	0	15	0	0	15	1	0	0	7	1	17	
07:15:00	16	0	0	7	16	0	23	0	1	23	2	0	0	4	2	41	
07:30:00	4	0	0	11	4	0	29	0	3	29	0	0	0	14	0	33	
07:45:00	15	0	0	7	15	1	33	0	0	34	2	0	0	15	2	51	142
08:00:00	7	0	0	10	7	0	28	0	1	28	0	0	0	10	0	35	160
08:15:00	7	0	0	3	7	1	18	0	0	19	2	0	0	13	2	28	147
08:30:00	5	0	0	2	5	0	18	0	0	18	0	0	0	4	0	23	137
08:45:00	14	0	0	5	14	1	15	0	1	16	1	0	0	12	1	31	117
BREAK																	
16:00:00	6	0	0	11	6	0	21	0	2	21	0	0	0	10	0	27	
16:15:00	11	0	0	7	11	0	10	0	0	10	1	0	0	20	1	22	
16:30:00	3	0	0	11	3	0	25	0	1	25	1	0	0	9	1	29	
16:45:00	18	0	0	16	18	0	22	0	10	22	0	0	0	24	0	40	118
17:00:00	12	0	0	6	12	0	17	0	2	17	2	0	0	16	2	31	122
17:15:00	8	0	0	7	8	1	27	0	2	28	0	0	0	6	0	36	136
17:30:00	7	0	0	14	7	0	25	0	7	25	1	0	0	26	1	33	140
17:45:00	21	0	0	15	21	0	25	0	2	25	1	0	0	9	1	47	147
Grand Total	155	0	0	133	155	4	351	0	32	355	14	0	0	199	14	**524**	-
Approach%	100%	0%	0%		-	1.1%	98.9%	0%		-	100%	0%	0%		-	**-**	-
Totals %	29.6%	0%	0%		29.6%	0.8%	67%	0%		67.7%	2.7%	0%	0%		2.7%	**-**	-
Heavy	0	0	0		-	0	74	0		-	0	0	0		-	**-**	-
Heavy %	0%	0%	0%		-	0%	21.1%	0%		-	0%	0%	0%		-	**-**	-
Bicycles	0	0	0		-	0	0	0		-	1	3	0		-	**-**	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	7.1%	0%	0%		-	**-**	-

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

Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)

Start Time	N Approach PORT CREDIT GO STATION PARKING EXIT (NEAR HELENE S					E Approach QUEEN ST E					W Approach QUEEN ST E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
07:15:00	16	0	0	7	16	0	23	0	1	23	2	0	0	4	2	41
07:30:00	4	0	0	11	4	0	29	0	3	29	0	0	0	14	0	33
07:45:00	15	0	0	7	15	1	33	0	0	34	2	0	0	15	2	51
08:00:00	7	0	0	10	7	0	28	0	1	28	0	0	0	10	0	35
Grand Total	42	0	0	35	42	1	113	0	5	114	4	0	0	43	4	**160**
Approach%	100%	0%	0%		-	0.9%	99.1%	0%		-	100%	0%	0%		-	**-**
Totals %	26.3%	0%	0%		26.3%	0.6%	70.6%	0%		71.3%	2.5%	0%	0%		2.5%	**-**
PHF	0.66	0	0		0.66	0.25	0.86	0		0.84	0.5	0	0		0.5	**-**
Heavy	0	0	0		0	0	18	0		18	0	0	0		0	**-**
Heavy %	0%	0%	0%		0%	0%	15.9%	0%		15.8%	0%	0%	0%		0%	**-**
Lights	42	0	0		42	1	95	0		96	4	0	0		4	**-**
Lights %	100%	0%	0%		100%	100%	84.1%	0%		84.2%	100%	0%	0%		100%	**-**
Buses	0	0	0		0	0	18	0		18	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	15.9%	0%		15.8%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	32	-	-	-	-	5	-	-	-	-	43	-	**-**
Pedestrians%	-	-	-	38.6%		-	-	-	6%		-	-	-	51.8%		**-**
Bicycles on Crosswalk	-	-	-	3	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	3.6%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	1	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

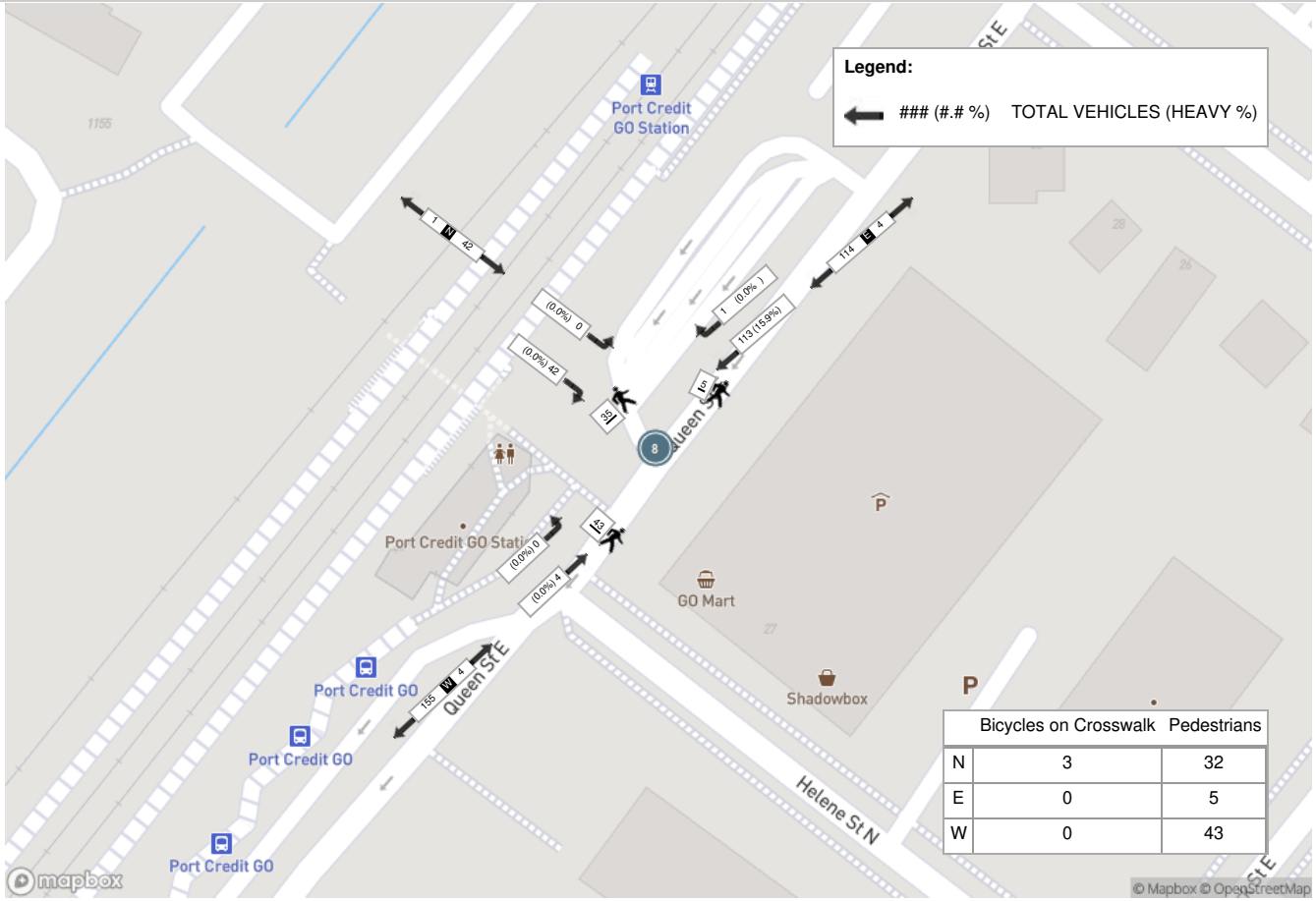
BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)

Start Time	N Approach PORT CREDIT GO STATION PARKING EXIT (NEAR HELENE S					E Approach QUEEN ST E					W Approach QUEEN ST E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	12	0	0	6	12	0	17	0	2	17	2	0	0	16	2	31
17:15:00	8	0	0	7	8	1	27	0	2	28	0	0	0	6	0	36
17:30:00	7	0	0	14	7	0	25	0	7	25	1	0	0	26	1	33
17:45:00	21	0	0	15	21	0	25	0	2	25	1	0	0	9	1	47
Grand Total	48	0	0	42	48	1	94	0	13	95	4	0	0	57	4	**147**
Approach%	100%	0%	0%		-	1.1%	98.9%	0%		-	100%	0%	0%		-	**-**
Totals %	32.7%	0%	0%		32.7%	0.7%	63.9%	0%		64.6%	2.7%	0%	0%		2.7%	**-**
PHF	0.57	0	0		0.57	0.25	0.87	0		0.85	0.5	0	0		0.5	**-**
Heavy	0	0	0		0	0	18	0		18	0	0	0		0	**-**
Heavy %	0%	0%	0%		0%	0%	19.1%	0%		18.9%	0%	0%	0%		0%	**-**
Lights	48	0	0		48	1	76	0		77	4	0	0		4	**-**
Lights %	100%	0%	0%		100%	100%	80.9%	0%		81.1%	100%	0%	0%		100%	**-**
Buses	0	0	0		0	0	18	0		18	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	19.1%	0%		18.9%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	40	-	-	-	-	13	-	-	-	-	56	-	**-**
Pedestrians%	-	-	-	35.7%		-	-	-	11.6%		-	-	-	50%		**-**
Bicycles on Crosswalk	-	-	-	2	-	-	-	-	0	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	1.8%		-	-	-	0%		-	-	-	0.9%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

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

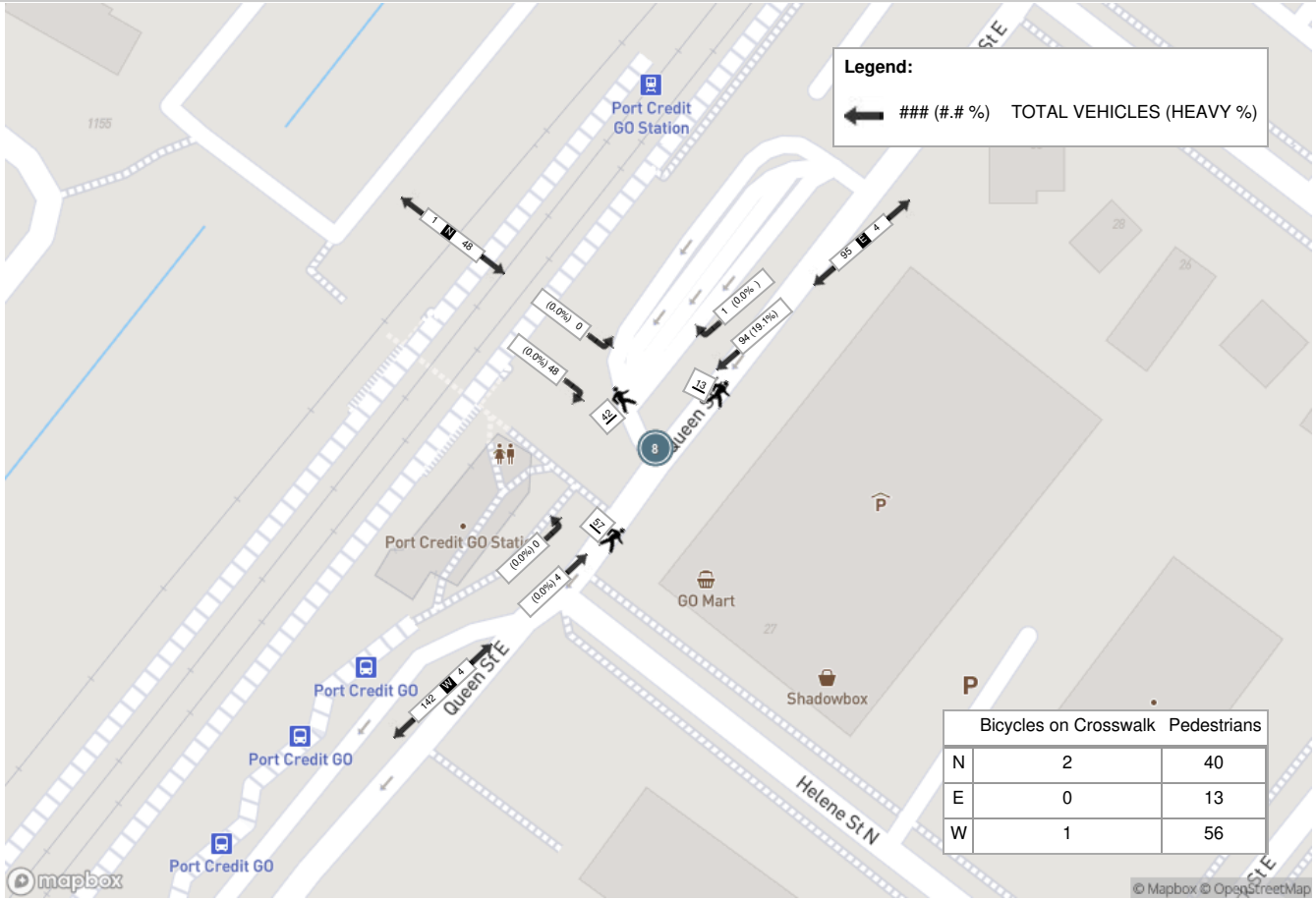
Peak Hour: 07:15 AM - 08:15 AM Weather: Scattered Clouds (15.9 °C)



	Bicycles on Crosswalk	Pedestrians
N	3	32
E	0	5
W	0	43

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

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (28.05 °C)



	Bicycles on Crosswalk	Pedestrians
N	2	40
E	0	13
W	1	56

Appendix H:
Corridor Growth – City Correspondence

Chris Asmanis

From: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Sent: Tuesday, September 27, 2022 4:53 PM
To: Chris Asmanis
Subject: RE: Growth Rates along Hurontario Street

Hi Chris,

Below are the recommended growth rates to be used along Hurontario Street and Lakeshore Road for your study. These rates are compounded annually from existing to 2027.

Hurontario Street

	Compounded Annual Growth from Existing to 2027	
	NB	SB
AM Peak	1.5%	2.0%
PM Peak	0.5%	1.5%

Lakeshore Road

	Compounded Annual Growth from Existing to 2027	
	EB	WB
AM Peak	0.0%	1.5%
PM Peak	0.5%	0.5%

-This analysis assumes lane reductions along Hurontario Street from 3 through lanes per direction to 2 through lanes per direction as a result of LRT implementation, as such you analysis should also include this assumption.

Regards,

MISSISSAUGA

Tyler Xuereb
Transportation Planning Analyst
T 905-615-3200 ext.4783
Tyler.xuereb@mississauga.ca

City of Mississauga | Transportation and Works Department,
Infrastructure Planning and Engineering Services Division

Please consider the environment before printing.

From: Chris Asmanis <chris.asmanis@bagroup.com>
Sent: Thursday, September 22, 2022 9:52 AM
To: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Subject: RE: Growth Rates along Hurontario Street

No worries at all, thanks Tyler.

Have a great day.

Chris

From: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Sent: Thursday, 22 September 2022 3:53 PM
To: Chris Asmanis <chris.asmanis@bagroup.com>
Subject: RE: Growth Rates along Hurontario Street

Hi Chris,

Thank you for this information!

Unfortunately, I do not have any further information on TIS documents; I work in the Transportation Planning Department which is a different department from Dave's group so you will have to get that information from him.

I will get started on the growth rates and get them to you as soon as I have them.

Regards,

Tyler Xuereb
Transportation Planning Analyst
T 905-615-3200 ext.4783
Tyler.xuereb@mississauga.ca

City of Mississauga | Transportation and Works Department,
Infrastructure Planning and Engineering Services Division

From: Chris Asmanis <chris.asmanis@bagroup.com>
Sent: Thursday, September 22, 2022 9:36 AM
To: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Subject: RE: Growth Rates along Hurontario Street

Hi Tyler,

Thanks for the quick turnaround - always nice!

We recently received comments back on our ToR from Michael Turco (please see attached).

I'm looking into background developments over the next few days. Developments that I have lined up to try and include so far are:

- 0 Park Street East (also known as 30 Queen Street East I believe)
- 17 and 19 Ann Street, 84 and 90 High Street, and 91 Park Street East
- 42 - 46 Park Street East and 23 Elizabeth Street
- 128 Lakeshore Road East
- 170 Lakeshore Road East

There are three others which I am unable to find a TIS for online that may also be applicable:

- 28 Ann Street
- 55 Port Street East
- 21 Park Street East

I have emailed your colleague David Ferro for further information on these, but am yet to hear back. Are you able to provide any additional information or TIS documents?

I am assuming that the various area developments have used varying methods of dealing with analyzing the Hurontario Street/Park Street East intersection. I did receive some comment back from Michael Turco on this (attached), but if you have any further comment please let me know.

Thanks,
Chris

From: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Sent: Thursday, 22 September 2022 3:32 PM
To: Chris Asmanis <chris.asmanis@bagroup.com>
Subject: RE: Growth Rates along Hurontario Street

Good Morning Chris,

Thank you for your email.

Can you please confirm that you have submitted a ToR and have received comments back from the City, can you also provide a list of background developments that you are including in your analysis.

Thanks,

Tyler Xuereb
Transportation Planning Analyst
T 905-615-3200 ext.4783
Tyler.xuereb@mississauga.ca

City of Mississauga | Transportation and Works Department,
Infrastructure Planning and Engineering Services Division

From: Chris Asmanis <chris.asmanis@bagroup.com>
Sent: Thursday, September 22, 2022 8:22 AM
To: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Subject: Growth Rates along Hurontario Street

Hi Tyler,

Hope you are well. We are currently undertaking a transportation study for a proposed development on Park Street East in Mississauga.

Could you kindly advise on growth rates that could be used along Hurontario Street (at Park Street East)? Our study horizon year is 2027. Please let me know if further information is required to assist.

Thanks,
Chris

Chris Asmanis
Transportation Analyst

BA Consulting Group Ltd.
300 - 45 St. Clair Ave. W.
Toronto, ON M4V 1K9

EMAIL chris.asmanis@bagroup.com

Appendix I:
Proxy Trip Generation Data

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: High Park Early Learning Centre, 17 High Park Ave
Study Date: Wednesday, November 25, 2015
Study Time: 7:00-9:00 AM

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location		Staff	Parent
							Street	Driveway		
1	7:28	7:35	0:07	1	1	Type C1	1			1
2	7:28	7:33	0:05	1	1	Type C1	1			1
3	7:37	7:43	0:06	1	1	Type C1		1		1
4	7:41	7:43	0:02	2	1	Type C1	1			1
5	7:48	9:00	1:12	1	1	Type C1		1	1	
6	7:52	7:58	0:06	5	1	Type C1	1			1
7	8:08	8:13	0:05	1	1	Type C1	1			1
8	8:09	8:14	0:05	1	1	Type C1	1			1
9	8:14	8:24	0:10	2	1	Type C1	1			1
10	8:15	8:20	0:05	1	1	Type C1		1		
11	8:28	8:32	0:04	1	1	Type C1	1			1
12	8:29	8:34	0:05	1	1	Type C1	1			1
13	8:33	8:34	0:01	1	1	Type C1	1		1	
14	8:35	8:42	0:07	5	1	Type C1	1			1
15	8:39	8:44	0:05	1	1	Type C1	1			1
16	8:40	8:41	0:01	1	1	Type C1		1		
17	8:41	8:47	0:06	3	1	Type C1	1			1
18	8:44	8:49	0:05	2	1	Type C1		1		
19	8:47	8:53	0:06	1	1	Type C1	1			1
20	8:57	9:00	0:03	1	1	Type C1	1			1
Total Vehicles							**15**	**5**	**2**	**15**

	(hh:mm)
Minimum Duration	**0:01**
Average Duration	**0:08**
85th Percentile	**0:07**
95th Percentile	**0:13**
Maximum Duration	**1:12**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
7:15	0	0	0	
7:30	2	0	2	
7:45	2	4	6	
8:00	2	1	3	11
8:15	4	2	6	17
8:30	2	2	4	19
8:45	6	6	12	25
9:00	2	5	7	29
Total	20	20	40	
Peak Hour 8:00-9:00	14	15	29	
Trip Rate per Child	0.23	0.24	0.47	

62 Children

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: High Park Early Learning Centre, 17 High Park Ave
Study Date: Wednesday, November 25, 2015
Study Time: 4:00-6:00 PM

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location		Staff	Parent	Service
							Street	Driveway			
1	16:00	16:05	0:05	1	1	Type C1	1			1	
2	16:00	17:22	1:22	1	1	Type C1		1	1		
3	16:10	16:33	0:23	5	1	Type C1		1			1
4	16:29	16:43	0:14	1	1	Type C1	1			1	
5	16:39	16:50	0:11	1	1	Type C1	1			1	
6	16:42	16:50	0:08	1	1	Type C1		1		1	
7	16:45	17:06	0:21	1	1	Type C1	1			1	
8	16:52	17:07	0:15	2	1	Type C1	1			1	
9	16:56	17:03	0:07	5	1	Type C1		1		1	
10	17:09	17:14	0:05	2	1	Type C1	1			1	
11	17:11	17:21	0:10	1	1	Type C1		1		1	
12	17:11	17:35	0:24	1	1	Type C1	1			1	
13	17:21	17:32	0:11	3	1	Type C1		1		1	
14	17:24	17:29	0:05	1	1	Type C1		1		1	
15	17:24	17:29	0:05	1	1	Type C1	1			1	
16	17:33	17:38	0:05	1	1	Type C1		1		1	
17	17:36	17:55	0:19	1	1	Type C1	1			1	
18	17:40	18:00	0:20	3	1	Type C1		1	1		
19	17:43	17:52	0:09	3	1	Type C1		1		1	
Total Vehicles							**9**	**10**	**2**	**16**	**1**

	(hh:mm)
Minimum Duration	**0:05**
Average Duration	**0:15**
85th Percentile	**0:21**
95th Percentile	**0:29**
Maximum Duration	**1:22**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
16:15	3	1	4	
16:30	1	0	1	
16:45	3	2	5	
17:00	2	2	4	14
17:15	3	4	7	17
17:30	3	4	7	23
17:45	4	3	7	25
18:00	0	3	3	24
Total	19	19	38	
Peak Hour 17:00-18:00	10	14	24	
Trip Rate per Child	0.16	0.23	0.39	

62 Children

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: Dandylion Daycare, 108 Strathmore Blvd
Municipality: Toronto
Study Date: Thursday, January 7, 2016
Study Time: 7:00-9:00 AM

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location Street	Parking Location Site	Staff	Parent
1	7:00	9:00	2:00	3	1	Type C1		1	1	
2	7:16	9:00	1:44	1	1	Type C1		1	1	
3	7:21	9:00	1:39	1	1	Type C1		1	1	
4	7:21	9:00	1:39	3	1	Type C1		1	1	
5	7:30	7:32	0:02	1	1	Type C1		1		1
6	7:34	9:00	1:26	3	1	Type C1		1	1	
7	7:37	7:42	0:05	3	1	Type C1		1		1
8	7:40	7:45	0:05	3	1	Type C1		1		1
9	7:43	9:00	1:17	1	1	Type C1		1		1
10	7:46	7:54	0:08	1	1	Type C1		1		1
11	7:48	7:57	0:09	3	1	Type C1		1		1
12	7:50	7:54	0:04	3	1	Type C1		1		1
13	7:50	7:54	0:04	3	1	Type C1		1		1
14	7:54	8:03	0:09	3	1	Type C1		1		1
15	7:56	8:09	0:13	1	1	Type C1		1		1
16	7:58	8:18	0:20	1	1	Type C1		1		1
17	8:00	8:03	0:03	3	1	Type C1		1		1
18	8:01	8:07	0:06	3	1	Type C1		1		1
19	8:02	8:08	0:06	1	1	Type C1		1		1
20	8:16	8:19	0:03	6	1	Type C1		1		1
21	8:20	9:00	0:40	1	1	Type C1		1		1
22	8:22	8:25	0:03	1	1	Type C1		1		1
23	8:34	8:36	0:02	1	1	Type C1		1		1
24	8:36	8:43	0:07	3	1	Type C1		1		1
25	8:41	8:47	0:06	1	1	Type C1		1		1
26	8:54	8:55	0:01	1	1	Type C1		1		1
27	8:55	8:59	0:04	3	1	Type C1		1		1
Total Vehicles							**0**	**27**	**5**	**22**

	(hh:mm)
Minimum Duration	**0:01**
Average Duration	**0:27**
85th Percentile	**1:27**
95th Percentile	**1:42**
Maximum Duration	**2:00**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
7:15	1	0	1	
7:30	4	0	4	
7:45	4	3	7	
8:00	7	4	11	23
8:15	3	5	8	30
8:30	3	3	6	32
8:45	3	2	5	30
9:00	2	10	12	31
Total	27	27	54	
Peak Hour 8:00-9:00	11	20	31	
Trip Rate per Child	0.09	0.16	0.25	
122				

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: Dandylion Daycare, 108 Strathmore Blvd
Municipality: Toronto
Study Date: Thursday, January 7, 2016
Study Time: 3:45-6:00 pm

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location		Staff	Parent
							Street	Site		
1	16:00	17:56	1:56	3	1	Type C1		1	1	
2	16:00	17:45	1:45	1	1	Type C1		1	1	
3	16:00	18:00	2:00	1	1	Type C1		1	1	
4	16:00	18:00	2:00	1	1	Type C1		1	1	
5	15:50	15:52	0:02	3	1	Type C1		1		1
6	15:58	15:59	0:01	1	1	Type C1		1		1
7	15:59	16:06	0:07	1	1	Type C1		1		1
8	16:06	16:14	0:08	1	1	Type C1		1		1
9	16:13	16:19	0:06	3	1	Type C1		1		1
10	16:25	16:34	0:09	3	1	Type C1		1		1
11	16:27	16:34	0:07	3	1	Type C1		1		1
12	16:46	16:53	0:07	3	1	Type C1		1		1
13	16:46	16:57	0:11	1	1	Type C1		1		1
14	16:46	16:53	0:07	3	1	Type C1		1		1
15	16:48	17:29	0:41	1	1	Type C1		1		1
16	16:51	17:00	0:09	1	1	Type C1		1		1
17	17:02	17:24	0:22	1	1	Type C1		1		1
18	17:03	17:09	0:06	3	1	Type C1		1		1
19	17:06	17:13	0:07	3	1	Type C1		1		1
20	17:14	17:21	0:07	1	1	Type C1		1		1
21	17:14	17:21	0:07	1	1	Type C1		1		1
22	17:14	17:21	0:07	3	1	Type C1		1		1
23	17:14	17:23	0:09	1	1	Type C1		1		1
24	17:16	17:36	0:20	3	1	Type C1		1		1
25	17:19	17:27	0:08	3	1	Type C1		1		1
26	17:23	17:33	0:10	1	1	Type C1		1		1
27	17:25	17:40	0:15	1	1	Type C1		1		1
28	17:26	17:34	0:08	1	1	Type C1		1		1
29	17:31	17:40	0:09	3	1	Type C1		1		1
30	17:32	17:44	0:12	3	1	Type C1		1		1
31	17:34	17:44	0:10	3	1	Type C1		1		1
32	17:34	17:46	0:12	1	1	Type C1		1		1
33	17:34	17:48	0:14	1	1	Type C1		1		1
34	17:42	17:50	0:08	3	1	Type C1		1		1
35	17:46	17:53	0:07	3	1	Type C1		1		1
36	17:53	17:56	0:03	2	1	Type C1		1		1
37	17:54	17:59	0:05	3	1	Type C1		1		1
38	17:54	18:00	0:06	3	1	Type C1		1		1
Total Vehicles							**0**	**38**	**4**	**34**

	(hh:mm)
Minimum Duration	**0:01**
Average Duration	**0:20**
85th Percentile	**0:20**
95th Percentile	**1:56**
Maximum Duration	**2:00**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
16:00	3	2	5	
16:15	6	2	8	
16:30	2	1	3	
16:45	0	2	2	
17:00	5	3	8	21
17:15	7	3	10	23
17:30	5	7	12	32
17:45	6	7	13	43
18:00	4	11	15	50
Total	38	38	76	
Peak Hour 17:00-18:00	22	28	50	
Trip Rate per Child	0.18	0.23	0.41	

122 Children

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: Metamorphosis Early Learning Child Care Centre, 53 Strathmore Blvd
Municipality: Toronto
Study Date: Thursday, December 17, 2015
Study Time: 7:00-9:00 AM

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location		Staff	Parent
							Street	Church Lot		
1	7:35	7:42	0:06	3	1	Type C1		1		1
2	7:35	7:38	0:03	3	1	Type C1		1		1
3	7:37	7:41	0:04	3	1	Type C1		1		1
4	8:08	8:12	0:04	1	1	Type C1	1			1
5	8:14	8:16	0:02	1	1	Type C1	1			1
6	8:16	8:19	0:03	3	1	Type C1	1			1
7	8:17	8:31	0:14	3	1	Type C1		1		1
8	8:25	8:30	0:05	3	1	Type C1		1		1
9	8:47	8:52	0:05	2	1	Type C1		1		1
10	8:47	8:54	0:07	1	1	Type C1		1		1
11	8:48	8:54	0:06	1	1	Type C1		1		1
Total Vehicles							**3**	**8**	**0**	**11**

	(hh:mm)
Minimum Duration	**0:02**
Average Duration	**0:05**
85th Percentile	**0:06**
95th Percentile	**0:10**
Maximum Duration	**0:14**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
7:15	0	0	0	
7:30	0	0	0	
7:45	3	3	6	
8:00	0	0	0	6
8:15	2	1	3	9
8:30	3	2	5	14
8:45	0	2	2	10
9:00	3	3	6	16
Total	11	11	22	
Peak Hour 8:00-9:00	8	8	16	
Trip Rate per Child	0.21	0.21	0.41	

39 Children

Project No.: 7580.04
Project Name: High Park Daycare
Study Location: Metamorphosis Early Learning Child Care Centre, 53 Strathmore Blvd
Municipality: Toronto
Study Date: Thursday, December 17, 2015
Study Time: 4:00-6:00 pm

PUDO Activites

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	Vehicle Classification	Parking Location		Staff	Parent
							Street	Church Lot		
1	16:00	17:07	1:07	3	1	Type C1		1	1	
2	16:00	16:32	0:32	1	1	Type C1		1	1	
3	16:10	16:14	0:04	3	1	Type C1	1			1
4	16:48	16:54	0:06	1	1	Type C1	1			1
5	16:54	17:00	0:06	3	1	Type C1		1		1
6	17:04	17:12	0:08	1	1	Type C1		1		1
7	17:05	17:18	0:13	1	1	Type C1		1		1
8	17:05	17:15	0:10	3	1	Type C1		1		1
9	17:21	17:35	0:14	3	1	Type C1		1		1
10	17:40	17:44	0:04	2	1	Type C1	1			1
Total Vehicles							**3**	**7**	**2**	**8**

	(hh:mm)
Minimum Duration	**0:04**
Average Duration	**0:16**
85th Percentile	**0:25**
95th Percentile	**0:51**
Maximum Duration	**1:07**

Total Traffic

Period Ending	In	Out	2-Way	Hourly
16:15	3	1	4	
16:30	0	0	0	
16:45	0	1	1	
17:00	2	1	3	8
17:15	3	3	6	10
17:30	1	2	3	13
17:45	1	2	3	15
18:00	0	0	0	12
Total	10	10	20	
Peak Hour 16:45-17:45	7	8	15	
Trip Rate per Child	0.18	0.21	0.38	

39 Children

Appendix J:
Transportation Tomorrow Survey (TTS) Data

TTS DISTRIBUTION DATA

Mon Aug 29 2022 11:27:50 GMT+0200 (Central European Summer Time) - Run Time: 2916ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
Start time of trip - start_time In 600-859
and
2006 GTA zone of origin - gta06_orig In 3877
and
Trip purpose of origin - purp_orig In H
and
Primary travel mode of trip - mode_prime In D,M,T,P,U

Trip 2016
Table:

	3877
PD 1 of To	153
PD 2 of To	39
PD 6 of To	33
PD 7 of To	73
PD 8 of To	151
Newmarke	27
Caledon	41
Brampton	74
Mississaug -	
3605	20
3611	18
3614	10
3631	16
3632	38
3633	30
3634	9
3640	30
3641	10
3642	38
3643	14
3644	23
3645	31
3646	16
3653	26
3666	77
3671	44
3689	22
3701	30
3702	28
3715	38
3721	23
3836	33
3854	10
3871	10
3877	97
3878	37
Brantford	22

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
Start time of trip - start_time In 1500-1759
and
2006 GTA zone of destination - gta06_dest In 3877
and
Trip purpose of destination - purp_dest In H
and
Primary travel mode of trip - mode_prime In D,M,T,P,U

Trip 2016
Table:

	3877
Mississaug -	
3605	20
3611	18
3614	18
3631	16
3632	49
3639	35
3640	30
3641	38
3642	136
3643	14
3644	31
3646	35
3648	18
3654	18
3661	22
3662	25
3671	44
3701	30
3702	28
3715	38
3836	33
3843	18
3854	10
3861	16
3874	16
3877	71
3878	37
3879	65
PD 1 of To	104
PD 7 of To	73
PD 8 of To	182
Newmarke	27
Brampton	58
Milton	26
Oakville	6
Burlington	22
Perth	6
Brantford	22

TTS DISTRIBUTION - OUTBOUND

DESTINATION	ORIGIN	Total	Route Selection			Trip Distribution			
			N Hurontario	E Lakeshore	W Lakeshore	N Hurontario	E Lakeshore	W Lakeshore	
PD 1 of Toronto	153	153	80%	20%		8.8%	2.2%	0.0%	100%
PD 2 of Toronto	39	39	80%	20%		2.2%	0.6%	0.0%	100%
PD 6 of Toronto	33	33	100%			2.4%	0.0%	0.0%	100%
PD 7 of Toronto	73	73		100%		0.0%	5.2%	0.0%	100%
PD 8 of Toronto	151	151	20%	80%		2.2%	8.7%	0.0%	100%
Newmarket	27	27	100%			1.9%	0.0%	0.0%	100%
Caledon	41	41	100%			2.9%	0.0%	0.0%	100%
Brampton	74	74	100%			5.3%	0.0%	0.0%	100%
Mississauga	-	0				0.0%	0.0%	0.0%	0%
3605	20	20	100%			1.4%	0.0%	0.0%	100%
3611	18	18	100%			1.3%	0.0%	0.0%	100%
3614	10	10			100%	0.0%	0.0%	0.7%	100%
3631	16	16	50%		50%	0.6%	0.0%	0.6%	100%
3632	38	38	100%			2.7%	0.0%	0.0%	100%
3633	30	30			100%	0.0%	0.0%	2.2%	100%
3634	9	9	50%		50%	0.3%	0.0%	0.3%	100%
3640	30	30			100%	0.0%	0.0%	2.2%	100%
3641	10	10			100%	0.0%	0.0%	0.7%	100%
3642	38	38		100%		0.0%	2.7%	0.0%	100%
3643	14	14		100%		0.0%	1.0%	0.0%	100%
3644	23	23			100%	0.0%	0.0%	1.7%	100%
3645	31	31			100%	0.0%	0.0%	2.2%	100%
3646	16	16	20%		80%	0.2%	0.0%	0.9%	100%
3653	26	26	100%			1.9%	0.0%	0.0%	100%
3666	77	77	100%			5.5%	0.0%	0.0%	100%
3671	44	44	80%		20%	2.5%	0.0%	0.6%	100%
3689	22	22	100%			1.6%	0.0%	0.0%	100%
3701	30	30	100%			2.2%	0.0%	0.0%	100%
3702	28	28	100%			2.0%	0.0%	0.0%	100%
3715	38	38	100%			2.7%	0.0%	0.0%	100%
3721	23	23	100%			1.7%	0.0%	0.0%	100%
3836	33	33	100%			2.4%	0.0%	0.0%	100%
3854	10	10	100%			0.7%	0.0%	0.0%	100%
3871	10	10	100%			0.7%	0.0%	0.0%	100%
3877	97	97	33%	33%	33%	2.3%	2.3%	2.3%	100%
3878	37	37			100%	0.0%	0.0%	2.7%	100%
Brantford	22	22			100%	0.0%	0.0%	1.6%	100%
Total	**1391**	**1391**				58.6%	22.8%	18.7%	Check
					Rounded	**60%**	**25%**	**20%**	105%
					Adopted	55%	25%	20%	100%

TTS DISTRIBUTION - INBOUND

ORIGIN	ESITINATIO	Total	Route Selection			Trip Distribution			
			N Hurontario	E Lakeshore	W Lakeshore	N Hurontario	E Lakeshore	W Lakeshore	
Mississauga	-	0				0.0%	0.0%	0.0%	0%
3605	20	20	100%			1.4%	0.0%	0.0%	100%
3611	18	18	100%			1.2%	0.0%	0.0%	100%
3614	18	18			100%	0.0%	0.0%	1.2%	100%
3631	16	16	50%		50%	0.5%	0.0%	0.5%	100%
3632	49	49	100%			3.4%	0.0%	0.0%	100%
3639	35	35			100%	0.0%	0.0%	2.4%	100%
3640	30	30			100%	0.0%	0.0%	2.1%	100%
3641	38	38			100%	0.0%	0.0%	2.6%	100%
3642	136	136		100%		0.0%	9.3%	0.0%	100%
3643	14	14		100%		0.0%	1.0%	0.0%	100%
3644	31	31			100%	0.0%	0.0%	2.1%	100%
3646	35	35			100%	0.0%	0.0%	2.4%	100%
3648	18	18	50%	50%		0.6%	0.6%	0.0%	100%
3654	18	18	50%	50%		0.6%	0.6%	0.0%	100%
3661	22	22	50%	50%		0.8%	0.8%	0.0%	100%
3662	25	25	50%		50%	0.9%	0.0%	0.9%	100%
3671	44	44	100%			3.0%	0.0%	0.0%	100%
3701	30	30	100%			2.1%	0.0%	0.0%	100%
3702	28	28	100%			1.9%	0.0%	0.0%	100%
3715	38	38	100%			2.6%	0.0%	0.0%	100%
3836	33	33	100%			2.3%	0.0%	0.0%	100%
3843	18	18	100%			1.2%	0.0%	0.0%	100%
3854	10	10	100%			0.7%	0.0%	0.0%	100%
3861	16	16	50%	50%		0.5%	0.5%	0.0%	100%
3874	16	16	50%	50%		0.5%	0.5%	0.0%	100%
3877	71	71	33%	33%	33%	1.6%	1.6%	1.6%	100%
3878	37	37			100%	0.0%	0.0%	2.5%	100%
3879	65	65			100%	0.0%	0.0%	4.5%	100%
PD 1 of Toronto	104	104	100%			7.1%	0.0%	0.0%	100%
PD 7 of Toronto	73	73	20%	80%		1.0%	4.0%	0.0%	100%
PD 8 of Toronto	182	182	20%	80%		2.5%	10.0%	0.0%	100%
Newmarket	27	27	100%			1.9%	0.0%	0.0%	100%
Brampton	58	58	100%			4.0%	0.0%	0.0%	100%
Milton	26	26	100%			1.8%	0.0%	0.0%	100%
Oakville	6	6	100%			0.4%	0.0%	0.0%	100%
Burlington	22	22	100%			1.5%	0.0%	0.0%	100%
Perth	6	6	100%			0.4%	0.0%	0.0%	100%
Brantford	22	22	100%			1.5%	0.0%	0.0%	100%
Total	**1455**	**1455**				48.1%	29.0%	22.9%	Check
					Rounded	**50%**	**30%**	**25%**	105%
					Adopted	45%	30%	25%	100%

TTS MODE SPLIT DATA

Mon Aug 29 2022 15:02:54 GMT+0200 (Central European Summer Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of origin - gta0 3647
and
Start time of trip - start_time In 600-859
and
Trip purpose of origin - purp_orig In H

Table: Trip 2016

Row:	Count:	Expanded:	%
Transit excluding GO rail	10	218	7%
Cycle	2	26	1%
Auto driver	91	1930	59%
GO rail only	23	355	11%
Joint GO rail and local transit	10	183	6%
Auto passenger	15	277	9%
School bus	2	14	0%
Walk	11	249	8%
Total:	**164**	**3251**	**100%**

Mon Aug 29 2022 15:08:03 GMT+0200 (Central European Summer Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of destination - 3647
and
Start time of trip - start_time In 1500-1759
and
Trip purpose of destination - purp_dest In H

Table: Trip 2016

Row:	Count:	Expanded:	%
Transit excluding GO rail	7	135	4%
Cycle	2	26	1%
Auto driver	114	2177	63%
GO rail only	21	348	10%
Joint GO rail and local transit	11	168	5%
Motorcycle	1	15	0%
Auto passenger	16	255	7%
School bus	3	24	1%
Walk	11	333	10%
Total:	**186**	**3481**	**100%**

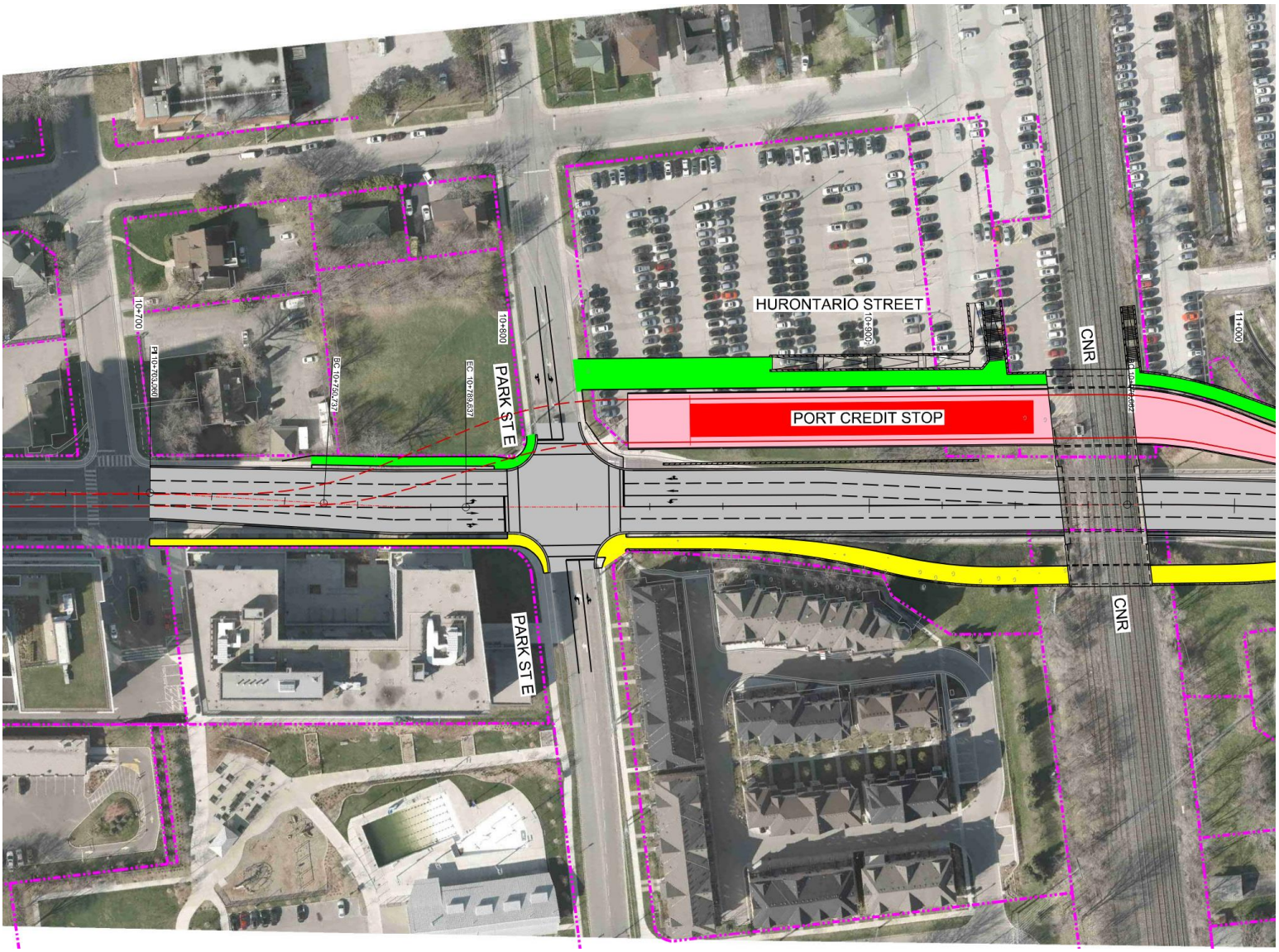
SUMMARY

Travel Mode Choice	**AM**	**PM**
Auto driver	59%	63%
Auto passenger	9%	8%
Transit	23%	19%
Cycle	1%	1%
Walk	8%	10%
Total	**100%**	**100%**

Appendix K:
Hurontario LRT Future Lane Configurations

FUTURE HURONTARIO LRT LANE CONFIGURATIONS

Excerpt from Aecom's 2017 HuLRT Road Plan Rollout



Appendix L:
Existing Signal Timing Plans

Signal Timing Audit Report

Runtime: 2021-08-05 08:27:41

Device: 0704

Region: Mississauga **Signal ID:** 0704 **Location:** HURONTARIO STREET N at Park Street

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	9	0	10	0	9	0	10
Ped Clear	Sec	0	17	0	21	0	17	0	21
Min Green	Sec	0	8	0	8	5	8	0	8
Passage	Sec	0.0	3.0	0.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	0	30	0	30	15	30	0	30
Maximum 2	Sec	0	30	0	30	15	30	0	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	other	redClear	other	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	0	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	0	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	0	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	0	1	0	1	2	2	0	2
[P2] Concurrency	Phase (,)	()	(5,6)	()	(8)	(2)	(2)	()	(4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	105	100	100	140	100	0	0	0
Offset	Sec	2	16	96	97	19	0	0	0
Split	Split	1	2	3	4	5	0	0	0
Sequence	Sequence	1	1	1	1	1	0	0	0

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	phaseOmitted	none	none	none
Split 1 - Time	Sec	0	63	0	42	0	63	0	42
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	phaseOmitted	none	none	none
Split 2 - Time	Sec	0	62	0	38	0	62	0	38
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	phaseOmitted	none	none	none
Split 3 - Time	Sec	0	57	0	43	0	57	0	43
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	pedRecall	none	none	none	none
Split 4 - Time	Sec	0	91	0	49	25	66	0	49
Split 4 - Coord	Enum	false	true	false	false	false	true	false	false
Split 5 - Mode	Enum	none	none	none	pedRecall	none	none	none	none
Split 5 - Time	Sec	0	60	0	40	23	37	0	40
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	12345678901234567890123456789012	12345678901234567890123456789012	12345678901234567890123456789012	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	15	16	19	3
Plan 1 Minute	Min	0	0	0	30	0	30	30	0
Plan 1 Action	Number	8	1	4	2	5	3	2	7
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

Appendix M:
Synchro Capacity Analysis Results

Timings
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	150	30	15	15	10	675	205	610	165
Future Volume (vph)	150	30	15	15	10	675	205	610	165
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA	Perm
Protected Phases		8		4		6	5	2	
Permitted Phases	8		4		6		2		2
Detector Phase	8	8	4	4	6	6	5	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	38.0	38.0	38.0	38.0	33.0	33.0	8.0	33.0	33.0
Total Split (s)	49.0	49.0	49.0	49.0	66.0	66.0	25.0	91.0	91.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	47.1%	47.1%	17.9%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag					Lag	Lag	Lead		
Lead-Lag Optimize?					Yes	Yes	Yes		
Recall Mode	Max	Max	Max	Max	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	64.6	64.6	64.6	64.6	46.3	46.3	69.4	65.4	65.4
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.33	0.33	0.50	0.47	0.47
v/c Ratio	0.39	0.07	0.03	0.32	0.05	0.73	0.68	0.45	0.25
Control Delay	30.1	16.0	23.8	5.1	30.7	45.2	31.1	25.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	16.0	23.8	5.1	30.7	45.2	31.1	25.7	11.6
LOS	C	B	C	A	C	D	C	C	B
Approach Delay		26.6		6.3		45.0		24.4	
Approach LOS		C		A		D		C	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 97 (69%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 29.4 — Intersection LOS: C
Intersection Capacity Utilization 83.0% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Park Street East

Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	169	56	17	259	11	792	230	685	185
v/c Ratio	0.39	0.07	0.03	0.32	0.05	0.73	0.68	0.45	0.25
Control Delay	30.1	16.0	23.8	5.1	30.7	45.2	31.1	25.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	16.0	23.8	5.1	30.7	45.2	31.1	25.7	11.6
Queue Length 50th (m)	31.8	5.4	2.7	2.7	2.2	106.6	38.1	69.6	16.4
Queue Length 95th (m)	58.6	15.2	8.1	20.6	6.7	121.4	49.3	74.3	27.6
Internal Link Dist (m)		67.1		118.1		224.8		293.6	
Turn Bay Length (m)	40.0		70.0		35.0		30.0		12.0
Base Capacity (vph)	431	781	604	798	319	1430	398	1997	937
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	0.39	0.07	0.03	0.32	0.03	0.55	0.58	0.34	0.20

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	30	20	15	15	215	10	675	30	205	610	165
Future Volume (vph)	150	30	20	15	15	215	10	675	30	205	610	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		1.0	5.0	5.0
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	0.98		1.00	0.96		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00		0.96	1.00		0.99	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.86		1.00	0.99		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)	1681	1668		1728	1449		1782	3278		1733	3252	1473
Flt Permitted	0.53	1.00		0.72	1.00		0.39	1.00		0.17	1.00	1.00
Satd. Flow (perm)	934	1668		1311	1449		734	3278		313	3252	1473
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	169	34	22	17	17	242	11	758	34	230	685	185
RTOR Reduction (vph)	0	12	0	0	130	0	0	3	0	0	0	45
Lane Group Flow (vph)	169	44	0	17	129	0	11	789	0	230	685	140
Confl. Peds. (#/hr)	27		34	34		27	12		24	24		12
Heavy Vehicles (%)	5%	4%	6%	0%	18%	7%	0%	9%	10%	4%	11%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	Perm
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	62.6	62.6		62.6	62.6		44.3	44.3		63.4	63.4	63.4
Effective Green, g (s)	64.6	64.6		64.6	64.6		46.3	46.3		65.4	65.4	65.4
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.33	0.33		0.47	0.47	0.47
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	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)	430	769		604	668		242	1084		329	1519	688
v/s Ratio Prot		0.03			0.09			c0.24		c0.09	0.21	
v/s Ratio Perm	c0.18			0.01			0.01			0.24		0.09
v/c Ratio	0.39	0.06		0.03	0.19		0.05	0.73		0.70	0.45	0.20
Uniform Delay, d1	24.8	20.9		20.6	22.3		31.8	41.3		26.2	25.2	22.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.7	0.1		0.1	0.6		0.4	4.3		6.4	1.0	0.7
Delay (s)	27.5	21.0		20.7	22.9		32.2	45.6		32.5	26.1	22.6
Level of Service	C	C		C	C		C	D		C	C	C
Approach Delay (s)		25.9			22.8			45.4			26.9	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0	
Intersection Capacity Utilization	83.0%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	175	5	15	70	105	0	65	15	10	0	0
Future Volume (vph)	30	175	5	15	70	105	0	65	15	10	0	0
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	43	254	7	22	101	152	0	94	22	14	0	0

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	304	123	152	116	14
Volume Left (vph)	43	22	0	0	14
Volume Right (vph)	7	0	152	22	0
Hadj (s)	0.03	0.16	-0.70	0.49	0.20
Departure Headway (s)	4.7	5.3	4.5	5.7	5.6
Degree Utilization, x	0.40	0.18	0.19	0.18	0.02
Capacity (veh/h)	741	650	774	579	563
Control Delay (s)	10.8	8.3	7.3	10.0	8.8
Approach Delay (s)	10.8	7.7		10.0	8.8
Approach LOS	B	A		B	A

Intersection Summary			
Delay	9.5		
Level of Service	A		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	210	70	0	0	0
Future Volume (Veh/h)	5	210	70	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	228	76	0	0	0
Pedestrians		5	10		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	88				336	93
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	88				336	93
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	100
cM capacity (veh/h)	1520				656	966

Direction, Lane #	EB 1	WB 1
Volume Total	233	76
Volume Left	5	0
Volume Right	0	0
cSH	1520	1700
Volume to Capacity	0.00	0.04
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

12/28/2022

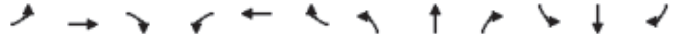
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	215	70	0	0	5
Future Volume (Veh/h)	0	215	70	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	234	76	0	0	5
Pedestrians		4	7		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	89				330	93
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89				330	93
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)	1503				658	956

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	234	76	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	956
Volume to Capacity	0.14	0.04	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	8.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East

12/28/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	205	45	5	65	5	10	30	5	5	65	10
Future Volume (vph)	15	205	45	5	65	5	10	30	5	5	65	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	223	49	5	71	5	11	33	5	5	71	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	288	81	49	87
Volume Left (vph)	16	5	11	5
Volume Right (vph)	49	5	5	11
Hadj (s)	-0.09	-0.02	0.08	0.01
Departure Headway (s)	4.3	4.5	4.9	4.8
Degree Utilization, x	0.34	0.10	0.07	0.12
Capacity (veh/h)	821	749	671	688
Control Delay (s)	9.4	8.0	8.3	8.4
Approach Delay (s)	9.4	8.0	8.3	8.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay			8.9	
Level of Service			A	
Intersection Capacity Utilization		34.2%	ICU Level of Service	A
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
7: Helene Street & Site Driveway (Ex)

12/28/2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	0	50	0	0	75
Future Volume (Veh/h)	5	0	50	0	0	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	54	0	0	82
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	136	54			54	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	136	54			54	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	857	1019			1564	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	54	82
Volume Left	5	0	0
Volume Right	0	0	0
cSH	857	1700	1564
Volume to Capacity	0.01	0.03	0.00
Queue Length 95th (m)	0.1	0.0	0.0
Control Delay (s)	9.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.2	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		13.9%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	75	80	50	0
Future Volume (Veh/h)	0	0	75	80	50	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	0	0	95	101	63	0
Pedestrians	31			24	2	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			2		324	26
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2		324	26
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		90	100
cM capacity (veh/h)			1611		633	1033

Direction, Lane #	WB 1	NB 1
Volume Total	196	63
Volume Left	95	63
Volume Right	0	0
cSH	1611	633
Volume to Capacity	0.06	0.10
Queue Length 95th (m)	1.5	2.6
Control Delay (s)	3.8	11.3
Lane LOS	A	B
Approach Delay (s)	3.8	11.3
Approach LOS		B

Intersection Summary				
Average Delay		5.6		
Intersection Capacity Utilization		30.5%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	115	0	0	40
Future Volume (Veh/h)	0	0	115	0	0	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	0	0	147	0	0	51
Pedestrians		43	5		35	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	182				187	225
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	182				187	225
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	94
cM capacity (veh/h)	1364				780	796

Direction, Lane #	WB 1	SB 1
Volume Total	147	51
Volume Left	0	0
Volume Right	0	51
cSH	1700	796
Volume to Capacity	0.09	0.06
Queue Length 95th (m)	0.0	1.6
Control Delay (s)	0.0	9.8
Lane LOS		A
Approach Delay (s)	0.0	9.8
Approach LOS		A

Intersection Summary				
Average Delay		2.5		
Intersection Capacity Utilization		31.2%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
10: Site Driveway (Ex) & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	90	25	0
Future Volume (Veh/h)	0	0	0	90	25	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	0	108	30	0
Pedestrians	3			5	4	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			4		115	9
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4		115	9
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		97	100
cM capacity (veh/h)			1625		883	1070

Direction, Lane #	WB 1	NB 1
Volume Total	108	30
Volume Left	0	30
Volume Right	0	0
cSH	1625	883
Volume to Capacity	0.00	0.03
Queue Length 95th (m)	0.0	0.8
Control Delay (s)	0.0	9.2
Lane LOS		A
Approach Delay (s)	0.0	9.2
Approach LOS		A

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Future Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	0	0	0	0	152	18	6	0	12	6

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	0	176	18
Volume Left (vph)	0	152	0
Volume Right (vph)	0	6	6
Hadj (s)	0.00	0.37	-0.20
Departure Headway (s)	4.3	4.3	3.9
Degree Utilization, x	0.00	0.21	0.02
Capacity (veh/h)	801	829	917
Control Delay (s)	7.3	8.4	6.9
Approach Delay (s)	0.0	8.4	6.9
Approach LOS	A	A	A

Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

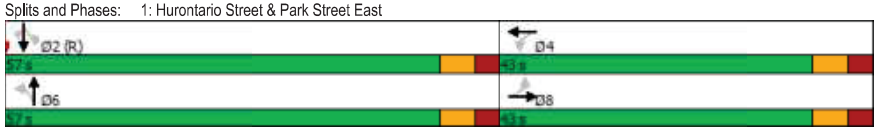
Timings
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	215	35	5	50	20	790	160	950	295
Future Volume (vph)	215	35	5	50	20	790	160	950	295
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		8		4		6		2	
Permitted Phases	8		4		6		2		2
Detector Phase	8	8	4	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	38.0	38.0	38.0	38.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	43.0	43.0	43.0	43.0	57.0	57.0	57.0	57.0	57.0
Total Split (%)	43.0%	43.0%	43.0%	43.0%	57.0%	57.0%	57.0%	57.0%	57.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	Max	C-Min	C-Min	C-Min
Act Effct Green (s)	38.0	38.0	38.0	38.0	52.0	52.0	52.0	52.0	52.0
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.52	0.52	0.52	0.52	0.52
v/c Ratio	0.65	0.09	0.01	0.36	0.13	0.52	0.83	0.60	0.41
Control Delay	35.5	14.4	19.6	15.0	14.8	16.9	53.4	18.5	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	14.4	19.6	15.0	14.8	16.9	53.4	18.5	11.2
LOS	D	B	B	B	B	B	D	B	B
Approach Delay		31.2		15.2		16.9		20.9	
Approach LOS		C		B		B		C	

Intersection Summary		
Cycle Length: 100		
Actuated Cycle Length: 100		
Offset: 96 (96%), Referenced to phase 2:SBTL, Start of Green		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 20.2	Intersection LOS: C	
Intersection Capacity Utilization 87.3%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 1: Hurontario Street & Park Street East



Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	244	63	6	239	23	926	182	1080	335
v/c Ratio	0.65	0.09	0.01	0.36	0.13	0.52	0.83	0.60	0.41
Control Delay	35.5	14.4	19.6	15.0	14.8	16.9	53.4	18.5	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	14.4	19.6	15.0	14.8	16.9	53.4	18.5	11.2
Queue Length 50th (m)	40.4	5.1	0.8	20.1	2.3	61.8	29.9	77.0	25.3
Queue Length 95th (m)	67.6	13.4	3.3	38.6	7.1	76.7	#71.4	94.3	44.4
Internal Link Dist (m)		67.1		118.1		224.8		293.6	
Turn Bay Length (m)	40.0		70.0		35.0		30.0		12.0
Base Capacity (vph)	373	674	504	659	173	1795	219	1804	808
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	0.65	0.09	0.01	0.36	0.13	0.52	0.83	0.60	0.41

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	35	20	5	50	160	20	790	25	160	950	295
Future Volume (vph)	215	35	20	5	50	160	20	790	25	160	950	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
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	0.99		1.00	0.96		1.00	1.00		1.00	1.00	0.92
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.89		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)	1738	1738		1760	1584		1788	3451		1730	3471	1453
Flt Permitted	0.54	1.00		0.72	1.00		0.18	1.00		0.23	1.00	1.00
Satd. Flow (perm)	984	1738		1327	1584		334	3451		423	3471	1453
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	244	40	23	6	57	182	23	898	28	182	1080	335
RTOR Reduction (vph)	0	14	0	0	58	0	0	2	0	0	0	53
Lane Group Flow (vph)	244	49	0	6	181	0	23	924	0	182	1080	282
Confl. Peds. (#/hr)	43		28	28		43	33		32	32		33
Heavy Vehicles (%)	1%	3%	0%	0%	2%	2%	0%	4%	0%	3%	4%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	36.0	36.0		36.0	36.0		50.0	50.0		50.0	50.0	50.0
Effective Green, g (s)	38.0	38.0		38.0	38.0		52.0	52.0		52.0	52.0	52.0
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.52	0.52		0.52	0.52	0.52
Clearance Time (s)	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
Lane Grp Cap (vph)	373	660		504	601		173	1794		219	1804	755
v/s Ratio Prot		0.03			0.11			0.27			0.31	
v/s Ratio Perm	c0.25			0.00			0.07			c0.43		0.19
v/c Ratio	0.65	0.07		0.01	0.30		0.13	0.51		0.83	0.60	0.37
Uniform Delay, d1	25.6	19.8		19.3	21.7		12.4	15.7		20.3	16.7	14.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.6	0.2		0.0	1.3		1.6	1.1		29.2	1.5	1.4
Delay (s)	34.2	20.0		19.4	23.0		14.0	16.8		49.5	18.2	15.7
Level of Service	C	B		B	C		B	B		D	B	B
Approach Delay (s)		31.3			22.9			16.7			21.2	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0	
Intersection Capacity Utilization	87.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	205	0	25	275	65	5	50	25	40	25	5
Future Volume (vph)	30	205	0	25	275	65	5	50	25	40	25	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	36	244	0	30	327	77	6	60	30	48	30	6

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	280	357	77	96	84
Volume Left (vph)	36	30	0	6	48
Volume Right (vph)	0	0	77	30	6
Hadj (s)	0.03	0.04	-0.70	0.02	0.07
Departure Headway (s)	5.1	5.4	4.6	5.8	5.9
Degree Utilization, x	0.40	0.54	0.10	0.16	0.14
Capacity (veh/h)	668	648	746	541	536
Control Delay (s)	11.5	13.2	7.0	9.9	9.8
Approach Delay (s)	11.5	12.1		9.9	9.8
Approach LOS	B	B		A	A

Intersection Summary				
Delay	11.5			
Level of Service	B			
Intersection Capacity Utilization	49.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	235	285	0	0	0
Future Volume (Veh/h)	5	235	285	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	255	310	0	0	0
Pedestrians		3	8		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	322				595	325
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322				595	325
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	100
cM capacity (veh/h)	1249				465	719

Direction, Lane #	EB 1	WB 1
Volume Total	260	310
Volume Left	5	0
Volume Right	0	0
cSH	1249	1700
Volume to Capacity	0.00	0.18
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

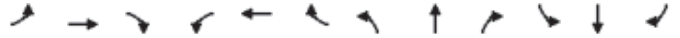
12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	240	285	0	0	5
Future Volume (Veh/h)	0	240	285	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	261	310	0	0	5
Pedestrians		5	4		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	323				588	328
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				588	328
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)	1235				468	707

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	261	310	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	707
Volume to Capacity	0.15	0.18	0.01
Queue Length 95th (m)	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	10.1
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.1
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East 12/28/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	235	35	5	285	0	20	30	0	5	65	10
Future Volume (vph)	10	235	35	5	285	0	20	30	0	5	65	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	255	38	5	310	0	22	33	0	5	71	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	304	315	55	87
Volume Left (vph)	11	5	22	5
Volume Right (vph)	38	0	0	11
Hadj (s)	-0.07	0.00	0.08	-0.06
Departure Headway (s)	4.6	4.7	5.6	5.4
Degree Utilization, x	0.39	0.41	0.09	0.13
Capacity (veh/h)	742	740	559	592
Control Delay (s)	10.5	10.8	9.1	9.2
Approach Delay (s)	10.5	10.8	9.1	9.2
Approach LOS	B	B	A	A

Intersection Summary				
Delay			10.4	
Level of Service			B	
Intersection Capacity Utilization			38.0%	ICU Level of Service
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
7: Helene Street & Site Driveway (Ex) 12/28/2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	0	35	5	5	75
Future Volume (Veh/h)	5	0	35	5	5	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	38	5	5	82
Pedestrians	35		5			8
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	172	84			78	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	172	84			78	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	792	946			1489	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	43	87
Volume Left	5	0	5
Volume Right	0	5	0
cSH	792	1700	1489
Volume to Capacity	0.01	0.03	0.00
Queue Length 95th (m)	0.2	0.0	0.1
Control Delay (s)	9.6	0.0	0.5
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	0.5
Approach LOS	A		

Intersection Summary				
Average Delay			0.6	
Intersection Capacity Utilization			22.6%	ICU Level of Service
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	80	65	35	0
Future Volume (Veh/h)	0	0	80	65	35	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	0	111	90	49	0
Pedestrians	46			32	5	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			3	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			5		363	37
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			5		363	37
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		92	100
cM capacity (veh/h)			1623		594	1009

Direction, Lane #	WB 1	NB 1
Volume Total	201	49
Volume Left	111	49
Volume Right	0	0
cSH	1623	594
Volume to Capacity	0.07	0.08
Queue Length 95th (m)	1.8	2.1
Control Delay (s)	4.3	11.6
Lane LOS	A	B
Approach Delay (s)	4.3	11.6
Approach LOS		B

Intersection Summary				
Average Delay		5.7		
Intersection Capacity Utilization		31.1%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	95	0	0	50
Future Volume (Veh/h)	0	0	95	0	0	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	0	0	122	0	0	64
Pedestrians		57	13		42	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	164				177	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	164				177	221
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	92
cM capacity (veh/h)	1377				780	795

Direction, Lane #	WB 1	SB 1
Volume Total	122	64
Volume Left	0	0
Volume Right	0	64
cSH	1700	795
Volume to Capacity	0.07	0.08
Queue Length 95th (m)	0.0	2.1
Control Delay (s)	0.0	9.9
Lane LOS		A
Approach Delay (s)	0.0	9.9
Approach LOS		A

Intersection Summary				
Average Delay		3.4		
Intersection Capacity Utilization		30.4%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
10: Site Driveway (Ex) & Queen Street East

12/28/2022

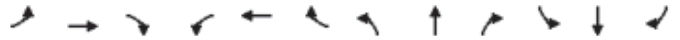
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	20	95	0	0
Future Volume (Veh/h)	0	0	20	95	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	21	101	0	0
Pedestrians	4			6	22	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			22		169	28
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			22		169	28
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1577		800	1028

Direction, Lane #	WB 1	NB 1
Volume Total	122	0
Volume Left	21	0
Volume Right	0	0
cSH	1577	1700
Volume to Capacity	0.01	0.00
Queue Length 95th (m)	0.3	0.0
Control Delay (s)	1.3	0.0
Lane LOS	A	A
Approach Delay (s)	1.3	0.0
Approach LOS		A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	5	5	0	145	5	0	0	5	5
Future Volume (vph)	0	0	0	5	5	0	145	5	0	0	5	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	0	6	6	0	167	6	0	0	6	6

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	12	173	12
Volume Left (vph)	6	167	0
Volume Right (vph)	0	0	6
Hadj (s)	0.10	0.39	-0.30
Departure Headway (s)	4.4	4.3	3.8
Degree Utilization, x	0.01	0.21	0.01
Capacity (veh/h)	777	819	932
Control Delay (s)	7.5	8.5	6.8
Approach Delay (s)	7.5	8.5	6.8
Approach LOS	A	A	A

Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

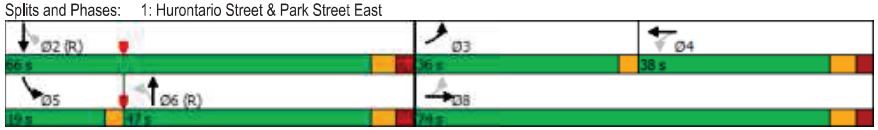
Timings
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	395	30	15	20	25	745	205	695
Future Volume (vph)	395	30	15	20	25	745	205	695
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases	3	8		4		6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	4	4	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0
Minimum Split (s)	8.0	38.0	38.0	38.0	33.0	33.0	8.0	33.0
Total Split (s)	36.0	74.0	38.0	38.0	47.0	47.0	19.0	66.0
Total Split (%)	25.7%	52.9%	27.1%	27.1%	33.6%	33.6%	13.6%	47.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	1.0	5.0	5.0	5.0	5.0	5.0	1.0	5.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max	Max	Max	C-Min	C-Min	None	C-Min
Act Effct Green (s)	76.4	72.4	44.9	44.9	40.0	40.0	61.6	57.6
Actuated g/C Ratio	0.55	0.52	0.32	0.32	0.29	0.29	0.44	0.41
v/c Ratio	0.63	0.09	0.04	0.38	0.20	0.82	0.72	0.73
Control Delay	24.6	8.9	39.1	9.1	42.0	54.8	40.9	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	8.9	39.1	9.1	42.0	54.8	40.9	36.0
LOS	C	A	D	A	D	D	D	D
Approach Delay		22.1		10.9		54.4		36.9
Approach LOS		C		B		D		D

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 37.1		Intersection LOS: D	
Intersection Capacity Utilization 98.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Hurontario Street & Park Street East



Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	395	75	15	235	25	775	205	955
v/c Ratio	0.63	0.09	0.04	0.38	0.20	0.82	0.72	0.73
Control Delay	24.6	8.9	39.1	9.1	42.0	54.8	40.9	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	8.9	39.1	9.1	42.0	54.8	40.9	36.0
Queue Length 50th (m)	67.8	4.3	3.1	4.1	5.5	110.2	36.4	113.1
Queue Length 95th (m)	96.9	13.3	9.8	28.8	14.2	134.1	59.5	136.2
Internal Link Dist (m)		67.1		118.1		224.8		293.6
Turn Bay Length (m)	40.0		70.0		35.0		30.0	
Base Capacity (vph)	678	841	413	612	130	986	300	1391
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	0.58	0.09	0.04	0.38	0.19	0.79	0.68	0.69

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	30	45	15	20	215	25	745	30	205	695	260
Future Volume (vph)	395	30	45	15	20	215	25	745	30	205	695	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		5.0	5.0		5.0	5.0		1.0	5.0	
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	0.96		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.96	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.86		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1702	1587		1730	1452		1792	3281		1734	3129	
Flt Permitted	0.48	1.00		0.71	1.00		0.23	1.00		0.14	1.00	
Satd. Flow (perm)	851	1587		1290	1452		434	3281		250	3129	
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)	395	30	45	15	20	215	25	745	30	205	695	260
RTOR Reduction (vph)	0	22	0	0	146	0	0	2	0	0	29	0
Lane Group Flow (vph)	395	53	0	15	89	0	25	773	0	205	926	0
Confl. Peds. (#/hr)	27		34	34		27	12		24	24		12
Heavy Vehicles (%)	5%	4%	6%	0%	18%	7%	0%	9%	10%	4%	11%	4%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	70.4	70.4		42.9	42.9		38.0	38.0		55.6	55.6	
Effective Green, g (s)	72.4	72.4		44.9	44.9		40.0	40.0		57.6	57.6	
Actuated g/C Ratio	0.52	0.52		0.32	0.32		0.29	0.29		0.41	0.41	
Clearance Time (s)	3.0	7.0		7.0	7.0		7.0	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	
Lane Grp Cap (vph)	601	820		413	465		124	937		278	1287	
v/s Ratio Prot	c0.12	0.03			0.06			c0.24		c0.09	0.30	
v/s Ratio Perm	0.22			0.01			0.06			0.22		
v/c Ratio	0.66	0.06		0.04	0.19		0.20	0.82		0.74	0.72	
Uniform Delay, d1	21.8	16.9		32.7	34.4		37.9	46.7		30.8	34.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	0.2		0.2	0.9		3.6	8.2		9.8	3.5	
Delay (s)	24.4	17.0		32.8	35.3		41.5	54.9		40.6	37.9	
Level of Service	C	B		C	D		D	D		D	D	
Approach Delay (s)		23.3			35.2			54.5			38.4	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	98.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

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	240	5	30	85	190	0	100	55	175	35	0
Future Volume (vph)	35	240	5	30	85	190	0	100	55	175	35	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	35	240	5	30	85	190	0	100	55	175	35	0

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	280	115	190	155	210
Volume Left (vph)	35	30	0	0	175
Volume Right (vph)	5	0	190	55	0
Hadj (s)	0.03	0.19	-0.70	0.27	0.17
Departure Headway (s)	5.6	6.3	5.3	6.2	5.9
Degree Utilization, x	0.44	0.20	0.28	0.27	0.35
Capacity (veh/h)	597	538	626	520	552
Control Delay (s)	13.0	9.6	9.2	11.4	12.1
Approach Delay (s)	13.0	9.4		11.4	12.1
Approach LOS	B	A		B	B

Intersection Summary			
Delay	11.4		
Level of Service	B		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	280	85	0	0	0
Future Volume (Veh/h)	5	280	85	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	280	85	0	0	0
Pedestrians		5	10		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	97				397	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	97				397	102
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	100
cM capacity (veh/h)	1509				605	955

Direction, Lane #	EB 1	WB 1
Volume Total	285	85
Volume Left	5	0
Volume Right	0	0
cSH	1509	1700
Volume to Capacity	0.00	0.05
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

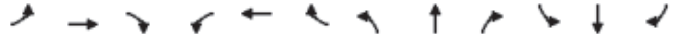
12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	285	85	0	0	5
Future Volume (Veh/h)	0	285	85	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	285	85	0	0	5
Pedestrians		4	7		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	98				390	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	98				390	102
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)	1491				608	945

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	285	85	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	945
Volume to Capacity	0.17	0.05	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	8.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East 12/28/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	275	45	5	80	5	10	30	5	5	65	10
Future Volume (vph)	15	275	45	5	80	5	10	30	5	5	65	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	275	45	5	80	5	10	30	5	5	65	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	335	90	45	80
Volume Left (vph)	15	5	10	5
Volume Right (vph)	45	5	5	10
Hadj (s)	-0.07	-0.02	0.07	0.01
Departure Headway (s)	4.3	4.6	5.0	4.9
Degree Utilization, x	0.40	0.11	0.06	0.11
Capacity (veh/h)	822	745	648	665
Control Delay (s)	10.0	8.2	8.4	8.5
Approach Delay (s)	10.0	8.2	8.4	8.5
Approach LOS	B	A	A	A

Intersection Summary				
Delay			9.4	
Level of Service			A	
Intersection Capacity Utilization		38.3%	ICU Level of Service	A
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
7: Helene Street & Site Driveway (Ex) 12/28/2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	0	50	0	0	75
Future Volume (Veh/h)	5	0	50	0	0	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	0	50	0	0	75
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	125	50			50	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125	50			50	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	870	1024			1570	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	50	75
Volume Left	5	0	0
Volume Right	0	0	0
cSH	870	1700	1570
Volume to Capacity	0.01	0.03	0.00
Queue Length 95th (m)	0.1	0.0	0.0
Control Delay (s)	9.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.2	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		13.9%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	75	80	50	0
Future Volume (Veh/h)	0	0	75	80	50	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	75	80	50	0
Pedestrians	31			24	2	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			2		263	26
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2		263	26
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		93	100
cM capacity (veh/h)			1611		695	1033

Direction, Lane #	WB 1	NB 1
Volume Total	155	50
Volume Left	75	50
Volume Right	0	0
cSH	1611	695
Volume to Capacity	0.05	0.07
Queue Length 95th (m)	1.2	1.9
Control Delay (s)	3.7	10.6
Lane LOS	A	B
Approach Delay (s)	3.7	10.6
Approach LOS		B

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	115	0	0	40
Future Volume (Veh/h)	0	0	115	0	0	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	115	0	0	40
Pedestrians		43	5		35	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	150				155	193
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150				155	193
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	95
cM capacity (veh/h)	1401				813	829

Direction, Lane #	WB 1	SB 1
Volume Total	115	40
Volume Left	0	0
Volume Right	0	40
cSH	1700	829
Volume to Capacity	0.07	0.05
Queue Length 95th (m)	0.0	1.2
Control Delay (s)	0.0	9.6
Lane LOS		A
Approach Delay (s)	0.0	9.6
Approach LOS		A

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
10: Ex. Parking Garage & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	90	25	0
Future Volume (Veh/h)	0	0	0	90	25	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	90	25	0
Pedestrians	3			5	4	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			4		97	9
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4		97	9
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		97	100
cM capacity (veh/h)			1625		904	1070

Direction, Lane #	WB 1	NB 1
Volume Total	90	25
Volume Left	0	25
Volume Right	0	0
cSH	1625	904
Volume to Capacity	0.00	0.03
Queue Length 95th (m)	0.0	0.7
Control Delay (s)	0.0	9.1
Lane LOS		A
Approach Delay (s)	0.0	9.1
Approach LOS		A

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Future Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	0	0	0	125	15	5	0	10	5

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	0	145	15
Volume Left (vph)	0	125	0
Volume Right (vph)	0	5	5
Hadj (s)	0.00	0.37	-0.20
Departure Headway (s)	4.3	4.3	3.8
Degree Utilization, x	0.00	0.17	0.02
Capacity (veh/h)	819	830	926
Control Delay (s)	7.3	8.2	6.9
Approach Delay (s)	0.0	8.2	6.9
Approach LOS	A	A	A

Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

Timings
1: Hurontario Street & Park Street East

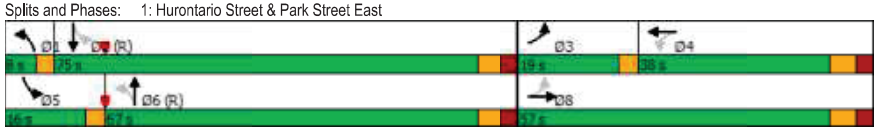
12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	375	40	5	55	45	835	160	1050
Future Volume (vph)	375	40	5	55	45	835	160	1050
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4		6		2	
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	38.0	38.0	38.0	8.0	33.0	8.0	33.0
Total Split (s)	19.0	57.0	38.0	38.0	8.0	67.0	16.0	75.0
Total Split (%)	13.6%	40.7%	27.1%	27.1%	5.7%	47.9%	11.4%	53.6%
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	3.0	3.0	3.0	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	1.0	5.0	5.0	5.0	1.0	5.0	1.0	5.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	C-Max	None	C-Min
Act Effct Green (s)	56.0	52.0	33.0	33.0	75.0	64.0	82.0	71.6
Actuated g/C Ratio	0.40	0.37	0.24	0.24	0.54	0.46	0.59	0.51
v/c Ratio	0.85	0.12	0.02	0.48	0.31	0.54	0.44	0.93
Control Delay	52.2	16.1	41.4	28.6	18.5	29.3	17.3	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	16.1	41.4	28.6	18.5	29.3	17.3	41.5
LOS	D	B	D	C	B	C	B	D
Approach Delay		45.9		28.9		28.7		39.3
Approach LOS		D		C		C		D

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 36.6 — Intersection LOS: D
Intersection Capacity Utilization 112.2% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Park Street East



Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	375	80	5	215	45	860	160	1565
v/c Ratio	0.85	0.12	0.02	0.48	0.31	0.54	0.44	0.93
Control Delay	52.2	16.1	41.4	28.6	18.5	29.3	17.3	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	16.1	41.4	28.6	18.5	29.3	17.3	41.5
Queue Length 50th (m)	82.3	7.5	1.1	28.9	5.3	93.8	20.4	215.2
Queue Length 95th (m)	#131.1	19.4	5.0	55.5	11.1	117.4	32.0	#274.3
Internal Link Dist (m)		67.1		118.1		224.8		293.6
Turn Bay Length (m)	40.0		70.0		35.0		30.0	
Base Capacity (vph)	442	652	305	444	147	1578	379	1681
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	0.85	0.12	0.02	0.48	0.31	0.54	0.42	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	40	40	5	55	160	45	835	25	160	1050	515
Future Volume (vph)	375	40	40	5	55	160	45	835	25	160	1050	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		5.0	5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.95		1.00	1.00		1.00	0.96	
Flpb, ped/bikes	0.99	1.00		0.97	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.89		1.00	1.00		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1761	1689		1744	1570		1805	3449		1748	3204	
Flt Permitted	0.43	1.00		0.70	1.00		0.06	1.00		0.22	1.00	
Satd. Flow (perm)	799	1689		1294	1570		119	3449		405	3204	
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)	375	40	40	5	55	160	45	835	25	160	1050	515
RTOR Reduction (vph)	0	25	0	0	75	0	0	2	0	0	42	0
Lane Group Flow (vph)	375	55	0	5	140	0	45	858	0	160	1523	0
Confl. Peds. (#/hr)	43		28	28		43	33		32	32		33
Heavy Vehicles (%)	1%	3%	0%	0%	2%	2%	0%	4%	0%	3%	4%	2%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	50.0	50.0		31.0	31.0		66.0	62.0		76.0	69.0	
Effective Green, g (s)	52.0	52.0		33.0	33.0		70.0	64.0		78.0	71.0	
Actuated g/C Ratio	0.37	0.37		0.24	0.24		0.50	0.46		0.56	0.51	
Clearance Time (s)	3.0	7.0		7.0	7.0		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	
Lane Grp Cap (vph)	420	627		305	370		131	1576		350	1624	
v/s Ratio Prot	c0.11	0.03			0.09		0.01	0.25		c0.04	c0.48	
v/s Ratio Perm	0.22			0.00			0.16			0.21		
v/c Ratio	0.89	0.09		0.02	0.38		0.34	0.54		0.46	0.94	
Uniform Delay, d1	38.5	28.6		41.0	44.9		26.5	27.5		17.4	32.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.6	0.3		0.1	2.9		1.6	1.4		0.9	11.7	
Delay (s)	59.1	28.9		41.1	47.8		28.0	28.8		18.3	44.2	
Level of Service	E	C		D	D		C	C		B	D	
Approach Delay (s)		53.8			47.7			28.8			41.8	
Approach LOS		D			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	112.2%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	245	0	60	330	225	5	110	55	155	85	10
Future Volume (vph)	45	245	0	60	330	225	5	110	55	155	85	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	45	245	0	60	330	225	5	110	55	155	85	10

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	290	390	225	170	250
Volume Left (vph)	45	60	0	5	155
Volume Right (vph)	0	0	225	55	10
Hadj (s)	0.03	0.08	-0.70	0.01	0.10
Departure Headway (s)	6.6	6.7	5.9	7.1	6.9
Degree Utilization, x	0.53	0.72	0.37	0.33	0.48
Capacity (veh/h)	511	527	594	445	479
Control Delay (s)	16.8	23.8	11.0	13.6	16.1
Approach Delay (s)	16.8	19.2		13.6	16.1
Approach LOS	C	C		B	C

Intersection Summary				
Delay	17.4			
Level of Service	C			
Intersection Capacity Utilization	72.5%	ICU Level of Service	C	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	290	345	0	0	0
Future Volume (Veh/h)	5	290	345	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	290	345	0	0	0
Pedestrians		3	8		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	357				665	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357				665	360
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	100
cM capacity (veh/h)	1213				424	687

Direction, Lane #	EB 1	WB 1
Volume Total	295	345
Volume Left	5	0
Volume Right	0	0
cSH	1213	1700
Volume to Capacity	0.00	0.20
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

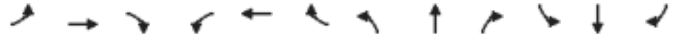
12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	295	345	0	0	5
Future Volume (Veh/h)	0	295	345	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	295	345	0	0	5
Pedestrians		5	4		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	358				657	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358				657	363
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)	1199				427	676

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	295	345	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	676
Volume to Capacity	0.17	0.20	0.01
Queue Length 95th (m)	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	10.4
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East 12/28/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	290	35	5	345	0	20	30	0	5	65	10
Future Volume (vph)	10	290	35	5	345	0	20	30	0	5	65	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	290	35	5	345	0	20	30	0	5	65	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	335	350	50	80
Volume Left (vph)	10	5	20	5
Volume Right (vph)	35	0	0	10
Hadj (s)	-0.06	0.00	0.08	-0.06
Departure Headway (s)	4.6	4.7	5.7	5.5
Degree Utilization, x	0.43	0.45	0.08	0.12
Capacity (veh/h)	740	741	538	569
Control Delay (s)	11.1	11.5	9.2	9.3
Approach Delay (s)	11.1	11.5	9.2	9.3
Approach LOS	B	B	A	A

Intersection Summary				
Delay			11.0	
Level of Service			B	
Intersection Capacity Utilization			41.2%	ICU Level of Service
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
7: Helene Street & Site Driveway (Ex) 12/28/2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	0	35	5	5	75
Future Volume (Veh/h)	5	0	35	5	5	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	0	35	5	5	75
Pedestrians	35		5			8
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	162	80			75	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162	80			75	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	803	950			1492	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	40	80
Volume Left	5	0	5
Volume Right	0	5	0
cSH	803	1700	1492
Volume to Capacity	0.01	0.02	0.00
Queue Length 95th (m)	0.2	0.0	0.1
Control Delay (s)	9.5	0.0	0.5
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	0.5
Approach LOS	A		

Intersection Summary				
Average Delay			0.7	
Intersection Capacity Utilization			22.6%	ICU Level of Service
Analysis Period (min)			15	

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	80	65	35	0
Future Volume (Veh/h)	0	0	80	65	35	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	80	65	35	0
Pedestrians	46			32	5	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			3	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			5		276	37
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			5		276	37
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		95	100
cM capacity (veh/h)			1623		680	1009

Direction, Lane #	WB 1	NB 1
Volume Total	145	35
Volume Left	80	35
Volume Right	0	0
cSH	1623	680
Volume to Capacity	0.05	0.05
Queue Length 95th (m)	1.2	1.3
Control Delay (s)	4.2	10.6
Lane LOS	A	B
Approach Delay (s)	4.2	10.6
Approach LOS		B

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	31.1%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	95	0	0	50
Future Volume (Veh/h)	0	0	95	0	0	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	95	0	0	50
Pedestrians		57	13		42	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	137				150	194
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				150	194
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	94
cM capacity (veh/h)	1408				808	823

Direction, Lane #	WB 1	SB 1
Volume Total	95	50
Volume Left	0	0
Volume Right	0	50
cSH	1700	823
Volume to Capacity	0.06	0.06
Queue Length 95th (m)	0.0	1.5
Control Delay (s)	0.0	9.7
Lane LOS		A
Approach Delay (s)	0.0	9.7
Approach LOS		A

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	30.4%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
10: Site Driveway (Ex) & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	20	95	0	0
Future Volume (Veh/h)	0	0	20	95	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	20	95	0	0
Pedestrians	4			6	22	
Lane Width (m)	0.0			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			22		161	28
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			22		161	28
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1577		809	1028

Direction, Lane #	WB 1	NB 1
Volume Total	115	0
Volume Left	20	0
Volume Right	0	0
cSH	1577	1700
Volume to Capacity	0.01	0.00
Queue Length 95th (m)	0.3	0.0
Control Delay (s)	1.4	0.0
Lane LOS	A	A
Approach Delay (s)	1.4	0.0
Approach LOS		A

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	5	5	0	145	5	0	0	5	5
Future Volume (vph)	0	0	0	5	5	0	145	5	0	0	5	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	5	5	0	145	5	0	0	5	5

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	10	150	10
Volume Left (vph)	5	145	0
Volume Right (vph)	0	0	5
Hadj (s)	0.10	0.39	-0.30
Departure Headway (s)	4.4	4.3	3.8
Degree Utilization, x	0.01	0.18	0.01
Capacity (veh/h)	791	820	940
Control Delay (s)	7.4	8.3	6.8
Approach Delay (s)	7.4	8.3	6.8
Approach LOS	A	A	A

Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

Timings
1: Hurontario Street & Park Street East

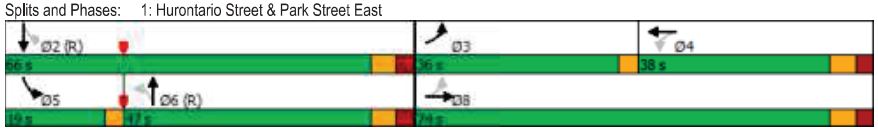
12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	460	30	15	20	30	745	205	695
Future Volume (vph)	460	30	15	20	30	745	205	695
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	pm+pt	NA
Protected Phases	3	8		4		6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	4	4	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0
Minimum Split (s)	8.0	38.0	38.0	38.0	33.0	33.0	8.0	33.0
Total Split (s)	36.0	74.0	38.0	38.0	47.0	47.0	19.0	66.0
Total Split (%)	25.7%	52.9%	27.1%	27.1%	33.6%	33.6%	13.6%	47.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	1.0	5.0	5.0	5.0	5.0	5.0	1.0	5.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	Max	Max	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	76.4	72.4	33.0	33.0	40.0	40.0	61.6	57.6
Actuated g/C Ratio	0.55	0.52	0.24	0.24	0.29	0.29	0.44	0.41
v/c Ratio	0.70	0.11	0.05	0.46	0.25	0.82	0.72	0.74
Control Delay	26.8	7.5	42.1	10.6	44.3	54.8	40.9	36.3
Queue Delay	32.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	7.5	42.1	10.6	44.3	54.8	40.9	36.3
LOS	E	A	D	B	D	D	D	D
Approach Delay		50.8		12.5		54.4		37.1
Approach LOS		D		B		D		D

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 42.6 — Intersection LOS: D
Intersection Capacity Utilization 98.4% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Park Street East



Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	460	95	15	235	30	775	205	970
v/c Ratio	0.70	0.11	0.05	0.46	0.25	0.82	0.72	0.74
Control Delay	26.8	7.5	42.1	10.6	44.3	54.8	40.9	36.3
Queue Delay	32.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	7.5	42.1	10.6	44.3	54.8	40.9	36.3
Queue Length 50th (m)	83.1	4.3	3.4	4.6	6.7	110.2	36.4	115.3
Queue Length 95th (m)	117.1	14.3	9.8	28.8	16.6	134.1	59.5	138.8
Internal Link Dist (m)		67.1		118.1		224.8		293.6
Turn Bay Length (m)	40.0		70.0		35.0		30.0	
Base Capacity (vph)	661	834	298	506	125	986	300	1390
Starvation Cap Reductn	219	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	1.04	0.11	0.05	0.46	0.24	0.79	0.68	0.70

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	460	30	65	15	20	215	30	745	30	205	695	275
Future Volume (vph)	460	30	65	15	20	215	30	745	30	205	695	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		5.0	5.0		5.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.96		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.96	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.86		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	1555		1732	1452		1793	3281		1734	3124	
Flt Permitted	0.40	1.00		0.70	1.00		0.22	1.00		0.14	1.00	
Satd. Flow (perm)	709	1555		1268	1452		418	3281		250	3124	
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)	460	30	65	15	20	215	30	745	30	205	695	275
RTOR Reduction (vph)	0	31	0	0	164	0	0	2	0	0	31	0
Lane Group Flow (vph)	460	64	0	15	71	0	30	773	0	205	939	0
Confl. Peds. (#/hr)	27		34	34		27	12		24	24		12
Heavy Vehicles (%)	5%	4%	6%	0%	18%	7%	0%	9%	10%	4%	11%	4%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	70.4	70.4		31.0	31.0		38.0	38.0		55.6	55.6	
Effective Green, g (s)	72.4	72.4		33.0	33.0		40.0	40.0		57.6	57.6	
Actuated g/C Ratio	0.52	0.52		0.24	0.24		0.29	0.29		0.41	0.41	
Clearance Time (s)	3.0	7.0		7.0	7.0		7.0	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	
Lane Grp Cap (vph)	640	804		298	342		119	937		278	1285	
v/s Ratio Prot	c0.20	0.04			0.05			c0.24		c0.09	0.30	
v/s Ratio Perm	0.17			0.01			0.07			0.22		
v/c Ratio	0.72	0.08		0.05	0.21		0.25	0.82		0.74	0.73	
Uniform Delay, d1	23.2	17.0		41.4	43.0		38.5	46.7		30.8	34.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.8	0.2		0.1	0.3		5.0	8.2		9.8	3.7	
Delay (s)	30.1	17.2		41.5	43.3		43.5	54.9		40.6	38.4	
Level of Service	C	B		D	D		D	D		D	D	
Approach Delay (s)		27.9			43.2			54.5			38.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

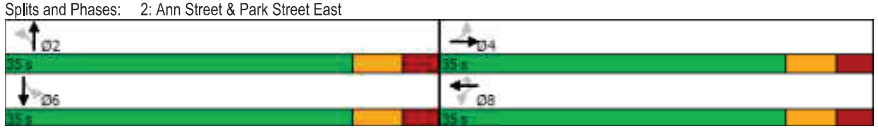
Timings
2: Ann Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	35	325	30	105	190	100	175	35
Future Volume (vph)	35	325	30	105	190	100	175	35
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		8		6	
Detector Phase	4	4	8	8	8	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0		-2.0
Total Lost Time (s)		5.0		5.0	5.0	5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	None	None	None
Act Effct Green (s)		31.4		31.4	31.4	16.9		16.9
Actuated g/C Ratio		0.54		0.54	0.54	0.29		0.29
v/c Ratio		0.37		0.15	0.21	0.35		0.59
Control Delay		10.4		8.8	2.4	12.8		24.2
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		10.4		8.8	2.4	12.8		24.2
LOS		B		A	A	B		C
Approach Delay		10.4		5.1		12.8		24.2
Approach LOS		B		A		B		C

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 58.3			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Ann Street & Park Street East



Queues
2: Ann Street & Park Street East

12/28/2022

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	365	135	190	155	210
v/c Ratio	0.37	0.15	0.21	0.35	0.59
Control Delay	10.4	8.8	2.4	12.8	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	8.8	2.4	12.8	24.2
Queue Length 50th (m)	20.8	6.7	0.0	8.6	19.1
Queue Length 95th (m)	48.7	18.7	9.3	20.6	36.7
Internal Link Dist (m)	26.5	67.1		95.8	94.8
Turn Bay Length (m)			15.0		
Base Capacity (vph)	976	872	925	742	639
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.15	0.21	0.21	0.33

Intersection Summary

HCM Signalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	325	5	30	105	190	0	100	55	175	35	0
Future Volume (vph)	35	325	5	30	105	190	0	100	55	175	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0		5.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00			1.00	0.97		0.99			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			0.99	
Frt		1.00			1.00	0.85		0.95			1.00	
Flt Protected		1.00			0.99	1.00		1.00			0.96	
Satd. Flow (prot)		1868			1807	1560		1393			1808	
Flt Permitted		0.97			0.89	1.00		1.00			0.66	
Satd. Flow (perm)		1812			1621	1560		1393			1241	
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)	35	325	5	30	105	190	0	100	55	175	35	0
RTOR Reduction (vph)	0	0	0	0	0	88	0	36	0	0	0	0
Lane Group Flow (vph)	0	365	0	0	135	102	0	119	0	0	210	0
Confl. Peds. (#/hr)	9		5	5		9	5		8	8		5
Heavy Vehicles (%)	0%	1%	0%	0%	5%	0%	0%	44%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		29.4			29.4	29.4		14.9			14.9	
Effective Green, g (s)		31.4			31.4	31.4		16.9			16.9	
Actuated g/C Ratio		0.54			0.54	0.54		0.29			0.29	
Clearance Time (s)		7.0			7.0	7.0		7.0			7.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		975			873	840		403			359	
v/s Ratio Prot								0.09				
v/s Ratio Perm		c0.20			0.08	0.07					c0.17	
v/c Ratio		0.37			0.15	0.12		0.30			0.58	
Uniform Delay, d1		7.8			6.8	6.6		16.1			17.7	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		1.1			0.4	0.3		0.4			2.4	
Delay (s)		8.9			7.1	6.9		16.5			20.1	
Level of Service		A			A	A		B			C	
Approach Delay (s)		8.9			7.0			16.5			20.1	
Approach LOS		A			A			B			C	

Intersection Summary					
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	10.0		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B		
Analysis Period (min)	15				

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
3: Park Street East & Site Driveway (Fut.)

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	280	85	20	85	35
Future Volume (Veh/h)	15	280	85	20	85	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	280	85	20	85	35
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			51			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	105				405	95
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	94				396	83
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	96
cM capacity (veh/h)	1501				602	973

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	295	105	120
Volume Left	15	0	85
Volume Right	0	20	35
cSH	1501	1700	677
Volume to Capacity	0.01	0.06	0.18
Queue Length 95th (m)	0.2	0.0	5.1
Control Delay (s)	0.5	0.0	11.5
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	11.5
Approach LOS			B

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	295	120	0	0	0
Future Volume (Veh/h)	5	295	120	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	295	120	0	0	0
Pedestrians		5	10		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			74			
pX, platoon unblocked						
vC, conflicting volume	132				447	137
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132				447	137
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	100
cM capacity (veh/h)	1466				566	913

Direction, Lane #	EB 1	WB 1
Volume Total	300	120
Volume Left	5	0
Volume Right	0	0
cSH	1466	1700
Volume to Capacity	0.00	0.07
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	300	120	0	0	5
Future Volume (Veh/h)	0	300	120	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	300	120	0	0	5
Pedestrians		4	7		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked						
vC, conflicting volume	133				440	137
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	133				440	137
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)	1448				569	904

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	300	120	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	904
Volume to Capacity	0.18	0.07	0.01
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.0	0.0	9.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		27.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	280	45	20	100	5	10	30	15	5	45	10
Future Volume (vph)	15	280	45	20	100	5	10	30	15	5	45	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	280	45	20	100	5	10	30	15	5	45	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	340	125	55	60
Volume Left (vph)	15	20	10	5
Volume Right (vph)	45	5	15	10
Hadj (s)	-0.07	0.01	-0.05	-0.02
Departure Headway (s)	4.3	4.6	5.0	5.0
Degree Utilization, x	0.40	0.16	0.08	0.08
Capacity (veh/h)	820	747	652	647
Control Delay (s)	10.1	8.4	8.4	8.5
Approach Delay (s)	10.1	8.4	8.4	8.5
Approach LOS	B	A	A	A

Intersection Summary			
Delay		9.4	
Level of Service		A	
Intersection Capacity Utilization		35.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
7: Helene Street & Site Driveway (Ex)

12/28/2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	50	0	0	60
Future Volume (Veh/h)	0	0	50	0	0	60
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	50	0	0	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	110	50			50	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	110	50			50	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	887	1024			1570	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	50	60
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1570
Volume to Capacity	0.00	0.03	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	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		6.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	60	70	50	0
Future Volume (vph)	0	0	60	70	50	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	60	70	50	0

Direction, Lane #	WB 1	NB 1
Volume Total (vph)	130	50
Volume Left (vph)	60	50
Volume Right (vph)	0	0
Hadj (s)	0.31	0.20
Departure Headway (s)	4.3	4.4
Degree Utilization, x	0.16	0.06
Capacity (veh/h)	819	786
Control Delay (s)	8.1	7.7
Approach Delay (s)	8.1	7.7
Approach LOS	A	A

Intersection Summary			
Delay		8.0	
Level of Service		A	
Intersection Capacity Utilization		29.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	90	0	0	40
Future Volume (Veh/h)	0	0	90	0	0	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	90	0	0	40
Pedestrians		43	5		35	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	125				130	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125				130	168
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	95
cM capacity (veh/h)	1431				840	856

Direction, Lane #	WB 1	SB 1
Volume Total	90	40
Volume Left	0	0
Volume Right	0	40
cSH	1700	856
Volume to Capacity	0.05	0.05
Queue Length 95th (m)	0.0	1.2
Control Delay (s)	0.0	9.4
Lane LOS		A
Approach Delay (s)	0.0	9.4
Approach LOS		A

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Future Volume (vph)	0	0	0	0	0	0	125	15	5	0	10	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	0	0	0	125	15	5	0	10	5

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	0	145	15
Volume Left (vph)	0	125	0
Volume Right (vph)	0	5	5
Hadj (s)	0.00	0.37	-0.20
Departure Headway (s)	4.3	4.3	3.8
Degree Utilization, x	0.00	0.17	0.02
Capacity (veh/h)	819	830	926
Control Delay (s)	7.3	8.2	6.9
Approach Delay (s)	0.0	8.2	6.9
Approach LOS	A	A	A

Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

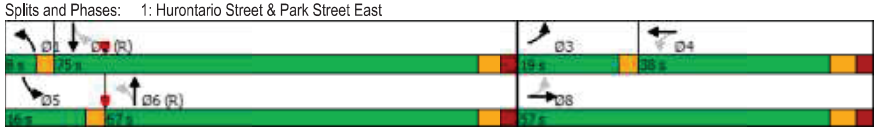
Timings
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	405	40	5	55	70	835	160	1050
Future Volume (vph)	405	40	5	55	70	835	160	1050
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4		6		2	
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	38.0	38.0	38.0	8.0	33.0	8.0	33.0
Total Split (s)	19.0	57.0	38.0	38.0	8.0	67.0	16.0	75.0
Total Split (%)	13.6%	40.7%	27.1%	27.1%	5.7%	47.9%	11.4%	53.6%
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	3.0	3.0	3.0	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	1.0	5.0	5.0	5.0	1.0	5.0	1.0	5.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	C-Max	None	C-Min
Act Effct Green (s)	56.0	52.0	33.0	33.0	75.0	64.0	82.0	71.6
Actuated g/C Ratio	0.40	0.37	0.24	0.24	0.54	0.46	0.59	0.51
v/c Ratio	0.92	0.14	0.02	0.48	0.48	0.54	0.44	0.95
Control Delay	61.8	14.7	41.4	28.6	27.5	29.3	17.3	44.5
Queue Delay	48.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	14.7	41.4	28.6	27.5	29.3	17.3	44.5
LOS	F	B	D	C	C	C	B	D
Approach Delay		92.6		28.9		29.1		42.0
Approach LOS		F		C		C		D

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 45.0		Intersection LOS: D	
Intersection Capacity Utilization 115.1%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: Hurontario Street & Park Street East



Queues
1: Hurontario Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	405	90	5	215	70	860	160	1600
v/c Ratio	0.92	0.14	0.02	0.48	0.48	0.54	0.44	0.95
Control Delay	61.8	14.7	41.4	28.6	27.5	29.3	17.3	44.5
Queue Delay	48.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	14.7	41.4	28.6	27.5	29.3	17.3	44.5
Queue Length 50th (m)	90.9	7.5	1.1	28.9	8.4	93.8	20.4	224.3
Queue Length 95th (m)	#155.8	19.8	5.0	55.5	19.6	117.4	32.0	#285.0
Internal Link Dist (m)		67.1		118.1		224.8		293.6
Turn Bay Length (m)	40.0		70.0		35.0		30.0	
Base Capacity (vph)	442	652	302	444	147	1578	379	1679
Starvation Cap Reductn	108	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	1.21	0.14	0.02	0.48	0.48	0.54	0.42	0.95

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
1: Hurontario Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	405	40	50	5	55	160	70	835	25	160	1050	550
Future Volume (vph)	405	40	50	5	55	160	70	835	25	160	1050	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0		5.0	5.0		1.0	5.0		1.0	5.0	
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	0.95		1.00	1.00		1.00	0.96	
Flpb, ped/bikes	0.99	1.00		0.97	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.89		1.00	1.00		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1761	1672		1745	1570		1805	3449		1748	3192	
Flt Permitted	0.43	1.00		0.70	1.00		0.06	1.00		0.22	1.00	
Satd. Flow (perm)	799	1672		1283	1570		119	3449		405	3192	
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)	405	40	50	5	55	160	70	835	25	160	1050	550
RTOR Reduction (vph)	0	31	0	0	75	0	0	2	0	0	48	0
Lane Group Flow (vph)	405	59	0	5	140	0	70	858	0	160	1552	0
Confl. Peds. (#/hr)	43		28	28		43	33		32	32		33
Heavy Vehicles (%)	1%	3%	0%	0%	2%	2%	0%	4%	0%	3%	4%	2%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	50.0	50.0		31.0	31.0		66.0	62.0		76.0	69.0	
Effective Green, g (s)	52.0	52.0		33.0	33.0		70.0	64.0		78.0	71.0	
Actuated g/C Ratio	0.37	0.37		0.24	0.24		0.50	0.46		0.56	0.51	
Clearance Time (s)	3.0	7.0		7.0	7.0		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	
Lane Grp Cap (vph)	420	621		302	370		131	1576		350	1618	
v/s Ratio Prot	c0.12	0.04			0.09		c0.02	0.25		0.04	c0.49	
v/s Ratio Perm	0.23			0.00			0.24			0.21		
v/c Ratio	0.96	0.09		0.02	0.38		0.53	0.54		0.46	0.96	
Uniform Delay, d1	40.4	28.7		41.0	44.9		28.1	27.5		17.4	33.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.5	0.3		0.1	2.9		4.1	1.4		0.9	14.6	
Delay (s)	74.8	29.0		41.1	47.8		32.2	28.8		18.3	47.7	
Level of Service	E	C		D	D		C	C		B	D	
Approach Delay (s)		66.5			47.7			29.1			45.0	
Approach LOS		E			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	115.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

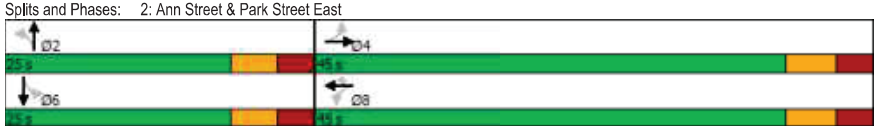
Timings
2: Ann Street & Park Street East

12/28/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	45	285	60	415	200	5	110	155	85
Future Volume (vph)	45	285	60	415	200	5	110	155	85
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	25.0	25.0	25.0	25.0
Total Split (%)	64.3%	64.3%	64.3%	64.3%	64.3%	35.7%	35.7%	35.7%	35.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0		-2.0		-2.0
Total Lost Time (s)		5.0		5.0	5.0		5.0		5.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		40.3		40.3	40.3		17.6		17.6
Actuated g/C Ratio		0.59		0.59	0.59		0.26		0.26
v/c Ratio		0.33		0.46	0.20		0.38		0.72
Control Delay		8.6		10.1	3.0		18.9		35.7
Queue Delay		0.0		2.1	0.0		0.0		0.0
Total Delay		8.6		12.2	3.0		18.9		35.7
LOS		A		B	A		B		D
Approach Delay		8.6		9.4			18.9		35.7
Approach LOS		A		A			B		D

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 68			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Ann Street & Park Street East



Queues
2: Ann Street & Park Street East

12/28/2022

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	330	475	200	170	250
v/c Ratio	0.33	0.46	0.20	0.38	0.72
Control Delay	8.6	10.1	3.0	18.9	35.7
Queue Delay	0.0	2.1	0.0	0.0	0.0
Total Delay	8.6	12.2	3.0	18.9	35.7
Queue Length 50th (m)	21.8	34.8	3.0	14.5	29.7
Queue Length 95th (m)	36.6	56.5	11.2	30.3	#59.2
Internal Link Dist (m)	27.6	67.1		95.8	94.8
Turn Bay Length (m)			15.0		
Base Capacity (vph)	1014	1037	996	497	392
Starvation Cap Reductn	0	405	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.75	0.20	0.34	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
2: Ann Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	285	0	60	415	200	5	110	55	155	85	10
Future Volume (vph)	45	285	0	60	415	200	5	110	55	155	85	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0		5.0			5.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		1.00			1.00	0.85		0.96			0.99	
Flt Protected		0.99			0.99	1.00		1.00			0.97	
Satd. Flow (prot)		1887			1888	1580		1625			1831	
Flt Permitted		0.90			0.92	1.00		0.99			0.70	
Satd. Flow (perm)		1711			1749	1580		1607			1325	
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)	45	285	0	60	415	200	5	110	55	155	85	10
RTOR Reduction (vph)	0	0	0	0	0	59	0	25	0	0	2	0
Lane Group Flow (vph)	0	330	0	0	475	141	0	145	0	0	248	0
Confl. Peds. (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		38.3			38.3	38.3		15.6			15.6	
Effective Green, g (s)		40.3			40.3	40.3		17.6			17.6	
Actuated g/C Ratio		0.59			0.59	0.59		0.26			0.26	
Clearance Time (s)		7.0			7.0	7.0		7.0			7.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		1015			1038	937		416			343	
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.27	0.09		0.09			c0.19	
v/c Ratio		0.33			0.46	0.15		0.35			0.72	
Uniform Delay, d1		7.0			7.7	6.2		20.5			22.9	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.9			1.5	0.3		0.5			7.3	
Delay (s)		7.8			9.2	6.5		21.0			30.2	
Level of Service		A			A	A		C			C	
Approach Delay (s)		7.8			8.4			21.0			30.2	
Approach LOS		A			A			C			C	

Intersection Summary

HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
3: Park Street East & Site Driveway (Fut.)

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	290	345	85	40	10
Future Volume (Veh/h)	30	290	345	85	40	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	290	345	85	40	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			52			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	430				738	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	267				621	218
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				90	99
cM capacity (veh/h)	1136				384	718

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	320	430	50
Volume Left	30	0	40
Volume Right	0	85	10
cSH	1136	1700	423
Volume to Capacity	0.03	0.25	0.12
Queue Length 95th (m)	0.7	0.0	3.2
Control Delay (s)	1.0	0.0	14.6
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	14.6
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Park Street East & Ex PPUDO Entry

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	320	355	0	0	0
Future Volume (Veh/h)	5	320	355	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	320	355	0	0	0
Pedestrians		3	8		12	
Lane Width (m)		3.6	3.6		0.0	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			74			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	367				705	370
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	232				610	235
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	100
cM capacity (veh/h)	1204				407	721

Direction, Lane #	EB 1	WB 1
Volume Total	325	355
Volume Left	5	0
Volume Right	0	0
cSH	1204	1700
Volume to Capacity	0.00	0.21
Queue Length 95th (m)	0.1	0.0
Control Delay (s)	0.2	0.0
Lane LOS	A	
Approach Delay (s)	0.2	0.0
Approach LOS		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
5: Park Street East & Ex PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	325	355	0	0	5
Future Volume (Veh/h)	0	325	355	0	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	325	355	0	0	5
Pedestrians		5	4		13	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	368				697	373
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	241				607	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				100	99
cM capacity (veh/h)	1189				410	706

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	325	355	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	706
Volume to Capacity	0.19	0.21	0.01
Queue Length 95th (m)	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	10.1
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.1
Approach LOS			B

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		30.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: Helene Street & Park Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	305	35	5	355	0	20	25	15	5	60	10
Future Volume (vph)	10	305	35	5	355	0	20	25	15	5	60	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	305	35	5	355	0	20	25	15	5	60	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	350	360	60	75
Volume Left (vph)	10	5	20	5
Volume Right (vph)	35	0	15	10
Hadj (s)	-0.05	0.00	-0.08	-0.07
Departure Headway (s)	4.7	4.7	5.6	5.6
Degree Utilization, x	0.45	0.47	0.09	0.12
Capacity (veh/h)	735	735	547	557
Control Delay (s)	11.5	11.8	9.2	9.3
Approach Delay (s)	11.5	11.8	9.2	9.3
Approach LOS	B	B	A	A

Intersection Summary			
Delay		11.3	
Level of Service		B	
Intersection Capacity Utilization		42.4%	ICU Level of Service A
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	305	35	5	355	0	20	25	15	5	60	10
Future Vol, veh/h	10	305	35	5	355	0	20	25	15	5	60	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	305	35	5	355	0	20	25	15	5	60	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.4	11.8	9.2	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	3%	1%	7%
Vol Thru, %	42%	87%	99%	80%
Vol Right, %	25%	10%	0%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	350	360	75
LT Vol	20	10	5	5
Through Vol	25	305	355	60
RT Vol	15	35	0	10
Lane Flow Rate	60	350	360	75
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.449	0.466	0.115
Departure Headway (Hd)	5.529	4.619	4.661	5.515
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	640	774	767	643
Service Time	3.629	2.678	2.72	3.613
HCM Lane V/C Ratio	0.094	0.452	0.469	0.117
HCM Control Delay	9.2	11.4	11.8	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.3	2.3	2.5	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	35	0	0	75
Future Volume (Veh/h)	0	0	35	0	0	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	35	0	0	75
Pedestrians	35		5			8
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	150	78			70	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150	78			70	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	819	953			1499	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	35	75
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1499
Volume to Capacity	0.00	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	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		22.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
8: Helene Street & Queen Street East

12/28/2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	75	65	35	0
Future Volume (vph)	0	0	75	65	35	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	75	65	35	0

Direction, Lane #	WB 1	NB 1
Volume Total (vph)	140	35
Volume Left (vph)	75	35
Volume Right (vph)	0	0
Hadj (s)	0.31	0.20
Departure Headway (s)	4.3	4.4
Degree Utilization, x	0.17	0.04
Capacity (veh/h)	827	781
Control Delay (s)	8.2	7.6
Approach Delay (s)	8.2	7.6
Approach LOS	A	A

Intersection Summary			
Delay	8.0		
Level of Service	A		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM 6th AWSC
8: Helene Street & Queen Street East

12/28/2022

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	75	65	35	0
Future Vol, veh/h	0	0	75	65	35	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	26	0	0
Mvmt Flow	0	0	75	65	35	0
Number of Lanes	0	0	0	1	1	0

Approach	WB	NB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		WB
Conflicting Lanes Right	0	1
HCM Control Delay	7.9	7.6
HCM LOS	A	A

Lane	NBLn1	WBLn1
Vol Left, %	100%	54%
Vol Thru, %	0%	46%
Vol Right, %	0%	0%
Sign Control	Stop	Stop
Traffic Vol by Lane	35	140
LT Vol	35	75
Through Vol	0	65
RT Vol	0	0
Lane Flow Rate	35	140
Geometry Grp	1	1
Degree of Util (X)	0.042	0.158
Departure Headway (Hd)	4.344	4.068
Convergence, Y/N	Yes	Yes
Cap	817	882
Service Time	2.411	2.09
HCM Lane V/C Ratio	0.043	0.159
HCM Control Delay	7.6	7.9
HCM Lane LOS	A	A
HCM 95th-tile Q	0.1	0.6

HCM Unsignalized Intersection Capacity Analysis
9: Queen Street East & Port Credit GO PUDO Exit

12/28/2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	90	0	0	50
Future Volume (Veh/h)	0	0	90	0	0	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	90	0	0	50
Pedestrians		57	13		42	
Lane Width (m)		0.0	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	1		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	132				145	189
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132				145	189
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	94
cM capacity (veh/h)	1414				813	828

Direction, Lane #	WB 1	SB 1
Volume Total	90	50
Volume Left	0	0
Volume Right	0	50
cSH	1700	828
Volume to Capacity	0.05	0.06
Queue Length 95th (m)	0.0	1.5
Control Delay (s)	0.0	9.6
Lane LOS		A
Approach Delay (s)	0.0	9.6
Approach LOS		A

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
12: Ann Street & Queen Street East

12/28/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	5	5	0	120	5	0	0	5	5
Future Volume (vph)	0	0	0	5	5	0	120	5	0	0	5	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	5	5	0	120	5	0	0	5	5

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	10	125	10
Volume Left (vph)	5	120	0
Volume Right (vph)	0	0	5
Hadj (s)	0.10	0.39	-0.30
Departure Headway (s)	4.3	4.3	3.7
Degree Utilization, x	0.01	0.15	0.01
Capacity (veh/h)	806	821	947
Control Delay (s)	7.4	8.1	6.8
Approach Delay (s)	7.4	8.1	6.8
Approach LOS	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	5	0	120	5	0	0	5	5
Future Vol, veh/h	0	0	0	5	5	0	120	5	0	0	5	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	12	0	0	0	0	0
Mvmt Flow	0	0	0	5	5	0	120	5	0	0	5	5
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.4	8.1	6.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	96%	50%	0%
Vol Thru, %	4%	50%	50%
Vol Right, %	0%	0%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	125	10	10
LT Vol	120	5	0
Through Vol	5	5	5
RT Vol	0	0	5
Lane Flow Rate	125	10	10
Geometry Grp	1	1	1
Degree of Util (X)	0.15	0.012	0.01
Departure Headway (Hd)	4.321	4.234	3.71
Convergence, Y/N	Yes	Yes	Yes
Cap	834	835	960
Service Time	2.328	2.312	1.749
HCM Lane V/C Ratio	0.15	0.012	0.01
HCM Control Delay	8.1	7.4	6.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0