



BA Group

RADIATOR 340-376R DUFFERIN STREET & 2 MELBOURNE AVENUE MIXED-USE DEVELOPMENT

Urban Transportation Considerations

City of Toronto

Official Plan Amendment, Zoning By-law Amendment, & Site Plan Application

Prepared For: Hullmark Sun Life (376 Dufferin) LP

July 2022



**MOVEMENT
IN URBAN
ENVIRONMENTS**
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1.0 INTRODUCTION

BA Group is retained by Hullmark Sun Life (376 Dufferin) LP to provide urban transportation consulting services in support of a Official Plan Amendment (OPA), Zoning By-law Amendment (ZBA), and Site Plan Application (SPA) to permit a proposed mixed-use redevelopment located at the municipal address 340-376R Dufferin Street and 2 Melbourne Avenue (the “site”).

The site on the southwest corner of the Dufferin Street and Milky Way laneway to the south of Queen Street West. The site is bound by Milky Way to the north, Melbourne Avenue to the south, Dufferin Street to the east and a private laneway to the west. The site location is illustrated in **Figure 1**.

This report forms part of the OPA/ZBA/SPA application submitted to the City to permit the construction of the proposed development, which is to occur over two phases, as described in the report that follows.

A notable element of the application is that elements of the existing structure on the site generally contained within the proposed first phase of the proposal are to be preserved to their heritage attributes. This most notably includes the façade along Dufferin Street starting approximately 27 metres south of Milky Way (laneway) to a point approximately 50 metres to the south as part of the project’s first phase.

1.1 EXISTING SITE

Multiple buildings are contained within the existing site ranging from 1- to 2-storeys. The building located at 340 Dufferin Street has access from Dufferin Street and Melbourne Avenue, while the building located at 342 Dufferin Street only has access from Dufferin Street. These buildings are 2-storey buildings.

The majority of the buildings on the site are older, industrial buildings that have been refurbished on the exterior and converted to commercial uses within the interior. The majority of the site’s parking supply is contained in the parking lot within the interior of the site.

There is a parking lot located within the interior of the site which includes 28 parking spaces. The buildings located at 350 and 358 Dufferin Street have access from the parking lot. The buildings located at 360 and 370 Dufferin Street have access from Dufferin Street and the internal parking lot. This area also includes 22 bicycle parking spaces. Loading is accommodated informally within the parking lot areas.

In addition there are 9 boulevard parking spaces located along Melbourne Avenue at the southern property line of the site which service 340 Dufferin Street. Waste collection bins are stored in a caged area and private refused / recycling collection occurs on Melbourne Avenue.



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FIGURE 1 SITE LOCATION

1.2 PROPOSED DEVELOPMENT CONCEPT

The proposed development concept includes 658 residential dwelling units, 1,936 m² GFA flex commercial space, and 1,518 m² GFA across two development phases. A summary of the proposed development program is included in **Table 1**. The site plan in neighbourhood context is illustrated in **Figure 2** and reduced scale architecture plans of the proposed development are attached in **Appendix A**.

TABLE 1 DEVELOPMENT PROGRAM

Use/Aspect	Type	Units / GFA / Description
Development		
Phase 1 (north)	Residential Dwelling Units	564 units
	Flex Space	1,928.92 m ² GFA
	Flex Commercial Space	833.57 m ² GFA
Phase 2 (south)	Residential Dwelling Units	94 units
	Flex Commercial Space	687.85 m ² GFA
TOTAL (site-wide)	Residential Dwelling Units	658 units
	Flex Space	1,928.92 m ² GFA
	Flex Commercial Space	1,521.42 m ² GFA
Site Plan / Facilities		
Vehicular Parking	Resident Parking	116 parking spaces (Phase 1) 54 parking spaces (Phase 2) 170 parking spaces (TOTAL)
	Commercial/Visitor Parking	38 parking spaces (Phase 1) 24 parking spaces (Phase 2) 62 parking spaces (TOTAL)
	Total	232 parking spaces
	Underground Parking Locations	Commercial Parking: P1 level (Phase 1 & 2) Resident Parking: P1-P2 levels (Phase 1 & 2)
Bicycle Parking	Residential – Long-Term	593 bicycle parking spaces
	Residential – Short-Term	66 bicycle parking spaces
	Non-Residential – Long-Term	8 bicycle parking spaces
	Non-Residential – Short-Term	15 bicycle parking spaces
	Total	682 bicycle parking spaces
Loading	1 Type 'G' loading space & 1 Type 'B' loading space, accessed directly from Milky Way (Phase 1) 2 underground Type 'C' loading spaces, accessed within parking garage (Phase 2)	
Site Vehicle Access	Vehicle accessed (passenger vehicles and loading) taken from Milky Way	

Notes:

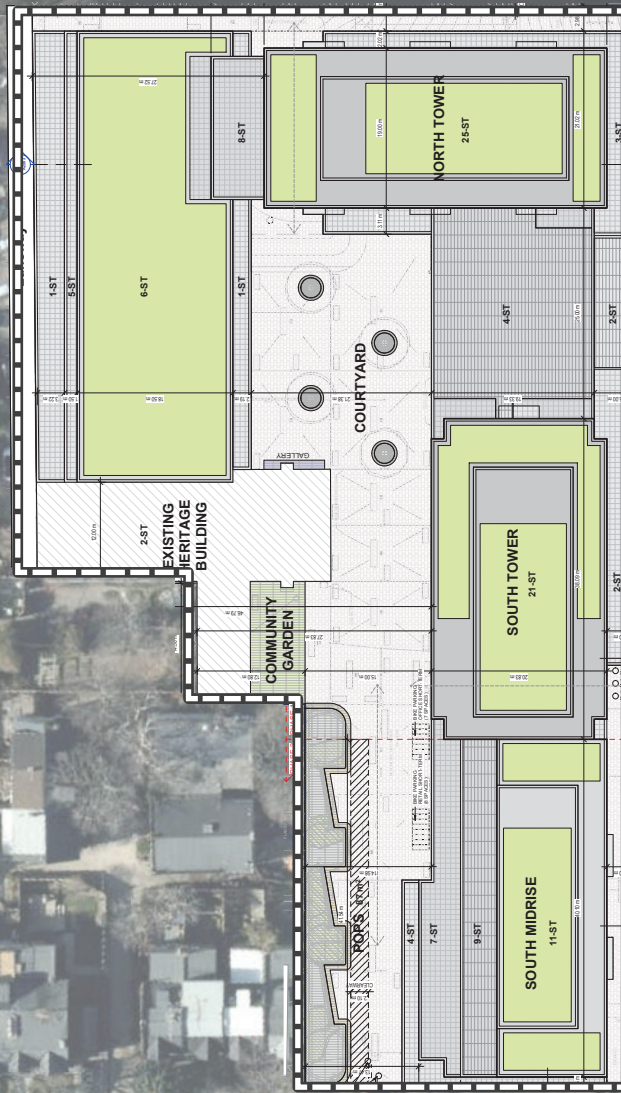
1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.



QUEEN ST W

MILKY WAY

GWYNNE AVE



DUFFERIN ST

MELBOURNE AVENUE

LEGEND
 - - - - - Site Location

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FIGURE 2 SITE PLAN

1.3 THIS STUDY

BA Group has undertaken a review of the key transportation-related aspects of the proposed OPA/ZBA/SPA application being submitted to the City of Toronto to permit the proposed development as planned. This report provides a review of the following:

- A review of supporting site transportation-related infrastructure;
- A review of the existing and evolving transportation context within the vicinity of the site;
- An outline of the potential Transportation Demand Management measures to be adopted for the proposed development;
- A review of the transportation elements of the proposed development (i.e. site access, parking, loading, and bicycle parking);
- A review of existing and future traffic activity forecasts in the study area considering new area development activity;
- An assessment of the traffic operations at intersections in the area under existing and future conditions;
- A review of forecast active transport and transit volumes levels related to the development of the proposal and commentary on the ability of area mobility networks to accommodate such demands; and
- A review of how the development responds to Toronto Green Standards trip reduction targets.

2.0 EVOLVING AREA TRANSPORTATION CONTEXT

2.1 AREA STREET NETWORK

The site is located on Dufferin Street and affords itself to excellent connectivity to the surrounding road network. Dufferin Street provides north-south connectivity and Queen Street West provides east-west connectivity.

Figure 3 illustrates the classification of the existing area road network. **Figure 4** illustrates the existing lane configuration and traffic controls. **Figure 5** shows the future lane configurations and traffic control.

Dufferin Street is a north-south oriented arterial road extending from Lakeshore Boulevard West in the south to, and beyond, Highway 401 in the north. Within the vicinity of the site, Dufferin Street is classified as a minor arterial road and has a basic four-lane cross-section. On-street parking is not permitted on the east side of the street at any time while paid parking is permitted on the west side during specified time periods. The intersection of Queen Street West and Dufferin Street operates as a four-way signalized intersection and is located beneath the CN/GO railway bridge. Streetcar tracks are located within the centre lanes of Dufferin Street for short turn / emergency purposes; this section is not part of a scheduled TTC route.

Queen Street West is an east-west oriented major arterial extending east from Roncesvalles Avenue / the Queensway / King Street West intersection to Yonge Street. Queen Street West has a four-lane cross-section, with shared left and right turn lanes at intersections where turning is permitted. Paid parking is permitted on the north and south sides during specified time periods. Within the vicinity of the site, there are two signalized intersections along Queen Street West at Dufferin Street and Brock Avenue. All turning movements are permitted at each intersection. Streetcar tracks are located within the centre lanes of Queen Street West accommodating TTC Route 501.

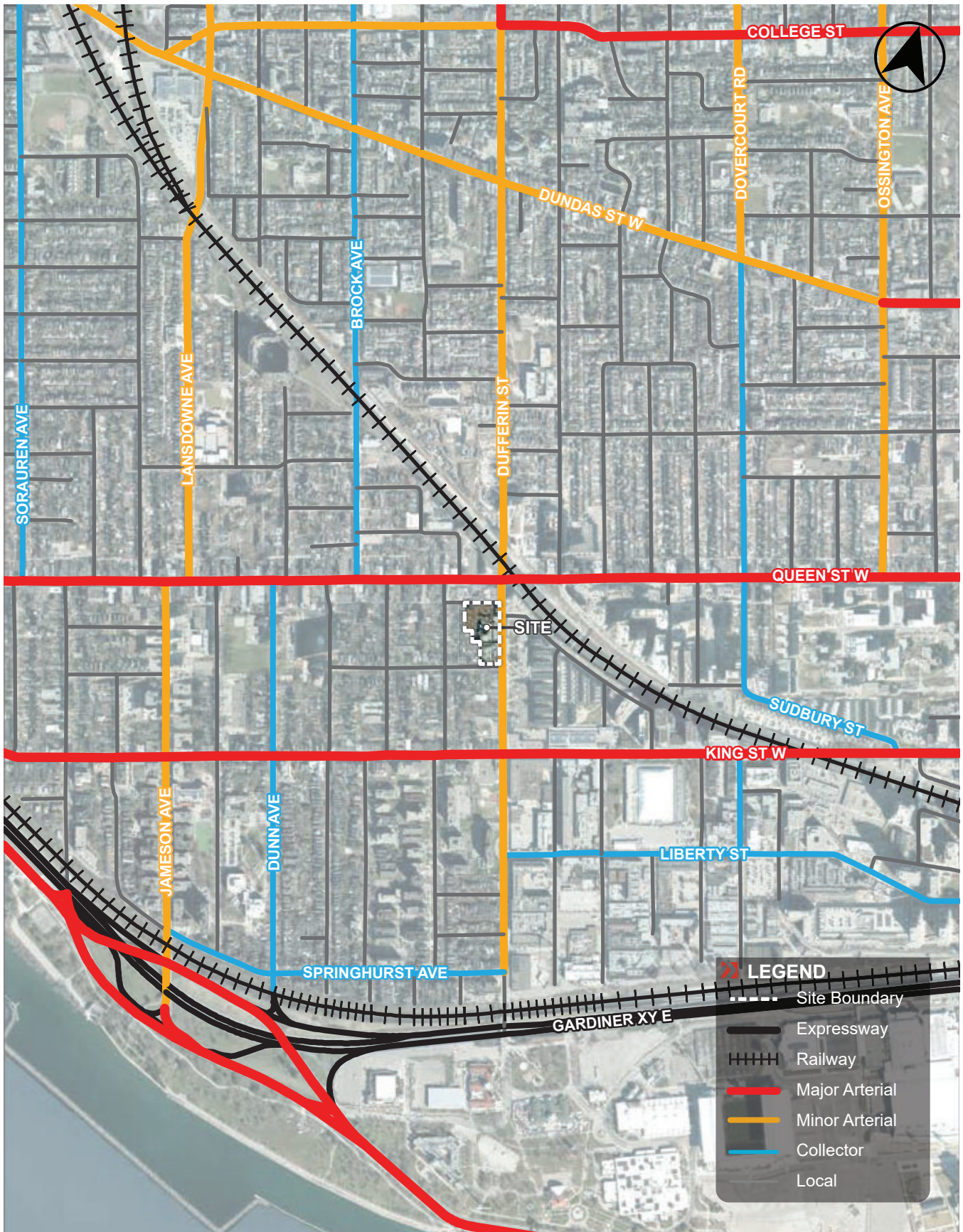
King Street West is an east-west oriented major arterial extending east from Roncesvalles Avenue / the Queensway / King Street West intersection to Yonge Street. King Street West has a four-lane cross-section, with shared left and right turn lanes at intersections where turning is permitted. Paid parking is permitted on the north and south sides during specified time periods. Within the vicinity of the site, there is a signalized intersections at King Street West and Dufferin Street. All turning movements are permitted at each intersection. Streetcar tracks are located within the centre lanes of Queen Street West accommodating TTC Route 504; during specified peak times, the centre streetcar lanes are reserved for streetcars and taxis.

Melbourne Avenue is an east-west oriented local road extending west from Dufferin Street to Cowan Avenue. In the vicinity of the site, Melbourne Avenue is a two-way two-lane cross-section. On-street parking is permitted on the north side of the street; a permit is required to park overnight. The Melbourne Avenue / Dufferin Street intersection has a pedestrian crossover (“PXO”); the Melbourne Avenue approach is stop-controlled.

Milky Way is an east-west laneway extending west from Dufferin Street to Cowan Avenue. No parking is permitted in the laneway.

Gwynne Avenue is a north-south oriented local road that operates one-way southbound from Queen Street West to King Street West. On-street parking is permitted with the exception of winter months (December to March), alternating sides during months where it is permitted, limited to 1 hour Monday-Friday during the daytime, and requiring a permit to park overnight. It connects Queen Street West at an unsignalized side street stop-controlled intersection.

Joe Schuster Way is a northwest-southeast oriented local road extending from Dufferin Street southeast to King Street West. On-street parking is intermittently permitted. It connects to Dufferin Street at an unsignalized side street stop-controlled intersection with dedicated left and right turn lanes.



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FIGURE 3 EXISTING STREET NETWORK

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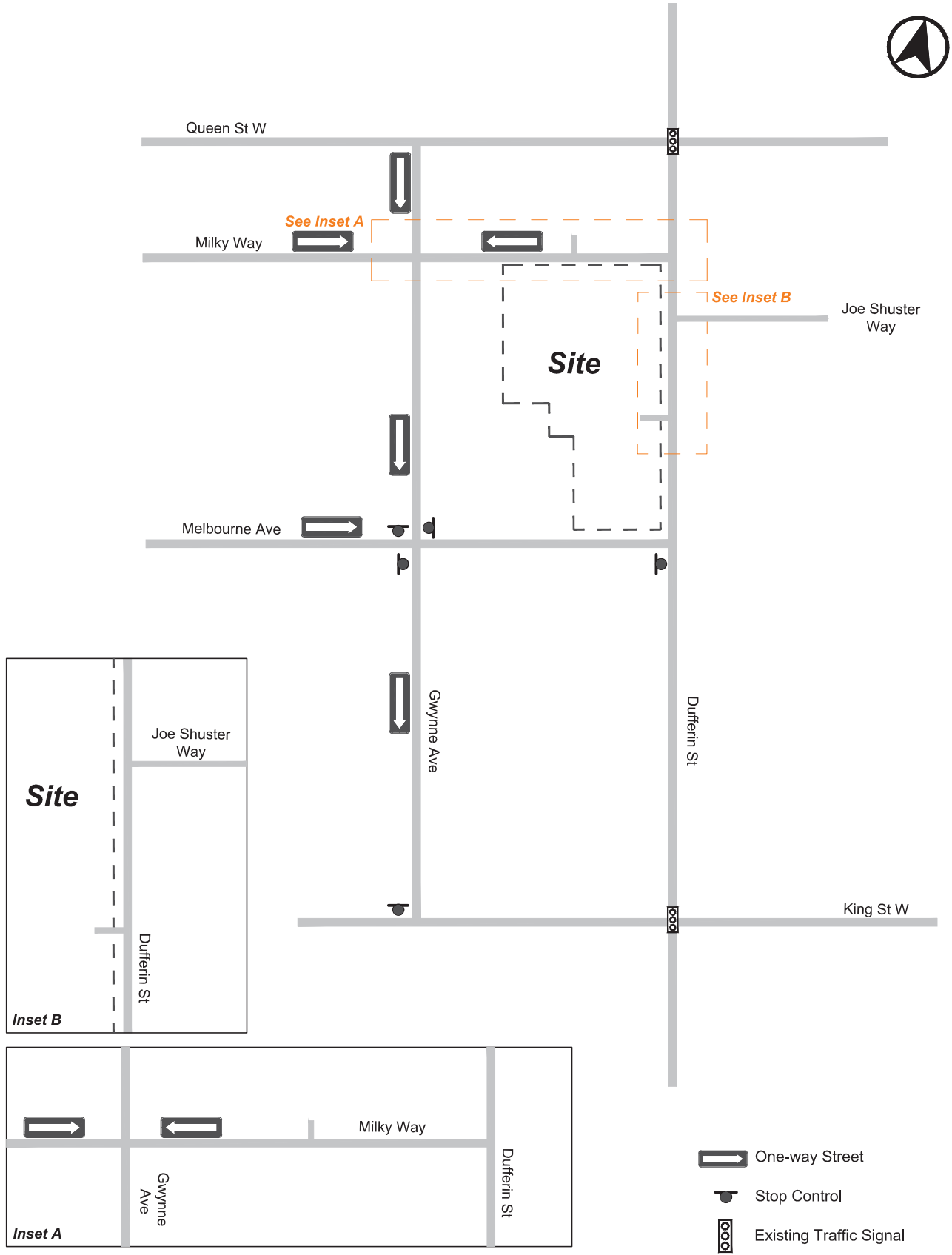


FIGURE 4 EXISTING LANE CONFIGURATION & TRAFFIC CONTROL

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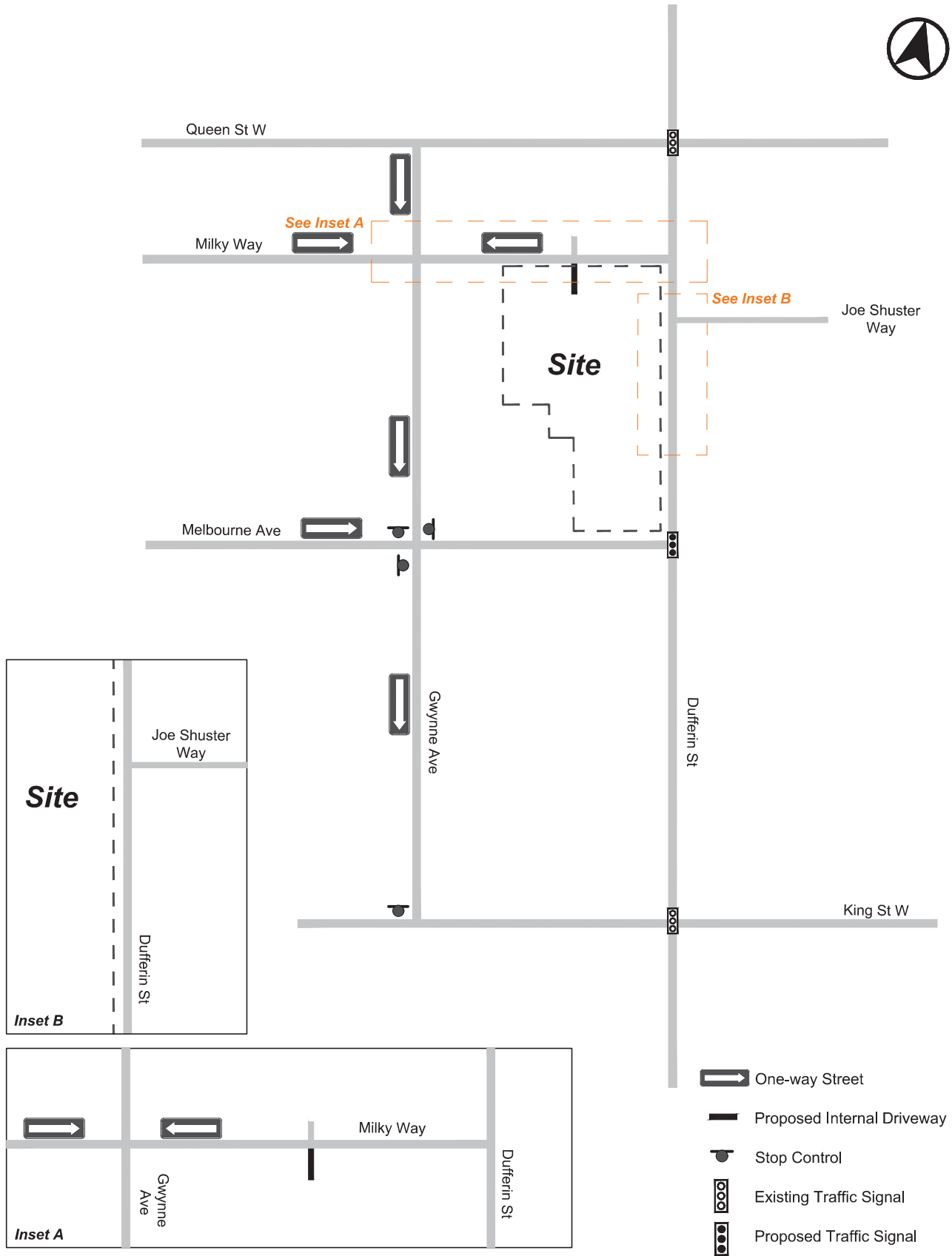


FIGURE 5 FUTURE LANE CONFIGURATION & TRAFFIC CONTROL

2.2 AREA TRANSIT NETWORK

2.2.1 Existing Transit

The site is very well located relative to public transit. Several Toronto Transit Commission (TTC) streetcar and express bus routes operate within 250 metres (2 – 3 minute walk) of the proposed development site. The surface transit routes servicing the site are described below and site are illustrated in **Figure 6**.

The **501 Queen Streetcar** route operates between Long Branch GO Station in the west (near the Toronto-Mississauga boarder) and Neville Park in the east. The route travels in an east-west direction along Queen Street with stop locations approximately 125 metres from the Site. The route offers surface transit connections to the Yonge-University-Spadina Subway line at Osgoode and Queen Stations. The route is part of the 10 Minute Network and operates 10 minutes or better, all day, everyday. The 501 streetcar route operates at 4-5 minute headways during the peak periods.

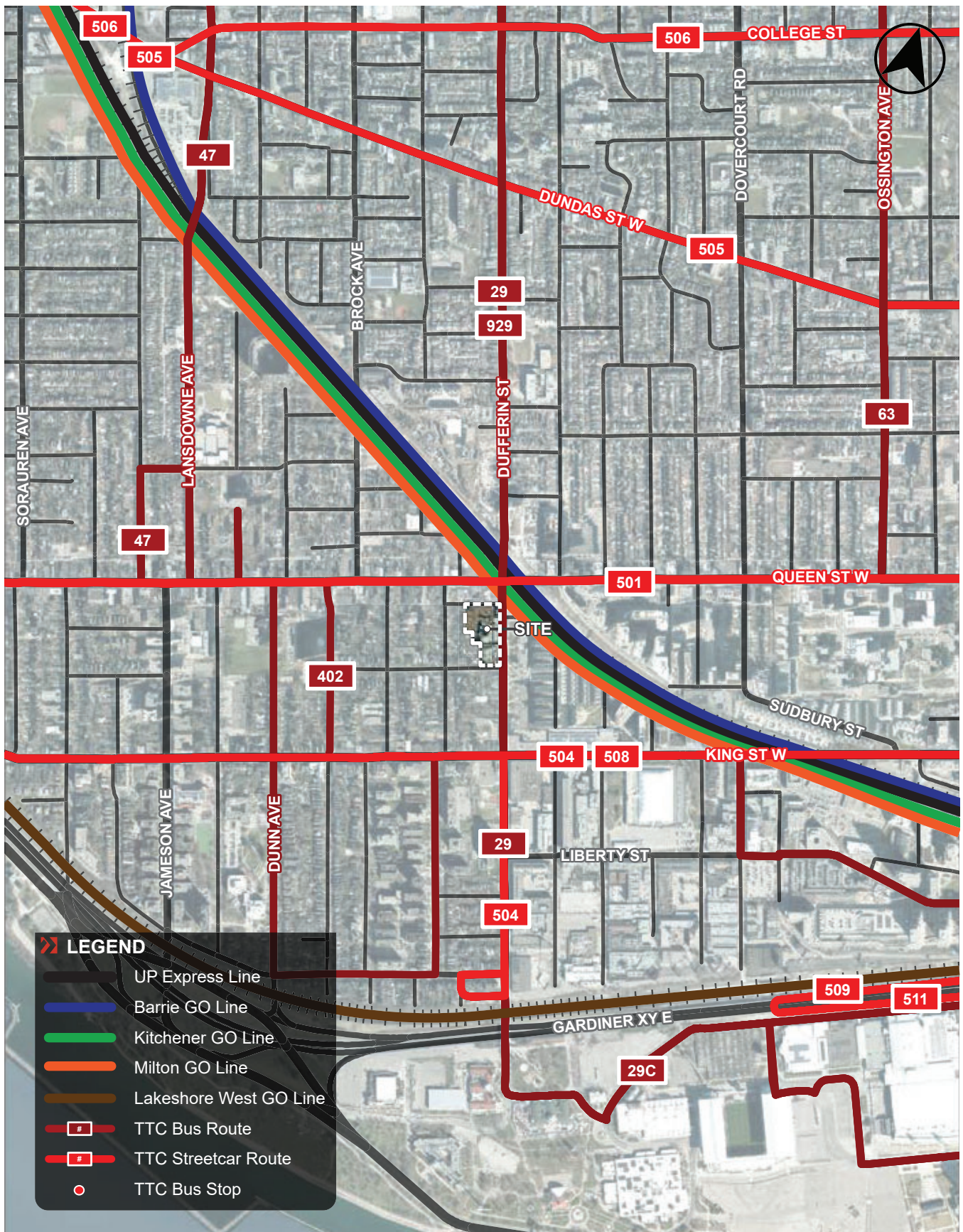
The **504 King Streetcar** route operates between Dundas West and Broaview Stations on the Bloor-Danforth Subway line. The route travels generally in an east-west direction along King Street approximately 260 metres south of the Site. The route offers surface transit connections to the Yonge-University-Spadina Subway line at St. Andrew and King Stations. The route is part of the 10 Minute Network and operates 10 minutes or better, all day, everyday. The 504 streetcar route operates at 3-5 minute headways during the peak hours.

The **29 Dufferin Bus** route operates between Princes' Gates Loop in the south to Wilson Station in the north. The route travels generally in a north-south direction along Dufferin Street with stop locations approximately 125 metres from the Site. The route offers a transit connection to the Yonge-University-Spadina Subway line surface at Wilson Station and a surface transit connection to the Bloor-Danforth Subway line at Dufferin Station. The route is part of the 10 Minute Network and operates 10 minutes or better, all day, everyday. The 29 bus route operates at 7-8 minute headways during the peak hours.

The **929 Dufferin Express Bus** operates similarly to the 29 Dufferin Bus route, between Dufferin Gate Loop in the south and Wilson Station in the north. This branch operates during the peak periods, midday and early evening, from Monday to Friday only. The bus route also has fewer stops than the regular 29 route with stops at the major intersections. The 929 bus route operates at 8-9 minute headways during the peak periods.

As a result, the subject Site is well serviced by public transit options that provide frequent and convenient access to local destinations and seamless flow between modes of travel.

It is also important to note that the site is approximately 950 metres or an 18 minute walk from the Exhibition GO Station and Exhibition Loop. These stops provide the site with access to an additional streetcar routes (**509 Harbourfront**) and the Lakeshore West GO Transit line.



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FIGURE 6 EXISTING TRANSIT CONTEXT

2.2.2 Planned Transit Improvements

There are several future transit improvements planned that will further enhance transit accessibility in the west downtown area including enhanced GO Transit services and the future Ontario Line. The planned transit projects within the site vicinity are discussed further below and are illustrated in **Figure 7**.

Regional Express Rail

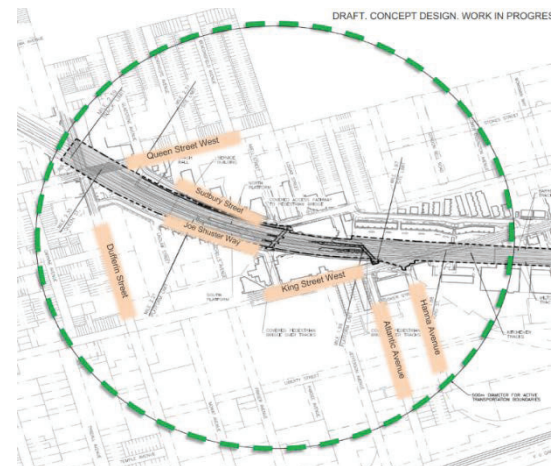
Regional Express Rail (RER) is a planned frequency, network, and speed enhancement to the regional transit network, to be developed as part of the GO Expansion On-Corridor Works program. Comprised of GO Rail electrification, new stations, and more frequent, all-day services, RER buildout will provide regional transit users with faster, easily accessible, and consistent services, even beyond peak hours.

As the site is well situated in relation to the regional transit network (all currently accessed at Union Station), RER will provide direct benefits for those frequenting the site through the Lakeshore West, Kitchener, Barrie, Stouffville, and Lakeshore East GO lines. These lines will offer service every 15 minutes or better during all times of day, 7 days a week. This will enhance service on the Lakeshore West GO line that can be accessed at the Exhibition GO Station, an approximate 18 minute walk from the Site.

In tandem with the RER plan is **SmartTrack Stations Program**, an urban enhancement to the advancing GO RER network which will add five (5) new stations to the Kitchener, Barrie, Stouffville, and Lakeshore East GO rail corridors in Toronto. The five new stops will be St. Clair-Old Weston, King-Liberty, East Harbour, Bloor-Lansdowne, and Finch-Kennedy.

King-Liberty GO Station

As part of the SmartTrack Stations Program, King-Liberty GO Station is proposed along the Kitchener GO Line and will be located on King Street West near Hanna Avenue and Atlantic Avenue with station access from King Street West, Joe Shuster Way, and Sudbury Street, with a connection to the West Toronto Railpath south of Queen Street West; the station will be an approximately 300m walk from the site along Joe Shuster Way. A diagram presented in a Metrolinx public meeting on November 18, 2021 is provided to the right.



Source:

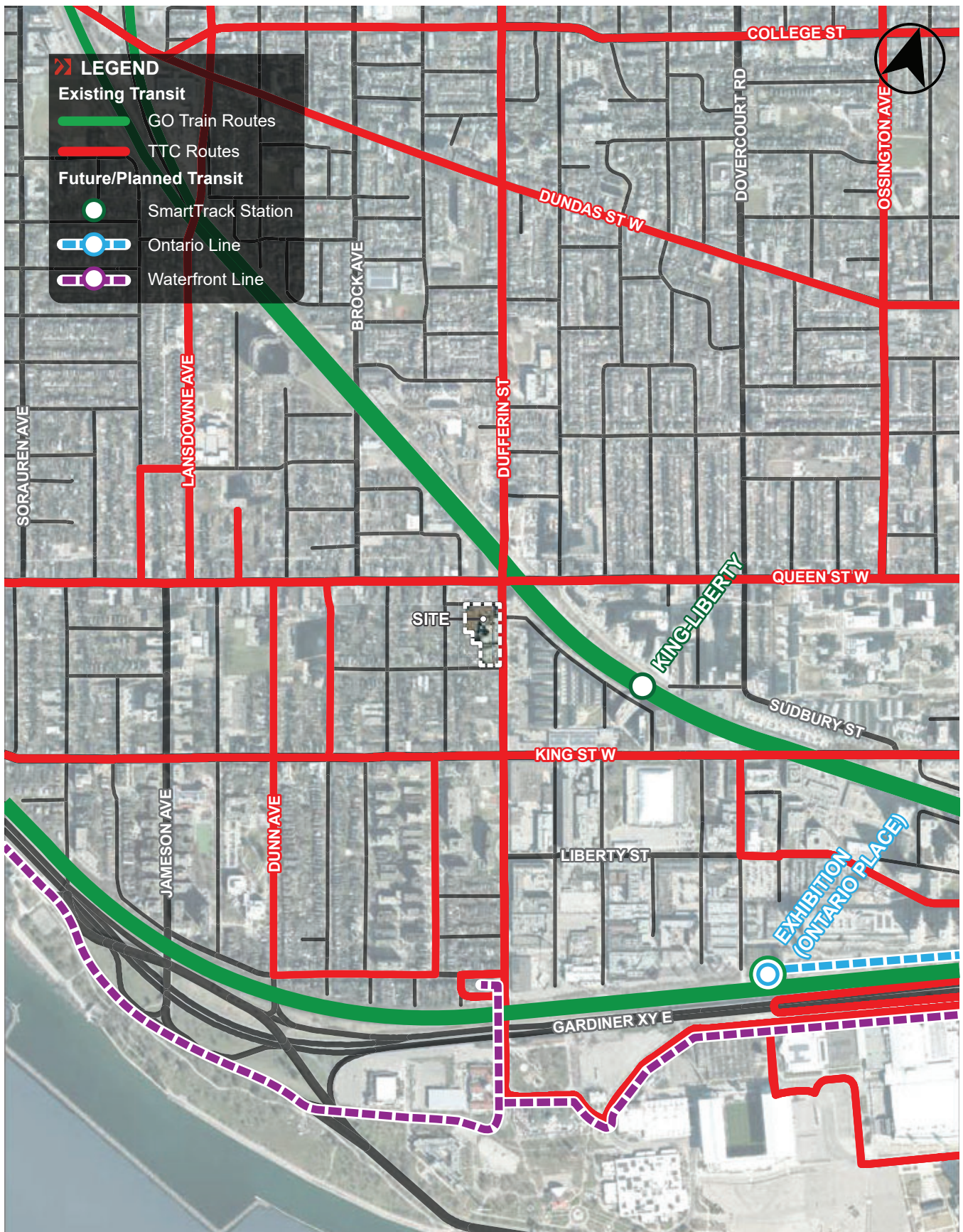
https://www.metrolinxengage.com/sites/default/files/st_king-liberty_voh_nov_18_final1.pdf

Ontario Line

The Ontario Line is a planned rapid transit line announced in April 2019, and planned to open by 2030, that will provide an alternative route into the Toronto Downtown. The planned alignment of the route is from Exhibition Place (or Ontario Place) in the west to the Ontario Science Centre in the east and north where it will connect with the under-construction Eglinton Crosstown LRT. The proposed line will provide the Site with convenient access to higher-order transit, which has connections to GO Transit services, Line 1, and Line 2. The line will have 15 stations (Exhibition Station will be the closest to the site) and is planned to have headways as frequent as every 90 seconds during rush hour.

RapidTO

The City of Toronto has plans for the Dufferin Street corridor to introduce, at an unspecified future date, dedicated bus lanes to accommodate TTC routes; this program is known as "RapidTO".



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FIGURE 7 PLANNED TRANSIT CONTEXT

2.3 CYCLING

2.3.1 Existing Cycling Infrastructure

Within the local site vicinity, Brock Avenue is a City of Toronto cycling route extending from Bloor Street West in the north to Queen Street West in the south. The route features a combination of bike lanes and “sharrows”. The most continuous cycling route, the Waterfront multi-use trail, is located approximately 1.2 km from the site.

The existing and planned cycling infrastructure network is illustrated in **Figure 8**.

2.3.2 Planned Cycling Network Improvements

A series of planned infrastructure investments will benefit the “reach” of the cycling network in proximity to the site, expanding the dedicated cycling infrastructure. Planned connections and improvements have been identified by the City of Toronto and have been addressed through the Cycling Network Ten Year Plan (2016), a policy document that outlines proposed cycling infrastructure improvements in Toronto over a ten-year period (2016-2025). Under the Ten Year Plan, a number of cycling infrastructure improvements are planned within the vicinity of the site, including bike lanes on the following streets; Dowling Avenue, Lansdowne Avenue, Gladstone Avenue, Argyle Street, Dovercourt Road and Springhurst Avenue.

In 2019, Toronto City Council approved the Cycling Network Plan Update, which provided a new timeframe to improve road work coordination, accountability and implementation following review of the Ten Year Cycling Network Plan. The current period Near-Term Implementation Program (2022-2024) contains plans to upgrade existing area cycling infrastructure and to study corridors in the vicinity of the Site for future cycling routes.

A number of cycling infrastructure improvements are planned within the vicinity of the site as part of the Implementation Plan, including cycling infrastructure on the following streets; Gladstone Avenue and Argyle Street. While some of the Ten Year Plan cycling improvements do not have status in the Near-Term Implementation Plan, these planned improvements may inform future Implementation Plans and will be carried out should road work on these corridors occur.

An important route to note is the proposed West Toronto Railpath multi-use trail, an extension of the existing trail to the northwest, is noted as being “Underway” in the 2022-2024 plan. This trail would extend south from Dundas Street West and Sterling Road to Abell Street and Sudbury Street. The trail will be routed adjacent to the Kitchener GO Rail Corridor. The first phase of the multi-use trail was completed in 2008 from Cariboo Avenue to the Dundas Street West overpass. The detailed design phase of the project is being coordinated with other projects in the area, including the Kitchen Rail Corridor Expansion and the King-Liberty SmartTrack Station design. The route would pass over the Dufferin Street / Queen Street intersection in close proximity to the site. Construction is scheduled to begin in 2022.

In addition, as part of the “RapidTO” dedicated bus lane implementation on Dufferin Street (see **Section 2.2.2**) it is possible that the painted lanes will be shared with cyclists. One RapidTO implementation has occurred in Toronto thus far – Eglinton Avenue East in Scarborough – which includes shared bus/bicycle usage (cars are excluded) of red painted lanes.

These routes will provide new north-south and east-west connections to the wider cycling network, planned and existing. It will make cycling to and from the Site more feasible.



FIGURE 8 EXISTING & PLANNED CYCLING FACILITIES

2.4 AREA PEDESTRIAN CONTEXT

Surrounding Area

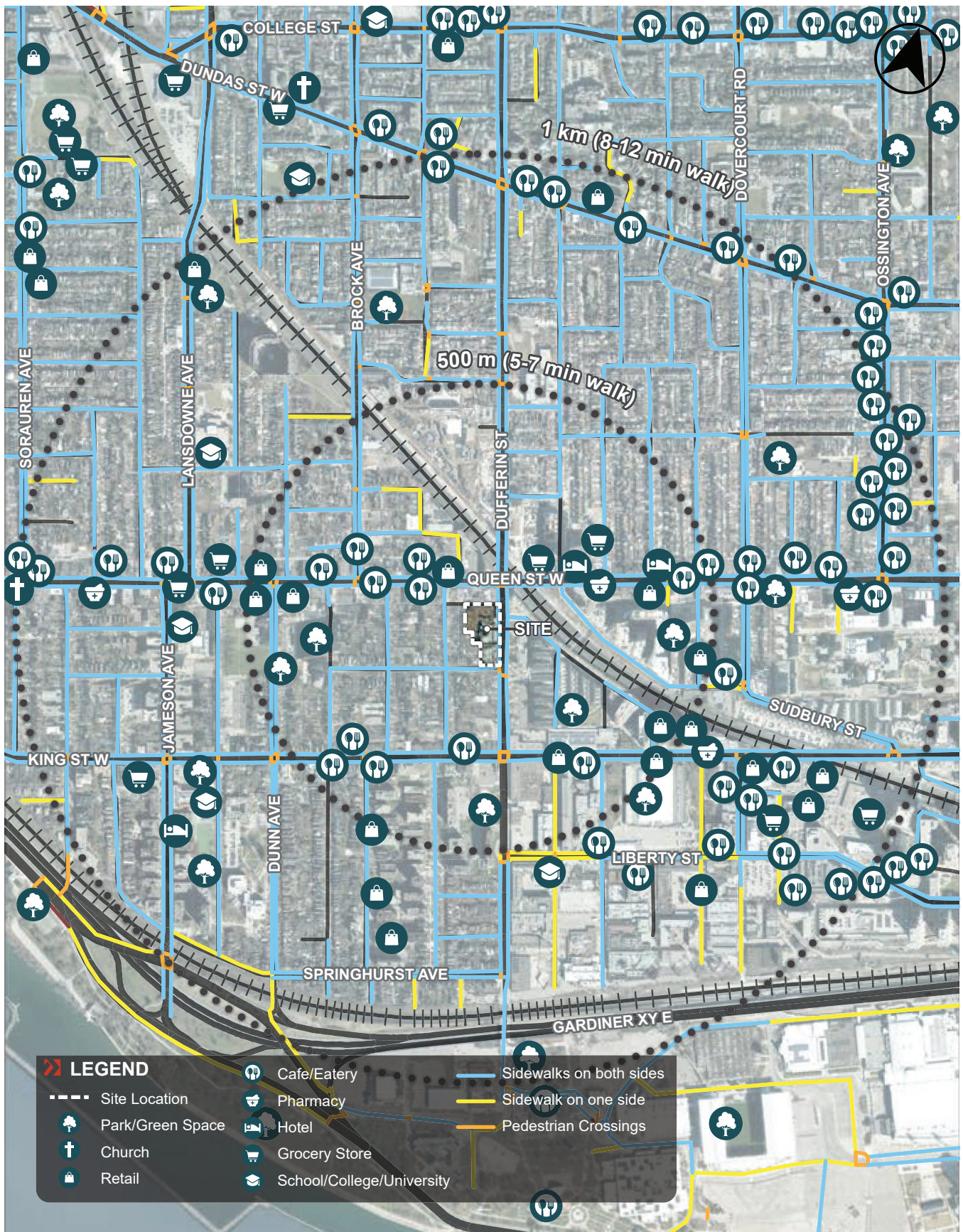
The site is located within walking distance of numerous amenities, restaurants, a library, several community centres, religious centres, tourist attractions, and more. This proximity provides substantial opportunity for future residents and visitors to travel on foot while accessing the local range of destinations. The locations of area pedestrian designations are illustrated in **Figure 9**.

Pedestrian Crossings

In the vicinity of the site, the Dufferin Street / Queen Street West intersection is signalized, facilitating safe and efficient pedestrian movement. Further, there is a formal pedestrian crossover (PXO) located at the south leg of the Dufferin Street / Melbourne Avenue unsignalized intersection; it is proposed to replace this pedestrian crossing by signalizing the intersection as part of this application.

Sidewalks

All local area streets (with the exception of laneways) include sidewalks on both sides of the street to facilitate walking activity. It is proposed to widen the sidewalk along the Dufferin Street façade as part of this project.



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FIGURE 9 AREA PEDESTRIAN DESTINATIONS

2.5 AREA SHARED MOBILITY SERVICES

The location of area car-share vehicles and Toronto Bike Share stations are illustrated in **Figure 10**.

2.5.1 Car-Share Options

Car sharing across central Toronto provides a low-commitment transportation alternative for automobile use. The success and influence of car-share programs, which were only in their infancy a decade ago, now provide convenient, non-private automobile travel opportunities for thousands of residents, employees, and visitors of the City of Toronto.

There are three primary car sharing companies operating in Toronto – ZipCar, Enterprise CarShare, and CommunAuto – and each offers their members access to vehicles conveniently located around the City. Zipcar is the world’s largest car sharing program and entered into the Toronto market in 2006 with approximately 100 vehicles; it has since grown the fleet to approximately 700 vehicles. Enterprise CarShare (formerly AutoShare) was founded in 1998 and currently has over 12,000 members and 400 vehicles at over 150 locations across the City. Vehicles rented from any of these programs must be picked up and returned from the same parking space.

In April 2018, City Council approved a Free-Floating Car-Share Pilot. Unlike the other car-share programs, a free-floating car-sharing program allows its users to undertake one-way trips that begin in one location and terminates in another location. Users park the vehicles on the street near their final destination and the vehicles do not have a designated space where they need to be returned to at the end of the trip.

The Quebec-based car-sharing platform, Communauto, was the first participating company to receive a car-sharing pilot permit and it began its Toronto operations in November 2018. Communauto FLEX entered the Toronto market with 200 cars serving an approximate 50 square kilometre area. If the pilot project is approved after the initial 18 months of operation, Communauto has plans to expand to 500 vehicles covering 100 square kilometres. City Council made the program permanent in June 2020.

Within a 500-metre radius of the site, there are 10 car-share vehicles (4 ZipCar and 6 Enterprise CarShare) located within walking distance to the site that are available to be used on demand by Site members and visitors, in addition to Communauto vehicles that may be available at any given time dependent on their location.

2.5.2 Bike Share Toronto

The Bike Share Toronto program provides flexible cycling options within the City of Toronto with bicycles that can be used on a short term basis and picked up/dropped off at different stations across the City. Recent expansions include the introduction of 300 pedal-assist e-bikes and 10 e-bike charging stations in 2020 and the launch of a 45-minute ride membership option in 2021. The fleet now has 6,850 bikes, 300 e-bikes, and 625 stations across urban parts of the City. The 2022-2025 Growth Plan will improve the reach to 1,000 stations in all 25 wards of the City.

Within a 500-metre radius of the site, there are nine (9) Bike Share Toronto stations which collectively hold approximately 155 bicycles.

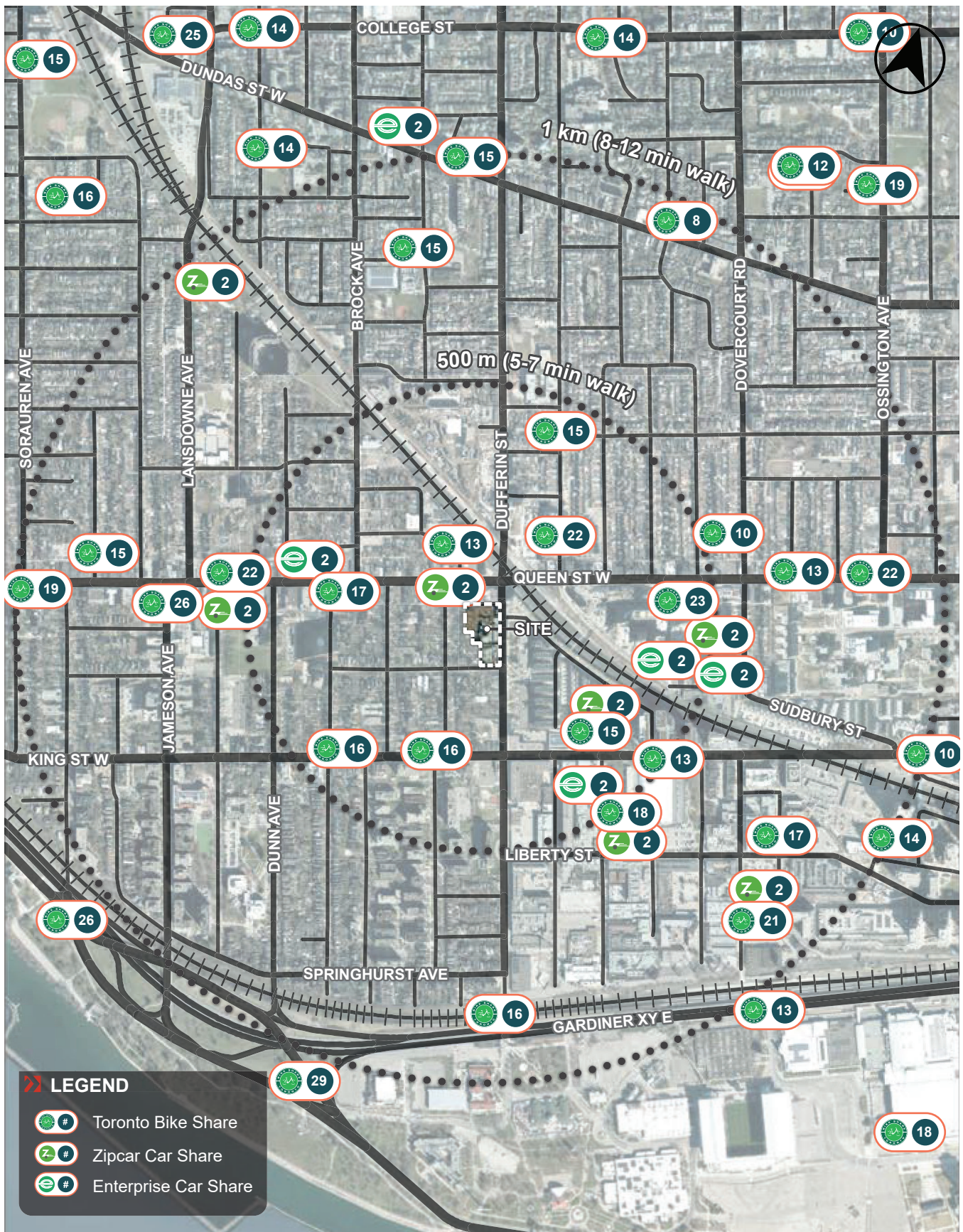


FIGURE 10 AREA CAR-SHARE & TORONTO BIKE SHARE FACILITIES

3.0 TRANSPORTATION DEMAND MANAGEMENT

A suite of transportation demand management measures are proposed as part of a 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.

Generally, this TDM Plan has three primary objectives:

1. Reduce car dependence and the need for everyday single-occupant vehicle (SOV) travel;
2. Make it easy and attractive for people to walk and cycle; and
3. Promote transit and low-carbon alternatives in comparison to car ownership and SOV travel.

Specifically, the primary goal is to reduce the overall reliance on SOV's while promoting the use of more active and sustainable modes of transportation.

A low parking supply is proposed as part of the overall demand management strategy. A reduced parking supply assists in reducing the attractiveness of driving to / from the site and responds to the reduced need for parking that will result from the successful advancement of the transportation demand management (TDM) strategies implemented on the site. In other areas of the City experiencing substantial growth, there has been the recognition that robust TDM plans support reduced vehicle use and ownership.

In addition to the proposed reduction in parking supply, the proposed TDM measures will include alternative transportation offerings, property management, and operational policies, each of which have the goal of redistributing and reducing the travel demand of the project.

3.1 TDM STRATEGIES AND INITIATIVES

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 2**.

TABLE 2 POTENTIAL AND RECOMMENDED SITE TDM MEASURES

TDM Measure	Overview	Impact
Cycling Related		
Local Cycling Network Infrastructure Funding Contribution	A funding contribution to the Toronto bicycle infrastructure fund will be considered.	Improved cycling convenience.
Bike Share Toronto Infrastructure Funding Contribution	A funding contribution to the Bike Share Toronto bicycle infrastructure fund will be considered; a Bike Share station may be located on site if desired by Bike Share Toronto.	Improved cycling convenience.
Bicycle Repair Station	Bike repair station(s) will be provided within the secure long-term bicycle parking rooms of the underground parking garage. This allows residents of the proposed building to change tires, inflate tires, adjust seat, etc.	Improved cycling convenience.
Bicycle Parking	Bicycle parking will be provided for the proposed buildings to meet Zoning By-law and Toronto Green Standard (TGS) requirements, as is outlined in Section 4.3 of this report.	Improved cycling convenience.
Transit Related		
Travel Information Brochures	Provide a travel information brochure to residents providing an overview of transportation (walk, cycle, car-share, transit) in the area.	Identifies mobility choices in the area.
Automobile Infrastructure		
Lower Parking Rates	A reduced parking rate on-site is proposed, as is outlined in Section 4.2 of this report.	Lower vehicle numbers and related traffic generated by the site.

4.0 SITE PLAN REVIEW

4.1 SITE PLAN ACCESS & DESIGN

4.1.1 Vehicular Site Access

Vehicular access to the site is taken directly from Milky Way, the laneway forming the northern boundary to the site. Milky Way can be accessed from Gwynne Avenue to the west and Dufferin Street to the east.

- The at-grade consolidated loading facility, to be built as part of Phase 1, is accessed from Milky Way. Loading vehicles that access the facility (i.e. refuse collection vehicles, delivery vehicles, service vehicles, etc.) will utilize the laneway to complete manoeuvres.
- The 2-level underground parking garage, to be built as part of Phase 1, is accessed via a ramp to the underground accessed directly from Milky Way, west of the loading facility. The underground parking garage includes resident and commercial parking. In addition, an underground Type 'C' loading space will be provided as part of Phase 2 at the south end of the site, within the underground parking garage on the P1 level. As a result, the ramp to the underground parking garage is designed at sufficient width and allowing sufficient clear height to accommodate cube vans and smaller service vehicles. The clear height is maintained across the path to the Type 'C' loading space.

Milky Way will be widened to 6 metres to meet the contemporary city standard and accommodate all anticipated vehicle activity.

4.1.2 Functional Design & Melbourne Avenue / Dufferin Street Intersection

A conceptual functional design plan, including the signalization of Dufferin Street / Melbourne Avenue intersection and changes to the Dufferin Street site frontage, are included in **Appendix B**. It is noted that the signalization of the Dufferin Street / Melbourne Avenue intersection was requested by City of Toronto Transportation Services staff as part of the pre-application process for this project.

4.1.3 Pedestrian Access & Design

A number of improvements are proposed that have been conceptualized to improve conditions for pedestrians both for future residents, employees, and visitors to the site, and for neighbourhood passers-by.

- It is proposed to expand the sidewalk on Dufferin Street to 3.7-3.8m as part of Phase 1 throughout the site extent by reducing the width of the Dufferin Street curb lane to 3.0m. Due to heritage façade retention included in Phase 1 of the project, it is not possible to expand the sidewalk to the west. The expanded sidewalk will represent an improvement over the existing condition by providing more space for pedestrian activity and streetscape design elements. In Phase 2, the building will include a greater setback and therefore, a larger width sidewalk area.
- It is proposed to replace the pedestrian crossover (PXO) located at the Dufferin Street / Melbourne Avenue intersection; it is proposed to convert it to a signalized intersection. The provision of a traffic signal that replaces a PXO is in keeping with City of Toronto policy to upgrade and replace PXO's where possible. The introduction of a traffic signal in this location facilitates urban signal spacing (relative to Queen Street West) and better facilitates pedestrian and cycling crossings.

4.2 VEHICULAR PARKING CONSIDERATIONS

4.2.1 Minimum Vehicular Parking Requirements

Zoning By-law 569-2013 & Site-Specific By-law 160-2022

Recently, Site-specific By-law 160-2022 was approved and is directly applicable to the site lands. While it contains a minimum parking requirement (27 parking spaces), that is directly applicable to a set of land uses that currently exist on the lot. As the proposed mixed-use redevelopment is an entirely new development scheme, this parking requirement is not considered to be applicable.

More relevantly, By-law 160-2022 brought the site under Zoning By-law 569-2013, and in particular, entered the site into Policy Area 1 in the Policy Area Overlay Map (995.10.1). As a result, minimum parking requirements of City of Toronto Zoning By-law 569-2013, Policy Area 1 are applicable to the site, and are applied to the development program below in **Table 3**.

TABLE 3 ZONING BY-LAW 569-2013 / 160-2022 MINIMUM PARKING REQUIREMENTS

Use	Units/ GFA	Minimum Requirement (Rate)	Minimum Requirement (Spaces)	Minimum Requirement w/ Sharing (Spaces)		
				AM	PM	Evening
Studio	12 units	0.3 sps/unit	3 sps	100%	100%	100%
				3 sps	3 sps	3 sps
1-bedroom	424 units	0.5 sps/unit	212 sps	100%	100%	100%
				212 sps	212 sps	212 sps
2-bedroom	156 units	0.8 sps/unit	124 sps	100%	100%	100%
				124 sps	124 sps	124 sps
3-bedroom	66 units	1.0 sps/unit	66 sps	100%	100%	100%
				66 sps	66 sps	66 sps
Resident Sub-total	658 units	0.62 sps/unit (blended)	405 sps	405 sps	405 sps	405 sps
Residential Visitors	658 units	0.1 sps/unit	65 sps	10%	35%	100%
				6 sps	22 sps	65 sps
Office ²	1,928.92 m ² GFA	0.35 sps / 100 m ² GFA	6 sps	100%	60%	0%
				6 sps	3 sps	0 sps
Retail ³	1,521.42 m ² GFA	1.0 sps / 100 m ² GFA	15 sps	20%	100%	100%
				3 sps	15 sps	17 sps
Non-Resident Sub-total			86 sps	15 sps	40 sps	80 sps
SITE TOTAL			491 sps	430 sps	445 sps	485 sps

Notes:

1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.
2. The proposed flex space is considered as office for the purpose of calculating minimum parking requirements.
3. The proposed flex/commercial space is considered as retail for the purpose of calculating minimum parking requirements.

A total of 485 parking spaces are required inclusive of 405 resident parking spaces and 80 shared non-resident parking spaces.

City of Toronto By-law 89-2022

The City of Toronto has signalled a change in policy direction regarding its Zoning By-law and minimum parking requirements. In December 2021, after approximately a year of study and consultation, City Council adopted the *Review of Parking Requirements for New Development* which recommended the elimination of minimum parking requirements for most land uses, city-wide, replacing them with maximum parking standards within Zoning By-law 569-2013. In February 2022, By-law 89-2022 was published to amend Zoning By-law 569-2013 with the proposed changes, which included adjusted minimum accessible parking requirements for most land uses. By-law 89-2022 was appealed during the 20-day appeal period mandated by the provincial Planning Act and remains under appeal.

As such, while By-law 89-2022 (since amended by By-law 125-2022) is considered to be 'applicable law', the minimum parking requirements of Zoning By-law 569-2013 (due to By-law 160-2022) are also considered to be simultaneously applicable due to the appeal. Both are considered as part of this application.

Therefore, the application of the new parking standards included within By-law 89-2022 (which will amend Zoning By-law 569-2013) are applied to the updated development program is summarized in **Table 4**. Notably, portions of the site are located in Parking Zone B while others are not in a Parking Zone under By-law 125-2022; the entire site is considered to be Parking Zone B for simplicity.

TABLE 4 BY-LAW 89-2022 MINIMUM PARKING REQUIREMENTS (INCL. ACCESSIBLE PARKING)

Use	Units/ GFA	Minimum Parking Ratio	Minimum Parking Requirement	Effective Parking Ratio ³	Effective Parking Requirement ³	Accessible Parking Requirement	Total Parking Requirement
Resident							
Studio	12 units	None	0 sps	0.7 sps/unit	8 sps	<i>if the number of effective parking spaces is >100, a minimum of 5 accessible parking spaces + 1 accessible parking space for every 50 effective parking spaces or part thereof in excess of 100 parking spaces</i>	34 sps including 34 residential visitor parking spaces, of which 16 spaces must be accessible parking
1-bedroom	424 units	None	0 sps	0.8 sps/unit	339 sps		
2-bedroom	156 units	None	0 sps	0.9 sps/unit	140 sps		
3-bedroom	66 units	None	0 sps	1.1 sps/unit	72 sps		
Resident Sub-total	658 units	--	0 sps	--	559 sps		
Non-Resident							
Residential Visitor	658 units	2 sps plus 0.05 per unit	34 sps	0.1 sps/unit	65 sps		
Office ²	1,928.92 m ² GFA	None	0 sps	0.4 sps / 100 sm GFA	7 sps		
Retail ³	1,518.04 m ² GFA	None	0 sps	1.0 sps / 100 sm GFA	15 sps		
Non-resident Sub-total			34 sps	--	87 sps		
Site Total			34 sps	--	646 sps	16 sps	34 sps

Notes:

1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.
2. The proposed flex space is considered as office for the purpose of calculating minimum parking requirements.
3. The proposed flex/commercial space is considered as retail for the purpose of calculating minimum parking requirements.
4. Application of "Effective" Parking Ratio and Requirement is a procedural requirement, stipulated by By-law 89-2022, intended to calculate the required quantity of parking spaces.

The application of the new standards of By-law 89-2022 results in a requirement of 34 residential visitor parking spaces, of which 16 must be accessible parking.

4.2.2 Proposed Vehicular Parking Supply and Facilities

It is proposed to provide vehicular parking – across the Site including both phases – in accordance with the minimum parking rates outlined below. While the proposed parking supply rates do not meet the aforementioned requirements of Zoning By-law 569-2013, they are compliant with the under appeal By-law 89-2022.

- 170 parking spaces allocated to residents
 - Equivalent to 0.26 parking spaces per unit (residents)
- 62 parking spaces for the shared non-exclusive use of residential visitors and commercial/retail users
 - Equivalent to 0.09 parking spaces per unit (residential visitors)

The allocation of parking spaces across both phases and parking levels is outlined in **Table 5**.

TABLE 5 PARKING GARAGE USE ALLOCATION

	Phase 1 (North)		Phase 2 (South)	
	Residents	Commercial	Residents	Commercial
P1 Level	20 spaces	38 spaces	11 spaces	24 spaces
P2 Level	96 spaces	--	43 spaces	--
TOTAL	116 spaces	38 spaces	54 spaces	24 spaces

Notes:

1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.

Parking Garage Access

Site access details are provided in **Section 4.1.1**. In summary, the 2-level underground parking garage, to be built as part of Phase 1, is accessed via a ramp to the underground accessed directly from Milky Way, west of the loading facility. The garage will be extended south as part of Phase 2.

Accessible Parking

In accordance with the higher accessible parking supply standard of By-law 89-2022, a total of 16 accessible parking spaces are provided throughout the development, located in close proximity to elevator cores as is required.

Electric Vehicle Parking

In accordance with Toronto Green Standard Version 4, all (100% of) resident parking spaces will include an energized outlet capable of providing Level 2 charging or higher to the parking space. In addition, 25% of non-resident parking spaces will include an energized outlet capable of providing Level 2 charging or higher to the parking space.

Non-Standard Parking Spaces

It is expected at this time that several parking spaces (number to be determined as part of a subsequent application at the Site Plan Approval stage of the development process) within the proposed parking garage will not meet the parking space dimensional requirements of City of Toronto Zoning By-law 569-2013. The relevant and basic parking space dimensional requirements are the following:

- 2.6 metres in width
- 5.6 metres in length
- 2.0 metres in height
- Accessed by a 6.0 metre drive aisle

Parking spaces that do not meet any of the above requirements will be small car / obstructed parking spaces. As building plans will adapt to respond to City comments and the acceleration of the design process, the number of small car / obstructed spaces will change. It is expected that the number of obstructed parking spaces will not exceed 15% of the total parking space supply within the parking garages. The small car / obstructed parking spaces will be reviewed to determine functionality; this analysis will be conducted in conjunction with a subsequent submission associated with the Project.

4.2.3 Appropriateness of Vehicular Parking Supply

It is proposed to adopt reduced parking supply standards for resident and non-residential uses within the proposed development. A discussion and rationale is provided within the following sections regarding the appropriateness of the reduced parking supply.

4.2.3.1 Resident Parking Assessment

Resident parking standards outlined in Zoning By-law 569-2013 (which remain applicable to the site) are considered to overstate the parking needs of a residential building in an area well served by transit. Recently, we have observed a significant reduction in parking space demand needs at almost all new residential buildings that are marketed in the city, 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 the size of residential units on an overall basis (i.e. reduction), the unbundling of parking from a unit sale and more importantly, the significant enhancement in travel alternatives available in the midtown area 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.

Adoption of a reduced parking standard is appropriate based upon the following considerations:

- area land use compatibility;
- existing and evolving sustainable transportation context;
- the evolving planning policy context;
- transportation planning principles that have informed the proposed parking supply;
- the proposed TDM Plan; and
- recent reduced resident parking supply ratio approvals for buildings in the surrounding area.

The following provides an overview of the contextual factors influencing parking demand at residential buildings in urban areas of the City of Toronto and the adequacy of the proposed parking rate (0.26 spaces per unit).

Area Land Use Compatibility

Future residents of the site will enjoy the benefit of residing within walking distance of a range of local amenities on the Queen Street West and Dufferin Street corridors. Located within a 500m radius are a number of grocery stores, parks, restaurants/bars, and entertainment venues; the community includes a variety of land uses to ensure that various needs can be met without driving a car. Residents of the site will be able to walk to all of these closely-located amenities which will in turn reduce parking demand; a future resident of the site will not need to own a vehicle (and will not require parking on-site) in order to live comfortably.

Existing and Evolving Transportation Context

The location of the site will afford future residents with numerous options for transportation that will eliminate the need to own a vehicle and park it on site. The complete transportation context is provided in **Section 2.0**.

Streetcar service is provided along the Queen Street and King Street corridors, and express bus service is provided along the Dufferin Street corridor. Transit service for future residents of the site will be enhanced by King-Liberty GO Station and the Metrolinx Regional Express Rail (RER) planned GO Transit enhancement; the site is located approximately 300m from the location of the future station.

A number of enhancements to the local cycling network are planned (including Gladstone Avenue and Argyle Street) and in addition, the extension of the West Toronto Railpath, to begin construction in 2022, will afford future residents of the site with a far reaching active transportation option providing access along the Kitchener GO Rail corridor and into downtown.

Area pedestrian destinations will ensure walking activity, which is aided by the sidewalk network in the area. Further improvements proposed as part of the project include the signalization of the Dufferin Street / Melbourne Avenue intersection and the widening of the sidewalk along the site's Dufferin Street façade.

Within a 500-metre radius of the site, there are 10 car-share vehicles (4 ZipCar and 6 Enterprise CarShare) and nine (9) Bike Share Toronto stations which collectively hold approximately 155 bicycles located within walking distance to the site that are available to be used on demand by Site members and visitors. In addition, Communauto vehicles may be available at any given time dependent on their location.

City of Toronto By-law 89-2022 (amended by 125-2022)

As is noted in **Section 4.2.1**, the City of Toronto has signalled a change in policy direction regarding its Zoning By-law and minimum parking requirements. In December 2021, after approximately a year of study and consultation, City Council adopted the *Review of Parking Requirements for New Development* which recommended the elimination of minimum parking requirements for most land uses, city-wide, replacing them with maximum parking standards within Zoning By-law 569-2013.

Throughout the year of study, several staff reports provided rationale for the change. It was noted that while development applications frequently get approved with reduced parking in comparison to Zoning By-law requirements, City Council has the power to prohibit residents, visitors, and tradespeople of a building subject to a development application from parking on local area streets when there is community concern, and that many other cities have completely or partially eliminated parking minimums in their Zoning By-laws.

Staff stipulated that the “review should be guided by the principle that parking standards should allow only the maximum amount of automobile parking reasonably required for a given use and minimums should be avoided except where necessary to ensure equitable access, such as for accessible parking or in areas which would be difficult to serve with transit.”

Generally, the staff report represents a definitive shift in the public position of City of Toronto staff with regards to minimum parking requirements and their enforcement. The most notable of the positions stated within the staff reports is that the current minimum parking requirements in Zoning By-law 569-2013 do not advance the policies of the City's Official Plan to reduce auto-dependence and support non-auto modes of transportation.

Given this shift, the proposed parking supply for the site is consistent with the research that informs the staff report and resulting Zoning By-law changes because it is lower than the requirements of the pre-existing Zoning By-law and is located within walking distance to higher order transit service, both existing and planned.

Toronto Green Standards

The Toronto Green Standards (TGS) set sustainable design requirements for new private and City-owned developments. The TGS implements the environmental policies of the City of Toronto Official Plan and the requirements of multiple City divisions through the community planning and development approvals process administered by the City Planning Division. The purpose of the TGS is to improve air quality, reduce urban heat island effect, and is an effective tool to achieve the City's greenhouse gas emission targets.

TGS Version 4 requires developments to be designed to encourage low-emissions transportation and encourage non-auto modes of transportation. The standards set a requirement for single occupancy auto vehicle trips generated by the proposed development to be reduced by 25 percent through a variety of multimodal infrastructure strategies and Transportation Demand Management (TDM) measures, including bicycle parking, shower and changerooms (depending on the uses in the building), and sustainable mobility spaces if minimum parking standards are exceeded.

Providing additional parking encourages automobile ownership, which encourages single occupant automobile commuting. The most direct, effective way to effect change in travel behaviour is to reduce the amount of vehicular parking available to commuters. The implementation of various TDM initiatives is more effectively implemented in tandem with limited vehicular parking.

The proposed parking supply of 232 spaces reflects a 52 percent reduction in parking supply from the pre-existing minimum requirement (485 spaces), which theoretically would result in a 52 percent reduction in vehicle ownership and the resulting trips generated from these vehicles. This would exceed the 25 percent reduction in single occupancy auto trips that are stipulated within the standards of the TGS Version 4. Thus, reducing the parking requirement would be in line with the City's stated policy intentions.

Transportation Planning Considerations

A future resident of the Site will have options that allow them to live and travel without a car. The currently applicable by-laws recognize this by requiring an effective rate of below one space per unit.

The proposed minimum resident parking requirement for the site is equivalent to 0.26 spaces per unit. By not accommodating all future residents to park a car on-site, in combination with the proposed TDM measures to be implemented, will increase mobility options throughout the area.

A parking reduction will not introduce the need for non-automobile travel to the Site in comparison to simply meeting minimum parking requirements; a decrease in minimum parking supply would simply increase the percentage of units that will not rely on personal vehicles for travel.

Providing additional parking encourages automobile ownership, which encourages single occupant automobile commuting.

Taking a holistic perspective of the overall transportation network, the simplest way to effect change in travel behaviour is to reduce the amount of available vehicular parking. While the consideration and implementation of various TDM initiatives and Projects is advised, these are always more effectively implemented in tandem with limited vehicular parking (or none). Providing a limited amount of parking is a direct incentive for residents to use sustainable transportation. As an alternative, the provision of ample parking encourages automobile ownership, a key enabler of automobile commuting particularly as a single occupant.

TDM Plan

The proposed TDM Plan for the site is included in **Section 3.0**. Proposed TDM measures include a local cycling network infrastructure funding contribution, Bike Share Toronto funding contribution, a bicycle repair station, bicycle parking, and travel information brochures. These TDM measures will work in tandem with the proposed lower parking rates in order to provide residents with transportation alternatives in place of owning a vehicle, parking it on site, and driving regularly.

Recent Resident Parking Approval Trends

The City of Toronto has regularly granted permission to establish minimum residential parking standards well below the prevailing by-laws. Such approvals have been provided by City Council as part of the Zoning By-law Amendment process, by the Committee of Adjustment as part of Minor Variance applications, or at the Ontario Land Tribunal (OLT). **Table 6** outlines a selection of approvals in the local area.

From the approvals seen below in **Table 6**, it is clear that the minimum parking rates outlined in City of Toronto Zoning By-law 569-2013 (pre-dating the By-law 89-2022 amendments) are not absolute. The City has shown flexibility and pragmatism in adopting to the evolving transportation landscape as options became available to residents that were not available at the time when the Zoning By-law was enacted. As more transit options surrounding the site will be available in the future, it is appropriate to approve parking standards in line with what is being proposed for the site.

TABLE 6 APPROVED REDUCED RESIDENT PARKING SUPPLY RATIOS

Address	Key Intersection	Resident Standard Applied	Permission Through
Local Area / West End Toronto			
1200 Dundas Street West	Ossington Street & Dundas Street West	115 dwelling units 25 resident parking spaces <i>Effective res ratio:</i> <i>0.22 sps / unit</i>	Site-specific By-law 398-2022(OLT)
646-648 Dufferin Street and 1-3 Boland Lane	Dufferin Street & Dundas Street West	124 dwelling units 36 resident parking spaces <i>Effective res ratio:</i> <i>0.29 sps / unit</i>	Site-specific By-laws 950-2021 & 951-2021
1182 King Street West	Dufferin Street & King Street West	400 dwelling units 120 resident parking spaces 1 car-share space <i>Effective res ratio (w car-share):</i> <i>0.30 sps / unit</i>	Site-specific By-laws 222-2021 & 223-2021
1221 King Street West	Dufferin Street & King Street West	307 dwelling units 92 resident parking spaces 1 car-share space <i>Effective res ratio (w car-share):</i> <i>0.30 sps / unit</i>	Site-specific By-laws 222-2021 & 223-2021
466-468 Dovercourt Road	Dovercourt Road & College Street	30 dwelling units 9 resident parking spaces <i>Effective res ratio:</i> <i>0.30 sps / unit</i>	Site-specific By-laws 30-2021 & 31-2021

4.2.3.2 Non-Resident Parking Assessment

Similarly, residential visitor and non-residential parking standards outlined in Zoning By-law 569-2013 (which remain applicable to the site) are considered to overstate the parking needs of a residential building in an area well served by transit. Adoption of a reduced non-resident parking supply – provided on a shared non-exclusive basis – is appropriate based upon the following considerations:

- recent reduced residential visitor parking supply ratio approvals for buildings in the surrounding area;
- area commercial parking supply which can accommodate additional parking demand as needed; and
- anticipated future plans for Dufferin Street which may result in the loss of on-street parking in the southbound curb lane.

Recent Dedicated Residential Visitor Parking Approval Trends

Alongside resident parking supply reduction approvals, residential visitor parking supply reductions have often been approved as part of the same developments. In addition, these approvals often include permission to share residential visitor parking with parking for non-residential uses. A selection of approvals is provided in **Table 7** that place the proposal for the site in local context.

TABLE 7 APPROVED REDUCED RESIDENTIAL VISITOR PARKING SUPPLY RATIOS

Address	Key Intersection	Visitor Standard Applied	Sharing Provision (if applicable)	Permission Through
Local Area / West End Toronto				
1200 Dundas Street West	Ossington Street & Dundas Street West	115 dwelling units 3 visitor parking spaces <i>Effective vis ratio):</i> <i>0.03 sps / unit</i>	"may be provided on a non-exclusive basis for the use of residential and non-residential visitors"	Site-specific By-law 398-2022(OLT)
646-648 Dufferin Street and 1-3 Boland Lane	Dufferin Street & Dundas Street West	124 dwelling units 4 visitor parking spaces <i>Effective vis ratio):</i> <i>0.03 sps / unit</i>	N/A	Site-specific By-laws 950-2021 & 951-2021
466-468 Dovercourt Road	Dovercourt Road & College Street	30 dwelling units 0 visitor parking spaces <i>Effective vis ratio):</i> <i>0.00 sps / unit</i>	N/A	Site-specific By-laws 30-2021 & 31-2021
1494-1502 Dundas Street West	Dufferin Street & Dundas Street West	48 dwelling units 0 visitor parking spaces <i>Effective vis ratio):</i> <i>0.00 sps / unit</i>	N/A	Site-specific By-laws 952-2021 & 953-2021

Area Commercial Parking

There are commercial parking options in the local area with an aggregate commercial parking supply of 500 spaces which can accommodate additional parking demand as needed; these are outlined in **Table 8**.

TABLE 8 AREA COMMERCIAL PARKING SUPPLY

Location (Name)	Total Parking Supply
45 Abell Street (Municipal Carpark 261 – Green P)	124 spaces
FreshCo Queen & Gladstone (TargetPark Inc.)	75 spaces
1325 Queen Street West (Municipal Carpark 158 – Green P)	32 spaces
1185 King Street West (Municipal Carpark 181 – Green P)	269 spaces
TOTAL Area Supply	500 spaces

Dufferin Street On-Street Parking Consideration

The existing condition includes, as is detailed in **Section 2.1**, on-street parking in the southbound curb lane. The proposed development proposes to reduce the size of this lane to enlarge the sidewalk along the project's Dufferin Street façade, as it outlined in **Section 4.1.3** and **Appendix B**. In addition, the City of Toronto has plans for the Dufferin Street corridor to introduce, at an unspecified future date, dedicated bus lanes to accommodate TTC routes; this program is known as "RapidTO".

The combination of the above factors mean that it is likely that, in the future, the on-street parking in the Dufferin Street southbound curb lane will be removed. As such, it is proposed for the non-residential portion of the parking garage to be accommodate shared non-resident (i.e. residential visitor and commercial uses) parking. The proposed non-resident parking supply (62 spaces) is larger than the existing on-site parking supply (37 parking spaces, as outlined in **Section 1.1**) and therefore, it will offset the anticipated future loss of on-street parking in the Dufferin Street southbound curb lane.

4.3 BICYCLE PARKING CONSIDERATIONS

4.3.1 Minimum Bicycle Parking Requirements

Recently, Site-specific By-law 160-2022 was approved and is directly applicable to the site lands. While it contains a minimum bicycle parking requirement (22 short-term bicycle parking spaces), that is directly applicable to a set of land uses that currently exist on the lot. As the proposed mixed-use redevelopment is an entirely new development scheme, this bicycle parking requirement is not considered to be applicable.

More relevantly, By-law 160-2022 brought the site under Zoning By-law 569-2013. Application of the bicycle parking requirements outlined in City of Toronto Zoning By-law 569-2013 is detailed in **Table 9**.

TABLE 9 ZONING BY-LAW 569-2013 (BICYCLE ZONE 1) BICYCLE PARKING REQUIREMENTS

Use	Units/GFA ¹	Type	Rate	Requirement ³
Residential	658 units	Long-term	0.9 spaces per unit	593 spaces
		Short-term	0.1 spaces per unit	66 spaces
Office ²	1,928.92 m ² GFA	Long-term	0.2 spaces per 100 m ² GFA	4 spaces
		Short-term	3 + 0.2 spaces per 100 m ² GFA	7 spaces
Retail ³	1,521.42 m ² GFA	Long-term	0.2 spaces per 100 m ² GFA	4 spaces
		Short-term	3 + 0.3 spaces per 100 m ² GFA	8 spaces
Long-term Sub-total				601 spaces
Short-term Sub-total				81 spaces
SITE TOTAL				682 spaces

Notes:

1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.
2. The proposed flex space is considered as office for the purpose of calculating minimum bike parking requirements.
3. The proposed flex/commercial space is considered as retail for the purpose of calculating minimum bike parking requirements.
4. Bicycle parking calculations resulting in fractions are rounded up to the nearest whole number, in accordance with Section 230.5.1.10 (2) of City of Toronto Zoning By-law 569-2013.

A minimum of 682 bicycle parking spaces are required, inclusive of 601 long-term bike parking spaces and 81 short-term bike parking spaces.

4.3.2 Proposed Bicycle Parking Supply

The proposed bicycle parking supply meets the requirements outlined above.

4.4 LOADING CONSIDERATIONS

4.4.1 Minimum Loading Requirement

Recently, Site-specific By-law 160-2022 was approved and is directly applicable to the site lands. While it notes that zero loading spaces are required on site, this provision is directly applicable to a set of land uses that currently exist on the lot. As the proposed mixed-use redevelopment is an entirely new development scheme, the absence of a loading requirement is not considered to be applicable.

More relevantly, By-law 160-2022 brought the site under Zoning By-law 569-2013. Application of the loading requirements outlined in City of Toronto Zoning By-law 569-2013 is detailed in **Table 9**.

TABLE 10 ZONING BY-LAW 569-2013 MINIMUM LOADING REQUIREMENTS

Land Use	Units/GFA ¹	Loading Category	Loading Requirement / Loading Space Type				
			Type A	Type B	Type C	Type G	Total
Residential	658 units	400+ units	0	0	1	1	2
Office ²	1,928.92 m ² GFA	1,000 to 1,999 m ²	0	1	1	0	2
Retail ³	1,521.42 m ² GFA	500 to 1,999 m ²	0	2	0	0	2
Sub-total (pre-sharing)			0	3	2	1	6
SITE TOTAL (with sharing)			0	1	0	1	2

Notes:

1. Site plan statistics provided by Sweeny&Co Architects, dated July 15, 2022.
2. The proposed flex space is considered as office for the purpose of calculating minimum loading requirements.
3. The proposed flex/commercial space is considered as retail for the purpose of calculating minimum loading requirements.
4. As per Sections 40.10.90.1 and 200.5.10.1(9) of Zoning By-law 569-2013, loading space sharing is applied.

A minimum of two loading spaces are required, after applying Zoning By-law 569-2013 sharing permissions, inclusive of 1 Type G loading space and 1 Type B loading space.

4.4.2 Proposed Loading Provision

4.4.2.1 Loading Supply / Servicing Arrangements

It is proposed to provide 4 loading spaces, including 1 Type G loading space, 1 Type B loading space, and 2 Type C loading spaces.

In a centralized loading facility accessed directly from Milky Way and servicing Phase 1, the Type G and Type B loading spaces are provided, as illustrated in the architectural plans (**Appendix A**). This will be the primary loading facility for the site, servicing both phases of the development. Service vehicles including refuse and recycling collection will access Milky Way and manoeuvre within the laneway to enter and exit the facility.

Two additional Type C loading spaces will be provided underground (P1 level) to service the southern tower as part of Phase 1 and the Phase 2 (i.e. southern) development. These loading spaces will accommodate deliveries and moving needs for the towers they are located under, to prevent “elevator switching” at the 4th floor. As access to the underground parking garage is taken from Milky Way, the ramp to the garage has been sized to accommodate both cube vans and passenger vehicles travelling in opposing directions simultaneously; it will be constructed in this manner for Phase 1.

4.4.2.2 Residential Waste Facilities

Residential waste collection for the proposed building, for both phases, will occur within the proposed Type G loading space.

A 65 m² bin staging area is provided at the front of the Type G loading space. A residential waste storage room is provided on the P1 level of the underground parking garage. Bins are transferred from the waste storage room to the bin staging area on collection day via a dedicated bin elevator adjacent to the loading area. The residential waste collection facilities meet the design provisions outlined in “*City of Toronto Requirements for Garbage and Recycling Collection for New Developments and Redevelopments*” dated May 2012.

4.4.2.3 Height Clearances

A minimum height clearance of 4.5 metres is maintained throughout the loading area, and a minimum height clearance of 6.1 metres is maintained above the Type G loading space and in staging area. The height clearance provided meets the standards of Zoning By-law 569-2013 and “*City of Toronto Requirements for Garbage and Recycling Collection for New Developments and Redevelopments*” dated May 2012.

A clear height of 3.5 metres is maintained through the underground parking garage ramp and the pathway to the underground Type C loading spaces to accommodate cube vans and similar vehicles.

4.4.2.4 Operations and Manoeuvring

Turning movement diagrams have been developed demonstrating the ability for City of Toronto refuse / recycling collection vehicles and other service / delivery vehicles to manoeuvre appropriately when entering / leaving the proposed loading area. Vehicle Manoeuvring Diagrams are provided in **Appendix C** and illustrate the turning movements of the above design vehicles entering and exiting the proposed loading areas. These diagrams confirm that the proposed loading area arrangements are appropriate and will facilitate the manoeuvring needs of the service vehicles entering / exiting the site. It is further noted that City refuse / recycling collection vehicles will be able to enter / leave the site in a forward motion without the need to reverse to / from the new proposed public road.

The design vehicles used to assess the proposed loading spaces are as follows:

- City of Toronto Front Loading Refuse Collection Vehicle
- TAC Heavy Single Unit Design Vehicle (TAC – HSU)
- TAC Single Unit Design Vehicle (TAC – SU)
- Cubevan (Ford E350) & Dodge Grand Caravan

4.4.2.5 Loading Summary

The proposed loading facilities meet and exceed the requirements of City of Toronto Zoning By-law 569-2013 and the facilities meet the standards of all additional applicable guidelines. Vehicle manoeuvring for each loading space is appropriate and will service the development sufficiently.

5.0 SITE TRAVEL DEMAND FORECASTING

Travel demand forecasts have been prepared as part of this study for the build-out of the proposed development. Residential site traffic was estimated based on proxy site surveys of developments in the Toronto, as detailed below.

A total of 658 new residential units are planned to be added, with 8,068 sqm GFA of non-residential floor area to be replaced by 3,450 sqm of non-residential floor area. The 37 non-resident parking spaces available on the site today will be replaced by 62 non-resident parking spaces to be shared with residential visitors in the future. Future non-residential trip generation will likely be lower than existing conditions. Conservatively, the existing site generated trips (plus the same number of trips in the opposite direction) have been adopted as trip generation for the future. Forecast traffic for the site during the weekday morning and afternoon peak hours is summarized in **Table 11**.

TABLE 11 VEHICULAR TRIP GENERATION

	Units or sqft GFA	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
ITE Trip Generation Manual, 11th Edition							
<i>Multifamily Housing (High-Rise) - LUC 222</i>	-	0.09	0.18	0.27	0.18	0.14	0.32
Residential Proxy Site Trip Generation Rates							
<i>955 Queen Street West</i>	144	0.00	0.08	0.08	0.04	0.02	0.06
<i>375 King Street West</i>	305	0.01	0.05	0.06	0.05	0.01	0.06
<i>43 Hanna Avenue</i>	215	0.07	0.10	0.17	0.13	0.09	0.22
<i>700 King West</i>	216	0.03	0.11	0.14	0.11	0.05	0.16
<i>120 Homewood Ave</i>	408	0.02	0.10	0.12	0.07	0.04	0.11
<i>1638 Bloor West</i>	108	0.03	0.14	0.17	0.11	0.03	0.14
<i>20 Gothic Avenue</i>	175	0.09	0.08	0.17	0.12	0.09	0.21
Average Residential Trip Generation Rate (Adopted)	-	0.04	0.09	0.13	0.09	0.05	0.14
Trips Generated							
Phase 1 Residential Site Traffic Volumes	564	25	50	75	50	30	80
Phase 2 Residential Site Traffic Volumes	95	5	10	15	10	5	15
Full Site Residential Traffic Volumes	659	30	60	90	60	35	95
Commercial Site Traffic Volumes (62 parking spaces)	-	10	10	20	10	10	20
Existing Site Trips to be Removed (37 parking spaces)	-	-10	0	-10	0	-10	-10
Net-New Site Traffic Volumes	-	30	70	100	70	35	105

Notes:

1. All trips rounded to the nearest five (5).
2. Proxy site surveys undertaken between December 2011 & April 2017.

Based on the foregoing, the proposed buildings will generate in the order of **100** and **105** two-way vehicle trips in the weekday morning and afternoon peak hours, respectively.

5.1 TORONTO GREEN STANDARD REQUIREMENT AQ 1.1

Under the *Toronto Green Standard* (TGS) Version 4, all residential developments within the City of Toronto must meet Tier 1 requirements. Air Quality (AQ) Requirement AQ 1.1 is addressed below.

Requirement AQ 1.1 – Single Occupant Auto Vehicle Trips targets a reduction of 25% in single-occupant auto vehicle trips. For this site, a reduction of 25% has been achieved through a variety of Transportation Demand Management (TDM) measures as outlined in **Section 3.0** and by the proposed parking reduction as outlined in **Section 4.2.3**. This is best showcased by comparing the adopted residential trip generation rates to ITE Trip Generation Manual 11th Edition rates for similar buildings.

Table 12 outlines the percentage reduction between the selected residential trip generation rates and the ITE Trip Generation Manual Rates for a high-rise residential building.

TABLE 12 RESIDENTIAL TRIP RATE COMPARISON (SELECTED VS ITE)

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
<i>ITE Trip Generation Manual (LUC 222: High-Rise)</i>	0.09	0.18	0.27	0.18	0.14	0.32
<i>Selected Residential Trip Generation Rate</i>	0.04	0.09	0.13	0.09	0.05	0.14
Percent Reduction from ITE	-56%	-49%	-52%	-50%	-64%	-56%

As illustrated above, the proposed two-way residential trip generation rates are a minimum of 49% lower compared to the ITE rates for high-rise buildings.

In combination with the other TDM measures proposed, a reduction in parking supply (compared to the requirements of Zoning By-law 569-2013) and residential trip generation rates will translate directly into a reduction in auto trips and hence encourage the use of sustainable transportation modes. Given the above, the minimum required reduction of 25% in single-occupant auto vehicle trips will be achieved for this development plan.

6.0 VEHICLE TRAFFIC VOLUMES

6.1 BASELINE EXISTING TRAFFIC VOLUMES

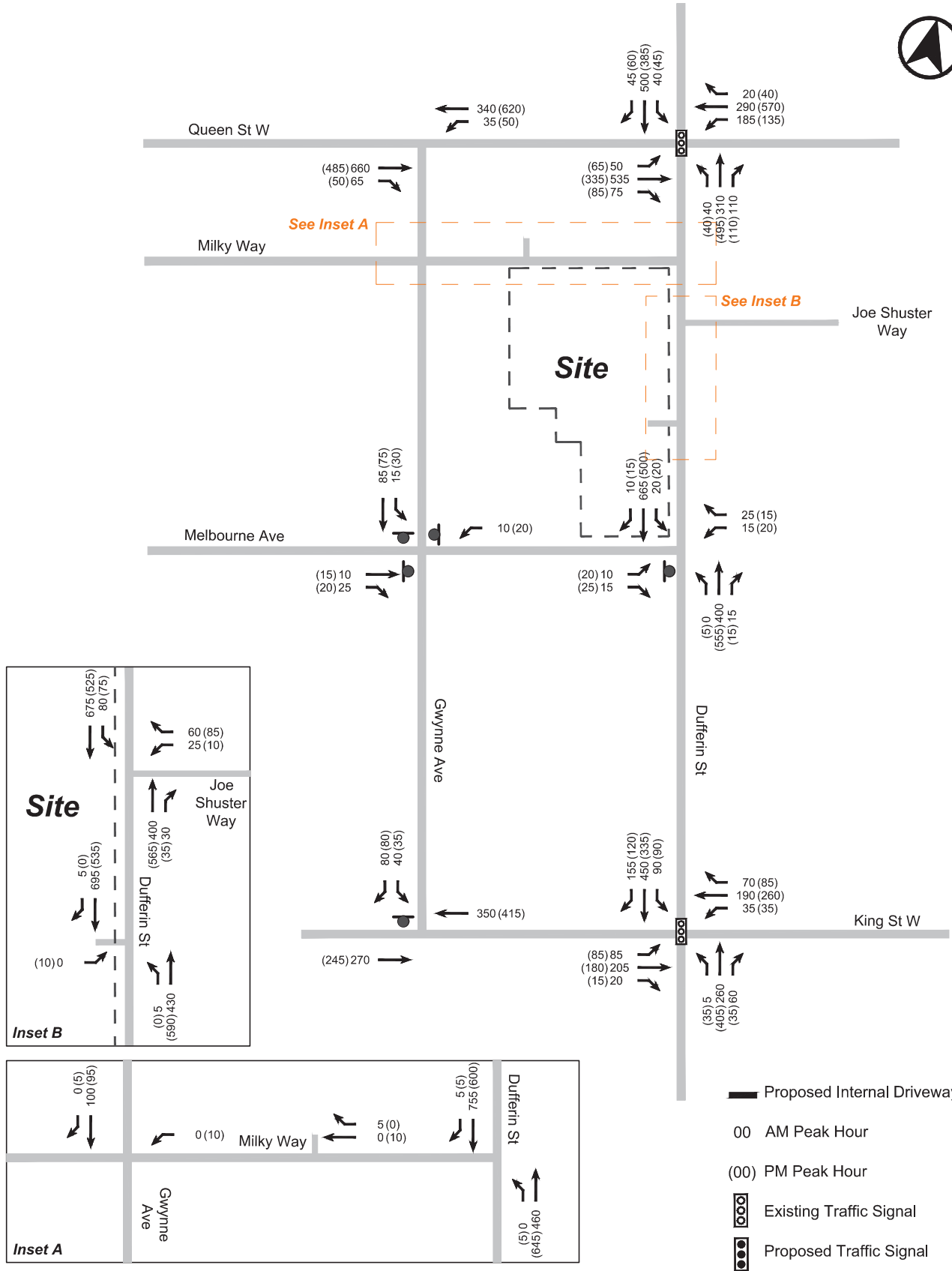
Existing public street intersection peak hour traffic volumes were established based on traffic counts undertaken by Spectrum Traffic Data on behalf of BA Group, as summarized in **Table 13**.

Baseline existing traffic volumes were derived by balancing the most recent available traffic data (2022), with traffic data available at the intersection of Queen Street West / Dufferin Street which was counted in 2019 prior to the COVID-19 pandemic. This is to represent 'pre-pandemic' conditions as closely as possible. Turning movement count (TMC) data and signal timing plans (STPs) are attached in **Appendix D**.

TABLE 13 EXISTING TRAFFIC DATA SOURCES

Intersection	Control Type	Source	Date
Queen Street West / Dufferin Street	Signalized	Spectrum Traffic Inc.	Thursday, February 21, 2019
Dufferin Street / King Street West	Signalized		Tuesday, March 8, 2022
Dufferin Street / Milky Way	Unsignalized		
Dufferin Street / Joe Shuster Way	Unsignalized		
Dufferin Street / Radiator Driveway (Existing)	Unsignalized		
Dufferin Street / Melbourne Avenue	Unsignalized		
Queen Street West / Gwynne Avenue	Unsignalized		
Gwynne Avenue / Milky Way	Unsignalized		
Melbourne Avenue / Gwynne Avenue	Unsignalized		

Existing area (rounded and balanced) baseline traffic volumes adopted for the analysis of weekday morning and afternoon peak hours are illustrated on **Figure 11**.



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FIGURE 11 BASELINE EXISTING TRAFFIC VOLUMES

6.2 FUTURE BACKGROUND TRAFFIC VOLUMES

6.2.1 Background Development

Background development traffic allowances were made for four significant approved or proposed developments in the local area, as summarized in **Table 14** below. Overall, background developments include in the order of 520 residential units and a small selection of commercial land use.

Traffic allowances associated with background developments were established based upon assignment information incorporated into traffic impact studies prepared as part of their approval process.

TABLE 14 BACKGROUND DEVELOPMENT APPLICATIONS

Address	Date of Application	Transportation Consultant	Statistics
2-24 Temple Street	January 2020	NexTrans	273 units
1354 Queen Street West	September 2020	BA Group	117 units + 539 sqm non-residential GFA
31 Gladstone Avenue	October 2021	LEA	28 units
6 Noble Street	November 2021	NexTrans	101 units + 45 sqm non-residential GFA

6.2.2 Corridor Traffic Changes

Two-way corridor growth along Queen Street West and Dufferin Streets was calculated based on traffic volume counts undertaken between the years 2013 and 2022. Low or negative corridor growth was observed in all cases, except for along Dufferin Street in the afternoon peak hour, where an average increase of 2% per year was adopted.

Where growth was calculated to be negative, a growth rate of 0% was adopted as a conservative measure for this analysis. Corridor growth calculations area attached in **Appendix E**.

6.2.3 Future Background Total Traffic Volumes

Future background total traffic volumes include existing traffic volumes and background traffic volumes. These are illustrated on **Figure 12**.

6.3 SITE TRAFFIC VOLUMES

6.3.1 Site Trip Generation

Based on methodology outlined in **Section 5.0**, the proposed development is expected to generate in the order of **100** and **105** new two-way vehicle trips in the weekday morning and afternoon peak hours, respectively.

6.3.2 Vehicle Trip Distribution

Vehicle trip distribution parameters have been adopted consistent with the 2016 Transportation Tomorrow Survey (TTS). Adopted traffic distribution patterns for site traffic are summarized in **Table 15**.

TABLE 15 SITE RESIDENT TRAFFIC DISTRIBUTION

Direction (origin or destination)	Residential	
	Inbound	Outbound
North via Dufferin	15%	20%
South via Dufferin	57.5%	37.5%
East via Queen Street West	7.5%	7.5%
East via King Street West	7.5%	10%
West via Queen Street West	10%	5%
West via King Street West	2.5%	20%
Total	100%	100%

Notes:

1. Residential distribution determined through a query of homebased trips from 2006 TTS zones 89, 109 and 110.

A variety of travel routes are available to and from the site. Traffic will likely predominantly utilize major highways to move throughout Toronto and the Greater Toronto Area (GTA), explaining the higher percentage showing to and from the south on Dufferin Street.

The future site driveway will be located off of Milky Way (one way westbound), meaning that all traffic leaving the site will need to head west along Milky Way, then south along Gwynne Avenue before utilizing Melbourne Avenue to head in the correct direction. Traffic inbound to the site can enter Milky Way and the subsequent site driveway via Dufferin Street directly.

Transportation Tomorrow Survey (TTS) data are attached in **Appendix F**.

6.3.3 Site Traffic Volumes

Forecast site traffic volumes for the proposed development are based upon the site trip generation and vehicular trip distribution described above. New site traffic volumes are illustrated on **Figure 13**.

6.4 FUTURE TOTAL TRAFFIC VOLUMES

Future total traffic volumes were established by adding future background traffic volumes and site traffic volumes. The resulting future total traffic volumes are illustrated on **Figure 14**.

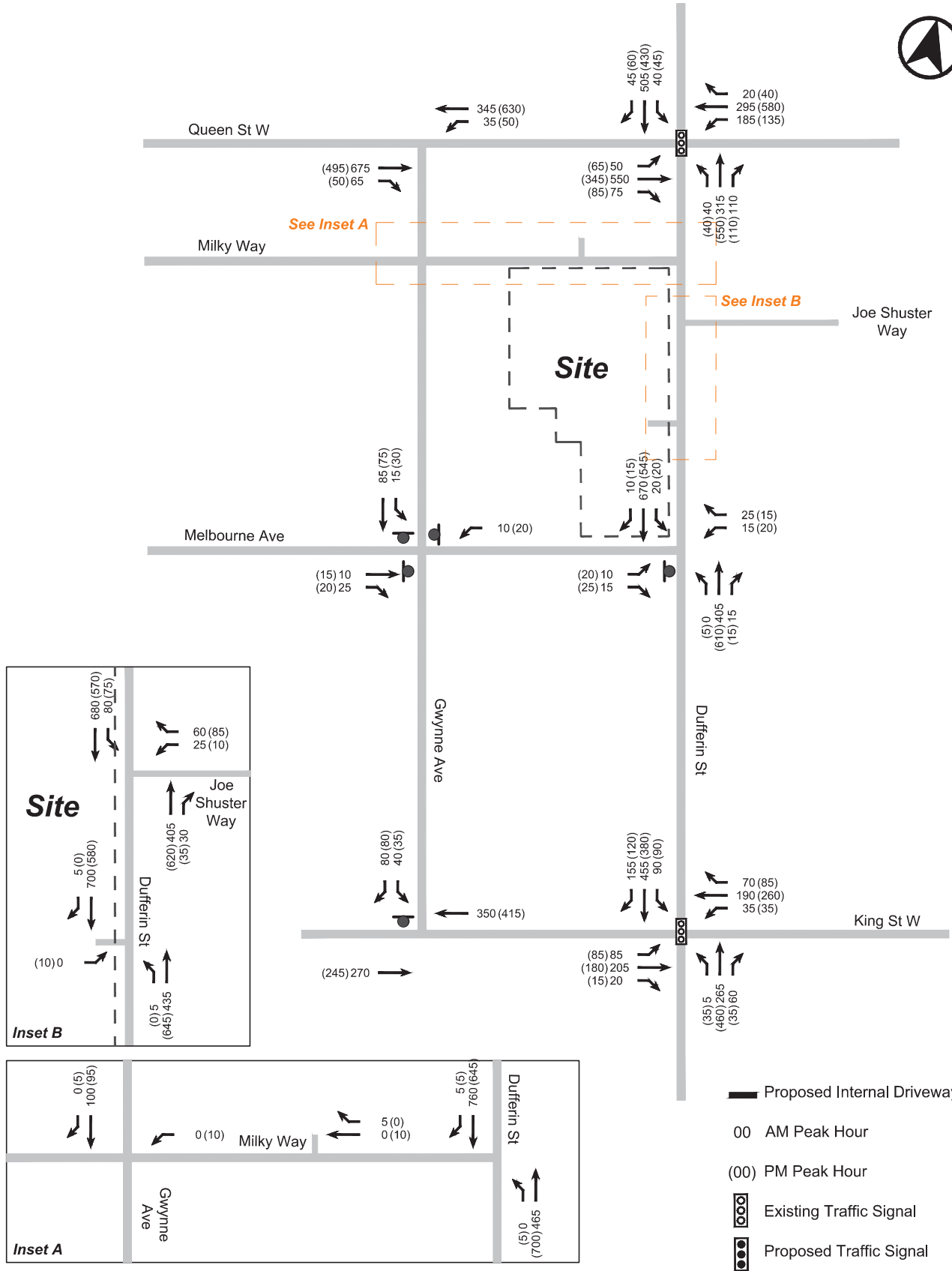


FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES

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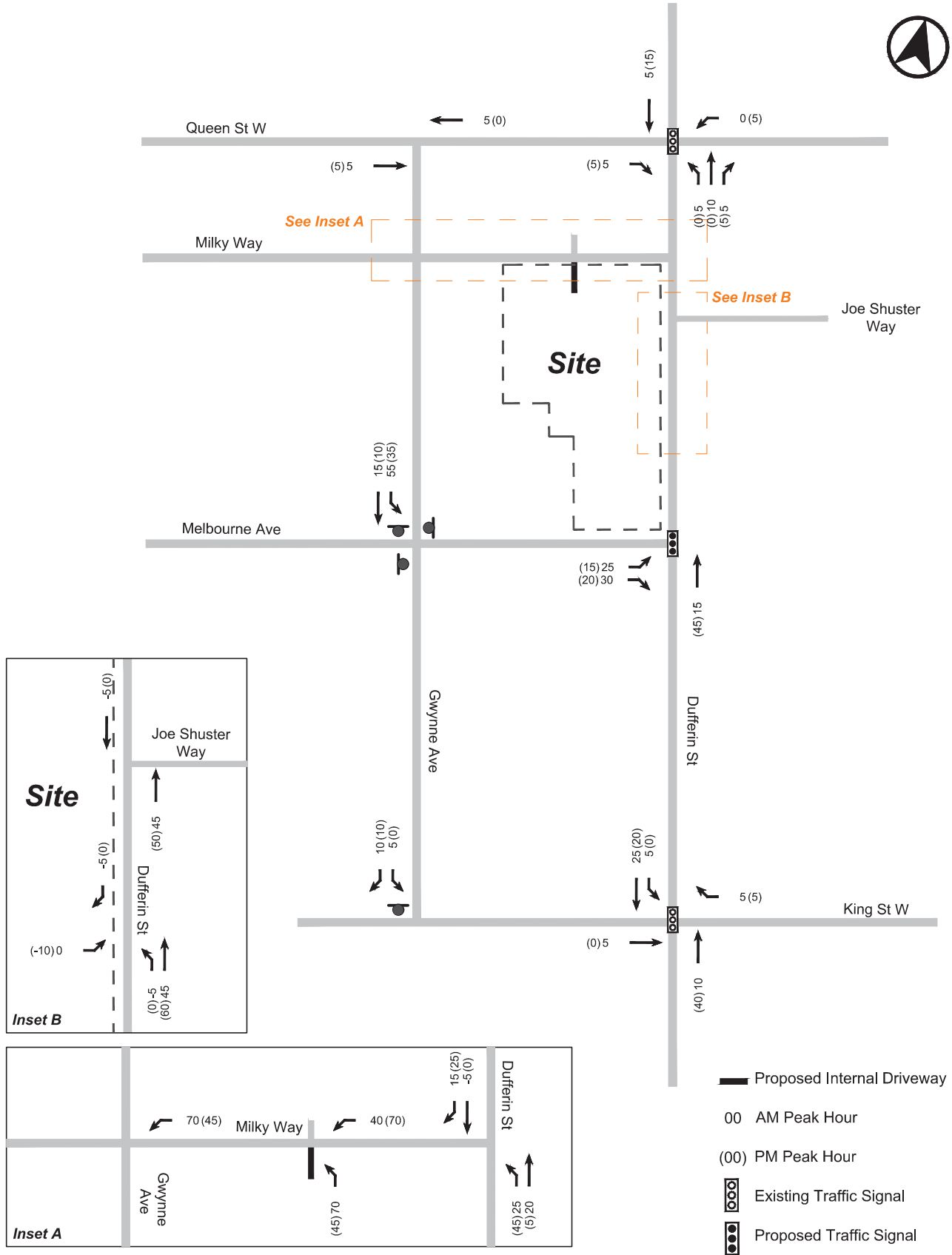
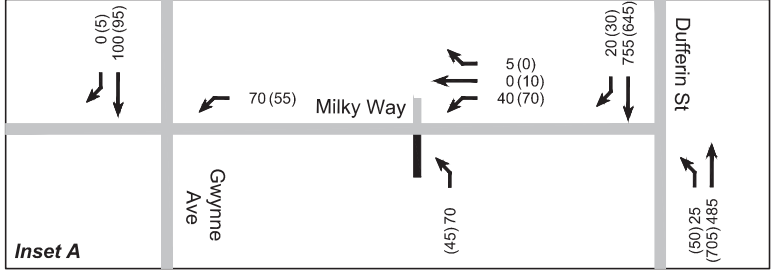
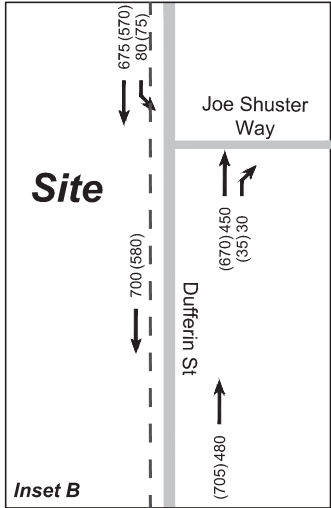
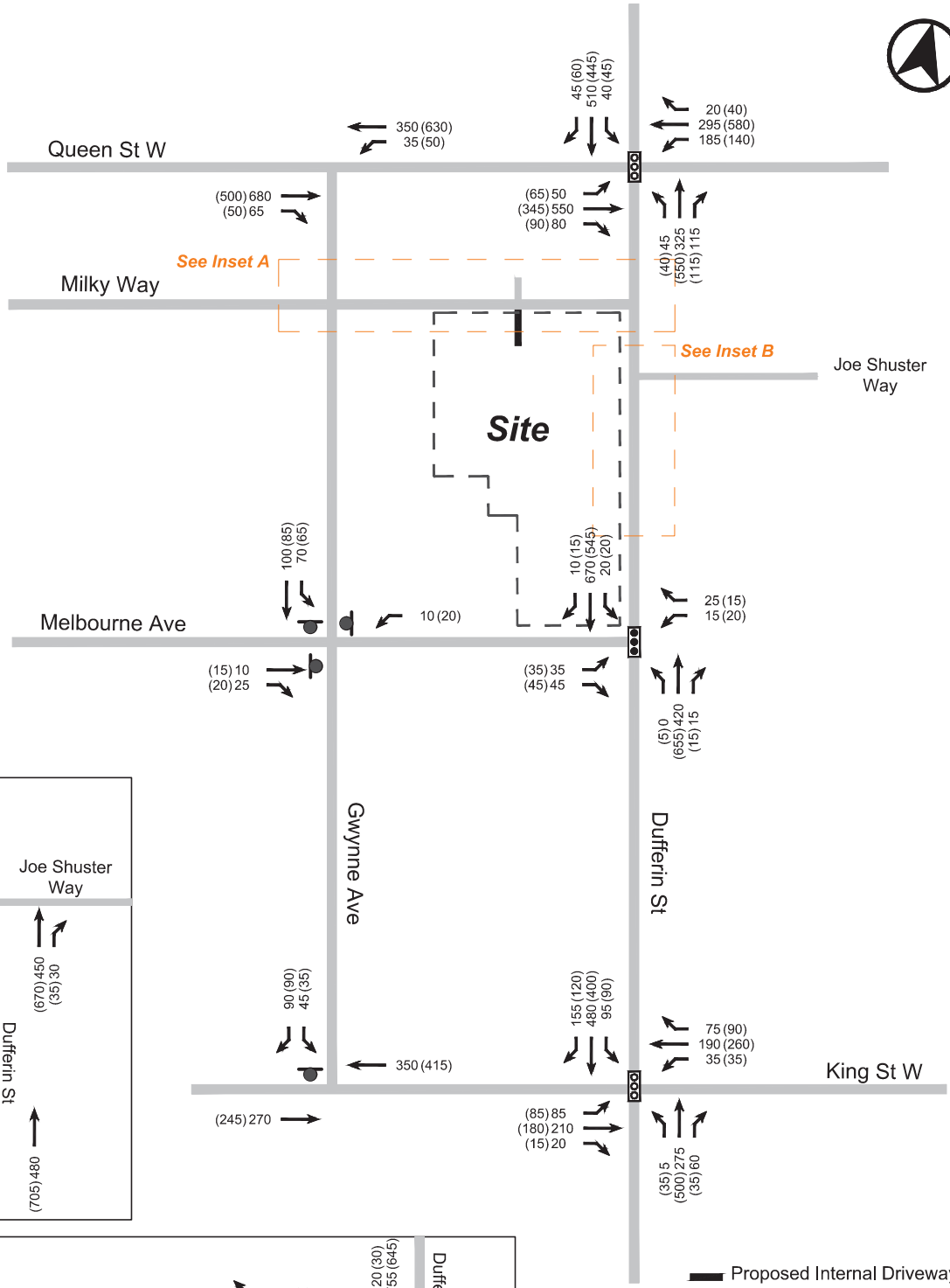


FIGURE 13 NET SITE TRAFFIC VOLUMES



- Proposed Internal Driveway
- 00 AM Peak Hour
- (00) PM Peak Hour
- Existing Traffic Signal
- Proposed Traffic Signal

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FIGURE 14 FUTURE TOTAL TRAFFIC VOLUMES

7.0 VEHICULAR TRAFFIC OPERATIONS ANALYSIS

7.1 ANALYSIS SCENARIOS

Operations analysis was undertaken for the weekday morning and weekday afternoon peak hours, for the following scenarios:

- Existing traffic conditions;
- 5-year future background traffic conditions; and
- 5-year future total traffic conditions.

7.2 ANALYSIS STUDY AREA

The following existing and future intersections were included in this analysis:

Signalized Intersections:

- Queen Street West / Dufferin Street
- Dufferin Street / King Street West

Unsignalized Intersections:

- Dufferin Street / Melbourne Avenue (future signal)
- Dufferin Street / Existing Site Driveway
- Dufferin Street / Joe Shuster Way
- Dufferin Street / Milky Way
- Queen Street West / Gwynne Avenue
- King Street West / Gwynne Avenue
- Melbourne Avenue / Gwynne Avenue
- Gwynne Avenue / Milky Way
- Milky Way / Future Site Driveway

7.3 ANALYSIS METHODOLOGY

Intersection capacity analysis has been completed using Synchro Version 11 and the methodology presented within the Highway Capacity Manual 2000 (HCM 2000), unless otherwise specified in the results discussion.

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

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

7.3.1 Input and Calibration Parameters

Key input parameters and calibrations for this analysis include:

- Existing lane configurations assumed for existing conditions;
- Existing signal timings provided by the City of Toronto;
- Heavy vehicle percentages derived from existing traffic counts;
- Peak hour factors as derived from existing traffic counts;
- Pedestrian and bicycle approach crossings derived from existing traffic counts;
- A lost time adjustment factor of -1.0 globally has been adopted, in addition to lane widths of 3.5 metres for through lanes and 3.0 metres for turning lanes, as outlined in the City of Toronto's *Guidelines for Using Synchro 11*; and
- Synchro defaults for all other parameters

7.4 FUTURE SIGNAL AT MELBOURNE AVE. & DUFFERIN ST.

It is noted that the signalization of the Dufferin Street / Melbourne Avenue intersection was requested by City of Toronto Transportation Services staff as part of the pre-application process for this project.

The intersection at Dufferin Street / Melbourne Avenue is proposed to be signalized in future. This signalization is not related directly to the site and the development, and it can be demonstrated that the area road network can accommodate site traffic volumes in future whether the intersection is signalized or not.

A conceptual functional design plan illustrating the signalization of the Dufferin Street / Melbourne Avenue intersection is included in **Appendix B**.

7.5 INTERSECTION TRAFFIC OPERATIONS

The following sections discuss the operations of the study area intersections. Synchro reports are provided in **Appendix G**.

7.5.1 Signalized Intersection Operations

Queen Street West / Dufferin Street

The intersection of Queen Street West / Dufferin Street currently operates under traffic signal control with a cycle length of 80 seconds in the weekday morning and afternoon peak hours. The results of the traffic analysis for this intersection are summarized in **Table 16**.

Under existing conditions, the intersection operates within its theoretical capacity, with overall V/C ratios of 0.69 and 0.75 during the weekday morning and afternoon peak hours, respectively.

Under future background conditions, the intersection continues to operate well, with overall V/C ratios of 0.70 and 0.78 during the weekday morning and afternoon peak hours, respectively.

Under future total conditions, the intersection will continue to operate very similarly to future background conditions, with overall V/C ratios of 0.70 and 0.79 during the weekday morning and afternoon peak hours, respectively.

TABLE 16 QUEEN STREET WEST / DUFFERIN STREET OPERATIONS SUMMARY

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBTLR	0.56 (0.48)	B (B)	0.57 (0.48)	B (B)	0.57 (0.49)	B (B)
WBTLR	0.60 (0.72)	B (B)	0.61 (0.73)	B (B)	0.61 (0.73)	B (B)
NBTLR	0.49 (0.60)	B (C)	0.49 (0.66)	B (C)	0.52 (0.67)	B (C)
SBTLR	0.60 (0.49)	B (B)	0.61 (0.55)	B (B)	0.61 (0.57)	B (C)
Overall	0.69 (0.75)	B (B)	0.70 (0.78)	B (B)	0.70 (0.79)	B (B)

Notes:

1. 00 (00) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

King Street West / Dufferin Street

The intersection of King Street West / Dufferin Street currently operates under traffic signal control with a cycle length of 80 seconds in the weekday morning and afternoon peak hours. The results of the traffic analysis for this intersection are summarized in **Table 17**.

Under existing conditions, the intersection operates within its theoretical capacity, with overall V/C ratios of 0.50 and 0.52 during the weekday morning and afternoon peak hours, respectively.

Under future background conditions, the intersection continues to operate well, with overall V/C ratios of 0.51 and 0.55 during the weekday morning and afternoon peak hours, respectively.

Under future total conditions, the intersection will continue to operate very similarly to future background conditions, with overall V/C ratios of 0.53 and 0.57 during the weekday morning and afternoon peak hours, respectively.

TABLE 17 KING STREET WEST / DUFFERIN STREET OPERATIONS SUMMARY

Movement	Existing		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBTLR	0.32 (0.33)	B (B)	0.32 (0.33)	B (B)	0.33 (0.33)	B (B)
WBTLR	0.27 (0.36)	B (B)	0.27 (0.36)	B (B)	0.27 (0.37)	B (B)
NBTLR	0.30 (0.33)	B (B)	0.31 (0.37)	B (B)	0.32 (0.40)	B (B)
SBTLR	0.70 (0.69)	C (C)	0.70 (0.76)	C (C)	0.74 (0.79)	C (C)
Overall	0.50 (0.52)	B (C)	0.51 (0.55)	B (C)	0.53 (0.57)	B (C)

Notes:

1. 00 (00) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

Melbourne Avenue / Dufferin Street

The intersection of Melbourne Avenue / Dufferin Street currently operates under side-street STOP control. In future, it is envisioned that the intersection will be signalized to ensure the safety of pedestrians and efficiency of traffic flow in the area.

For analysis purposes, an 80 second cycle length was adopted in accordance with existing cycle length times at the intersections of Queen Street West and King Street West at Dufferin Street.

Existing intersection capacity analysis results for the unsignalized intersection will follow in the section below. The results of the traffic analysis for this intersection operating as a signal are summarized in **Table 18**.

Under future total conditions, the intersection will operate very well, with overall V/C ratios of 0.33 and 0.30 during the weekday morning and afternoon peak hours, respectively.

TABLE 18 MELBOURNE AVENUE / DUFFERIN STREET OPERATIONS SUMMARY

Movement	Future Total	
	V/C	LOS
EBTLR	0.13 (0.11)	C (C)
WBTLR	0.03 (0.02)	C (B)
NBTLR	0.26 (0.40)	A (A)
SBTLR	0.43 (0.35)	B (B)
Overall	0.33 (0.30)	B (B)

Notes:

1. 00 (00) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

7.5.2 Unsignalized Intersection Operations

Unsignalized intersection movements within the study area operate satisfactorily at LOS E or better in future scenarios. Discounting the intersection of Dufferin Street / Melbourne Avenue which is planned to be signalized in future, all intersections will operate with LOS D or better in future.

No intersection improvements or mitigation measures are recommended at the unsignalized intersections in the study area, other than the requested signalization of Dufferin Street / Melbourne Avenue. Results of traffic analysis for the study area unsignalized intersections are summarized in **Table 19**.

TABLE 19 UNSIGNALIZED INTERSECTION TRAFFIC OPERATIONS SUMMARY

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Dufferin Street & Milky Way						
NBTL	A (A)	0.0 (0.2)	A (A)	0.0 (0.2)	A (A)	1.5 (2.0)
Dufferin Street & Joe Shuster Way						
WBL	C (D)	20.5 (27.8)	C (D)	20.6 (30.3)	C (D)	22.0 (31.8)
WBR	B (B)	13.1 (14.5)	B (B)	13.1 (15.0)	B (C)	13.4 (15.3)
SBTL	A (A)	3.5 (4.0)	A (A)	3.5 (4.0)	A (A)	3.6 (4.1)
Dufferin Street & Existing Site Driveway						
EBLR	A (C)	0.0 (19.4)	A (C)	0.0 (18.8)	Removed in future.	
Dufferin Street & Melbourne Avenue/BonAventure Child Care Access³						
EBTLR	C (C)	18.6 (19.7)	C (C)	18.6 (20.9)	C (C)	24.0 (24.0)
WBTLR	C (D)	17.7 (30.1)	C (D)	17.8 (32.8)	C (E)	19.5 (37.0)
NBTL	A (A)	0.0 (0.2)	A (A)	0.0 (0.2)	A (A)	0.0 (0.2)
SBTL	A (A)	0.8 (1.0)	A (A)	0.8 (0.9)	A (A)	0.8 (1.0)
King Street West & Gwynne Avenue						
SBLR	B (B)	11.7 (12.0)	B (B)	11.7 (12.0)	B (B)	11.9 (12.0)
Gwynne Avenue & Melbourne Avenue						
EBTR	A (A)	7.0 (7.0)	A (A)	7.0 (7.0)	A (A)	7.2 (7.2)
WBL	A (A)	7.5 (7.6)	A (A)	7.5 (7.6)	A (A)	7.7 (7.7)
NBR	A (A)	7.1 (7.2)	A (A)	7.1 (7.2)	A (A)	7.2 (7.2)
SBTL	A (A)	7.8 (7.8)	A (A)	7.8 (7.8)	A (A)	8.5 (8.2)
Gwynne Avenue & Milky Way						
WBL	A (A)	0.0 (9.9)	A (A)	0.0 (9.9)	B (B)	10.2 (10.2)

Table continued on following page.

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Gwynne Avenue & Queen Street West						
WBTL	A (A)	2.7 (2.4)	A (A)	2.7 (2.4)	A (A)	2.6 (2.4)
Site Driveway (Future) & Milky Way						
WBTL	A (A)	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)	7.3 (6.4)
NBLR	A (A)	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)	9.4 (9.8)

Notes:

1. 00 (00) = Weekday morning peak hour (Weekday afternoon peak hour).
2. Movements with no delay reported by Synchro not shown in this table.
3. Intersection is planned as a signal in future. This result is to demonstrate that the intersection can operate without a signal if needed.

8.0 MULTI-MODAL ANALYSIS

Multimodal trips made to and from the site were generated based on homebased modal splits for the local area, as shown in **Table 20**.

TABLE 20 AREA MODE SPLIT

Travel Mode	Weekday Morning Peak	Weekday Afternoon Peak
Auto driver	24%	22%
Passenger	6%	5%
Transit	49%	49%
Cycle	5%	16%
Walk	15%	8%
Total	100%	100%

Notes:

1. Based on a homebased TTS query for 2006 GTA Zone 110.

Based on the mode splits above, a back-calculation was made using the auto driver trips generated (per **Section 7.0**) to determine the multimodal trip generation for the proposed development. Site multimodal trip generation is summarized in **Table 21**.

TABLE 21 SITE MULTIMODAL TRIP GENERATION

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Area Mode Split						
Driver		24%			22%	
Passenger		6%			5%	
Transit		49%			49%	
Walk		15%			16%	
Cycle		6%			8%	
Multimodal Trips Generated						
Trips						
Driver	30	70	100	70	35	105
Passenger	8	18	26	16	8	24
Transit	61	143	204	156	78	234
Walk	19	44	63	51	25	76
Cycle	8	18	26	25	13	38
Total Site Trips	125	295	420	320	160	480

Notes:

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

It is expected that the proposed development will generate in the order of **420** and **480** two-way person trips in the morning and afternoon peak hours, respectively.

8.1 TRANSIT CONSIDERATIONS

Multimodal forecasting for the site as planned indicates that an additional **204** and **234** two-way transit trips will be generated in the weekday morning and afternoon peak hours, respectively.

In the morning peak hour, **143** of the transit trips are outbound from the subject site. In the afternoon peak hour, it is anticipated that **156** of the new transit trips will be inbound towards the site, equating to less than three new trips per minute in the peak hour.

A Transportation Tomorrow Survey (TTS) query was utilized to determine the transit distribution from the site area (2006 GTA Zone 110). Results of the query indicate that five different transit routes were commonly used:

- The 29 Dufferin (bus)
- 47 Lansdowne (bus)
- 501 Queen (streetcar)
- 504 King (streetcar)
- Line 2 Bloor-Danforth (subway)

The calculated route choice percentages are demonstrated in **Table 22**. TTS data for the transit distribution is included in **Appendix F**.

TABLE 22 TRANSIT ROUTE CHOICE PERCENTAGES

Transit Route		Orientation	Route Choice	
			IN	OUT
29	29 Dufferin	North	12%	10%
		South	0%	0%
47	47 Lansdowne	North	1%	5%
		South	0%	0%
501	501 Queen	East	1%	3%
		West	3%	4%
504	504 King	East	61%	56%
		West	21%	23%
2	Line 2 – Bloor Danforth	East	1%	0%
		West	1%	0%
Total			100%	100%

Multiplying the transit trip generation calculated in **Table 21** with the route choices outlined in **Table 22** results in the number of trips to be assigned to each transit service.

The calculated values were then calibrated, as the site is located within the north-east corner of the TTS zone – very close to Queen Street West. It was assumed that 40% of the transit riders assigned to the 504 King streetcar service would move onto the 501 Queen streetcar due to stop proximity and the lines both traversing downtown in an east-west orientation. The assumed 40% is arbitrarily decided based on an assumed 'less than half' of passengers choosing to make a shorter walk, however, whether this estimate is higher or lower than the actual value, the overall conclusions of this assessment would remain valid.

Resultant transit trip assignment is summarized in **Table 23**.

TABLE 23 TRANSIT TRIP ASSIGNMENT

Transit Route	Orientation	AM Peak Hour			PM Peak Hour		
		IN	OUT	2-WAY	IN	OUT	2-WAY
29 Dufferin	North	7	14	21	19	8	27
	South	0	0	0	0	0	0
47 Lansdowne	North	1	7	8	1	4	5
	South	0	0	0	0	0	0
501 Queen	East	16	36	52	40	20	60
	West	7	18	25	18	10	28
504 King	East	22	48	70	57	26	83
	West	8	20	28	19	11	30
Line 2 – Bloor Danforth	East	0	0	0	1	0	1
	West	0	0	0	1	0	1
Total	-	61	143	204	156	79	235

Under the above-stated assumptions, calculations indicate that the 501 Queen and the 504 King services are likely to carry a large majority of site generated transit trips during peak hours.

To determine how many additional passengers will be on each transit service during the peak hours, the TTC website was consulted for the number of transit services per peak hour for each of the routes concerned.

Table 24 indicates the number of transit services during each peak hour.

TABLE 24 TRANSIT SERVICES PER HOUR (PEAK HOURS)

Transit Route	Orientation	AM Peak Hour			PM Peak Hour		
		IN	OUT	2-WAY	IN	OUT	2-WAY
29 Dufferin	North	9	9	18	8	8	16
	South	9	9	18	8	8	16
47 Lansdowne	North	13	13	26	10	10	20
	South	13	13	26	10	10	20
501 Queen	East	13	13	26	13	13	26
	West	13	13	26	13	13	26
504 King	East	17	17	34	12	12	24
	West	17	17	34	12	12	24
Line 2 – Bloor Danforth ¹	East	24	24	48	24	24	48
	West	24	24	48	24	24	48

Notes:

1. Trains run every 2-3 minutes during the rush hours (from 6 a.m. to 9 a.m. and from 3 p.m. to 7 p.m.) and every 4-5 minutes during off-peak hours.

Using the above number of transit services per hour, the number of additional passengers (average) per service is calculated and summarized below in **Table 25**.

TABLE 25 ADDITIONAL PASSENGERS PER TRANSIT SERVICE

Transit Route	Orientation	AM Peak Hour			PM Peak Hour		
		IN	OUT	2-WAY	IN	OUT	2-WAY
29 Dufferin	North	1	2	-	3	1	-
	South	0	0	-	0	0	-
47 Lansdowne	North	1	1	-	1	1	-
	South	0	0	-	0	0	-
501 Queen	East	2	3	-	4	2	-
	West	1	2	-	2	1	-
504 King	East	2	3	-	5	3	-
	West	1	2	-	2	1	-
Line 2 – Bloor Danforth	East	0	0	-	1	0	-
	West	0	0	-	1	0	-

Additional passengers per service will be in the order of **5 or less** passengers during peak hours for the major routes (501 Queen and 504 King). This is relatively minor in the context of the higher-order transit facilities available and site-generated transit trips can be comfortably accommodated on existing services.

8.2 ACTIVE TRAVEL CONSIDERATIONS

Multimodal forecasting for the site indicates that in future, the site is projected to generate in the order of **89** and **114** two-way walking or cycling trips in the morning and afternoon peak hours, respectively. Given high level of pedestrian connectivity in the local area and proximity to a range of pedestrian destinations, it is anticipated that the existing infrastructure will be able to accommodate these additional person trips.

9.0 SUMMARY

BA Group is retained by Hullmark Sun Life (360 Dufferin) LP to provide urban transportation consulting services in support of a combined OPA/ZBA/SPA application to permit a proposed mixed-use redevelopment located at the municipal address 340-376R Dufferin Street and 2 Melbourne Avenue in the City of Toronto.

A notable element of the application is that elements of the existing structure on the site generally contained within the proposed first phase of the proposal are to be preserved to their heritage attributes. This most notably includes the façade along Dufferin Street between Milky Way (laneway) to a point approximately 75 metres to the south as part of the project's first phase. The proposed second phase does not involve heritage preservation of any sort.

The proposed development concept includes 658 residential dwelling units, 1,929 m² flex GFA, and 1,521 m² flex commercial GFA across two development phases.

9.1 KEY FINDINGS

Transportation Context

1. The site is very well located relative to public transit. Several Toronto Transit Commission (TTC) streetcar and express bus routes operate within 250 metres (2 – 3 minute walk) of the proposed development site. These routes include the 501 Queen, 504 King, 29 Dufferin, and 929 Dufferin Express.
2. There are several future transit improvements planned that will further enhance transit accessibility in the west downtown area including enhanced GO Transit services and the future Ontario Line. In particular, as part of the SmartTrack Stations Program (which will utilize the enhanced GO Transit services), King-Liberty GO Station is planned to be located approximately 300m (walking distance) from the site.
3. A number of enhancements to the local cycling network are planned (including Gladstone Avenue and Argyle Street) and in addition, the extension of the West Toronto Railpath, to begin construction in 2022, will afford future residents of the site with a far reaching active transportation option providing access along the Kitchener GO Rail corridor and into downtown.
4. Area pedestrian destinations will ensure walking activity, which is aided by the sidewalk network in the area. Further improvements proposed as part of the project include the signalization of the Dufferin Street / Melbourne Avenue intersection and the widening of the sidewalk along the site's Dufferin Street façade.
5. Within a 500-metre radius of the site, there are 10 car-share vehicles (4 ZipCar and 6 Enterprise CarShare) and nine (9) Bike Share Toronto stations which collectively hold approximately 155 bicycles located within walking distance to the site that are available to be used on demand by Site members and visitors. In addition, Communauto vehicles may be available at any given time dependent on their location.

Transportation Demand Management

6. A suite of transportation demand management measures are proposed as part of a 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.
7. The primary goal is to reduce the overall reliance on single-occupant vehicles (SOV) while promoting the use of more active and sustainable modes of transportation.
8. TDM measures that are proposed include Bike Share Station contribution, cycling network infrastructure contribution, on-site bicycle repair station, bicycle parking, travel information brochures, and lower vehicle parking supply rates.

Site Access

9. Vehicular access to the site is taken directly from Milky Way, the laneway forming the northern boundary to the site. Milky Way can be accessed from Gwynne Avenue to the west and Dufferin Street to the east. The at-grade consolidated loading facility and 2-level underground parking garage are both accessed (separately) from Milky Way. Milky Way will be widened to 6 metres to meet the contemporary city standard and accommodate all anticipated vehicle activity.
10. It is noted that the signalization of the Dufferin Street / Melbourne Avenue intersection was requested by City of Toronto Transportation Services staff as part of the pre-application process for this project; this is considered in the design and analyses contained herein. It is proposed to replace the pedestrian crossover (PXO) located at the Dufferin Street / Melbourne Avenue intersection; it is proposed to convert it to a signalized intersection.
11. Pedestrian conditions are proposed to be improved. It is proposed to expand the sidewalk on Dufferin Street to 3.7-3.8m as part of Phase 1 throughout the site extent by reducing the width of the Dufferin Street curb lane to 3.0m. In Phase 2, the building will include a greater setback and therefore, a larger width sidewalk area.

Vehicular Parking

12. By-law 160-2022, recently approved, brought the site under Zoning By-law 569-2013, and in particular, entered the site into Policy Area 1 in the Policy Area Overlay Map (995.10.1). The application of Policy Area 1 rates to the application require a total of 485 parking spaces are required inclusive of 405 resident parking spaces and 80 shared non-resident parking spaces.
13. The City of Toronto has signalled a change in policy direction regarding its Zoning By-law and minimum parking requirements; By-law 89-2022 (since amended) was passed to amend Zoning By-law 569-2013 and which eliminated most minimum parking requirements. Both the pre-existing Zoning By-law 569-2013 minimum parking requirements and the new requirements of By-law 89-2022 are simultaneously applicable to the site as the latter is under appeal. The application of its minimum parking requirements to the site results in a requirement for 34 residential visitor parking spaces, of which 16 must be accessible parking.

14. It is proposed to provide site-wide at the following supply ratios:
 - 170 parking spaces allocated to residents
 - Equivalent to 0.26 parking spaces per unit (residents)
 - 62 parking spaces for the shared use of residential visitors and commercial/retail users
 - Equivalent to 0.09 parking spaces per unit (residential visitors)
15. The 2-level underground parking garage, to be built as part of Phase 1, is accessed via a ramp to the underground accessed directly from Milky Way, west of the loading facility. The garage will be extended south as part of Phase 2.
16. Adoption of a reduced parking standard is appropriate based upon area land use compatibility, evolving sustainable transportation context, the evolving planning policy context, transportation planning principles that have informed the proposed parking supply, the proposed TDM Plan, and recent reduced resident parking supply ratio approvals for buildings in the surrounding area.
17. Adoption of a reduced residential visitor parking standard – and the provision to share parking for non-residential uses on a non-exclusive basis – is appropriate based on recent reduced residential visitor parking supply ratio approvals for buildings in the surrounding area, the area commercial parking supply which can accommodate additional parking demand as needed, and anticipated future plans for Dufferin Street which may result in the loss of on-street parking in the southbound curb lane.

Bicycle Parking

18. By-law 160-2022 brought the site under Zoning By-law 569-2013. The application of Bicycle Zone 1 minimum bicycle parking requirements results in a minimum of 682 bicycle parking spaces are required, inclusive of 601 long-term bike parking spaces and 81 short-term bike parking spaces.
19. The proposed bicycle parking supply meets the requirements.

Loading

20. By-law 160-2022, recently approved, brought the site under Zoning By-law 569-2013. The application of its loading requirements results in a minimum of two loading spaces being required, after applying Zoning By-law 569-2013 sharing permissions, inclusive of 1 Type G loading space and 1 Type B loading space.
21. It is proposed to provide 4 loading spaces, including 1 Type G loading space, 1 Type B loading space, and 2 Type C loading spaces.
22. In a centralized loading facility accessed directly from Milky Way and servicing Phase 1, the Type G and Type B loading spaces are provided; this will be the primary loading facility for the site, servicing both phases of the development. Two additional Type C loading spaces will be provided underground (P1 level) to service the southern tower as part of Phase 1 and the Phase 2 (i.e. southern) development.
23. The proposed loading supply and loading area arrangements are functionally appropriate and will accommodate the loading demands of the site as planned.

Site Travel Demand Forecasting

24. Travel demand forecasts have been prepared as part of this study for the build-out of the proposed development. Residential site traffic was estimated based on proxy site surveys of developments in the Toronto.
25. The 37 non-resident parking spaces available on the site today will be replaced by 26 non-resident parking spaces in future – providing the assumption that future non-residential trip generation will likely be lower than existing conditions. Conservatively, the existing site generated trips (plus the same number of trips in the opposite direction) have been adopted as trip generation for the future.
26. The proposed buildings will generate in the order of **100** and **105** two-way vehicle trips in the weekday morning and afternoon peak hours, respectively.
27. A reduction of 25% in single-occupant auto vehicle trips is required. For this site, a reduction of 25% has been achieved through a variety of Transportation Demand Management (TDM) measures as outlined in **Section 3.0** and by the proposed parking reduction as outlined in **Section 4.2.3**. This is best showcased by comparing the adopted residential trip generation rates to ITE Trip Generation Manual 11th Edition rates for similar buildings. The minimum required reduction of 25% in single-occupant auto vehicle trips will be achieved for this development plan.
28. Baseline existing traffic volumes were derived by balancing the most recent available traffic data (2022), with traffic data available at the intersection of Queen Street West / Dufferin Street which was counted in 2019 prior to the COVID-19 pandemic. This is to represent 'pre-pandemic' conditions as closely as possible.
29. Traffic allowances associated with background developments were established based upon assignment information incorporated into traffic impact studies prepared as part of their approval process.
30. Two-way corridor growth along Queen Street West and Dufferin Streets was calculated based on traffic volume counts undertaken between the years 2013 and 2022. Low or negative corridor growth was observed in all cases, except for along Dufferin Street in the afternoon peak hour, where an average increase of 2% per year was adopted. Where growth was calculated to be negative, a growth rate of 0% was adopted as a conservative measure for this analysis.
31. Future background total traffic volumes include existing traffic volumes and background traffic volumes. Future total traffic volumes were established by adding future background traffic volumes and site traffic volumes.

Traffic Operations Analysis

32. Intersection capacity analysis has been completed using Synchro Version 11 and the methodology presented within the Highway Capacity Manual 2000 (HCM 2000).
33. All signalized and unsignalized intersections and site driveways operate within their theoretical capacity during all future horizon years, indicating that the proposed road network can successfully accommodate the proposed development as planned.

Multimodal Analysis

34. Multimodal trips made to and from the site were generated based on homebased modal splits for the local area. A back-calculation was made using the auto driver trips generated (per **Section 7.0**) to determine the multimodal trip generation for the proposed development.
35. It is expected that the proposed development will generate in the order of **420** and **480** two-way person trips in the morning and afternoon peak hours, respectively.
36. Multimodal forecasting for the site as planned indicates that an additional **204** and **234** two-way transit trips will be generated in the weekday morning and afternoon peak hours, respectively.
37. To determine how many additional passengers will be on each transit service during the peak hours, the TTC website was consulted for the number of transit services per peak hour for each of the routes concerned.
38. Additional passengers per service will be in the order of **5 or less** passengers during peak hours for the major routes (501 Queen and 504 King). This is relatively minor in the context of the higher-order transit facilities available and site-generated transit trips can be comfortably accommodated on existing services.
39. Multimodal forecasting for the site indicates that in future, the site is projected to generate in the order of **89** and **114** two-way walking or cycling trips in the morning and afternoon peak hours, respectively. Given high level of pedestrian connectivity in the local area and proximity to a range of pedestrian destinations, it is anticipated that the existing infrastructure will be able to accommodate these additional person trips.