21 JOHN DEV INC.

13-21 JOHN STREET AND 36-40 SOUTH STATION STREET DEVELOPMENT

TRANSPORTATION IMPACT STUDY ADDENDUM

April 14, 2023

13-21 JOHN STREET AND 36-40 SOUTH STATION STREET DEVELOPMENT

TRAFFIC IMPACT STUDY ADDENDUM

21 JOHN DEV INC.

PROJECT NO.: 221-05407-00
DATE: APRIL 14, 2023

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April 14, 2023

21 John Dev Inc.
c/o Stephanie Bonic
Devron Developments
31 Scarsdale Road, Unit 5
Toronto, M3B 2R2, ON

Dear Ms. Bonic,

Subject: Transportation Impact Study Addendum – 13-21 John Street and 36-40 South Station Street Development

WSP Canada Inc. (WSP) is pleased to present the findings of our Transportation Impact Study (TIS) Addendum for the proposed development at 13-21 John Street and 36-40 South Station Street in the City of Toronto to reflect its updated development concept.

The proposed development will be supported by a TDM plan including provision of a Bike Share station on-site. The transportation demand associated with the proposed development can be readily accommodated by the study area transportation network. The transportation elements proposed on-site including loading and vehicle and bicycle parking comply with applicable supply and dimension requirements. A site plan review confirms functionality of the proposed on-site transportation elements, and recommends on-site safety mitigation to address potential conflicts. The findings of the study are detailed in this report.

We thank you for the opportunity to undertake this study. Please do not hesitate to contact us if you have any questions or comments.

Sincerely,

Josie Li, MCIP, RPP, PMP
Project Manager
Transportation Planning and Science

WSP ref.: 221-05407-00

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WSP Canada Inc.

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APPENDICES

1 INTRODUCTION

WSP was retained by 21 John Dev Inc. to prepare a Transportation Impact Study (TIS) Addendum for the proposed development at 13-21 John Street and 36-40 South Station Street in the City of Toronto.

By way of background, WSP previously prepared a TIS for the proposed development, dated October 06, 2022, which was included as part of the first development application submission. A Terms of Reference (ToR) was circulated to the City's transportation staff prior to preparing the original October 2022 TIS, which the City staff responded to. The ToR and City's responses are provided in **Appendix A** for reference. Subsequent to the first submission, the City Development Engineering department provided comments in a memorandum dated March 13, 2023, and comments from other City departments, including Transportation Services, are yet to be issued.

This document is an addendum to the October 2022 TIS. It has been prepared in accordance with the latest site plan and current area context to evaluate if there is any adverse transportation impact associated with the proposed changes, review the updated site plan from a transportation perspective, and assess the adequacy of the updated parking and loading arrangements. This TIS addendum includes the following key updates to the October 2022 TIS:

— Site trip generation and assignment per the new site statistics;
— Future total traffic forecasts and analysis according to the updated site trips:
— Future transit assessment (as part of the multi-modal analysis) per the updated site transit trips;
— Site plan review based on the new site plan;
— Parking and loading assessment per the new site plan and current By-law requirements; and
— Transportation Demand Management plan and associated single-occupancy vehicle trip reduction estimates based on the latest site context.

Existing traffic conditions, study horizon year (2027), and assumptions for future background conditions (other developments) are consistent with the original study.

Our study approach and findings are documented herein.

1.1 PROPOSED DEVELOPMENT

The site location and study area are shown in **Figure 1-1**. The site today is occupied by several buildings and their associated surface parking:

- A house at 36 and 38 South Station Street with one driveway on South Station Street,
- A small one-storey religious building at 40 South Station Street with one driveway on South Station Street,
- A two-storey multi-unit commercial building at 13-19 John Street, accessed via a shared laneway on John Street opposite Pantelis Kalamaris Lane. The shared laneway also provides rear yard access for the adjacent commercial properties on Weston Road.
- An automobile tire shop at 21 John Street, with a driveway on John Street and a driveway on South Station Street.

Since the previous submission, the development concept has been updated. The site has now been divided into two parcels, Parcel A and Parcel B, by an existing driveway on South Station Street between 36 and 40 South Station Street. This driveway provides rear yard access to the commercial uses on Weston Road and access for the existing house at 36 and 38 South Station Street.

Based on the site plan provided on April 14, 2023, Parcel A, the main component of the proposed development, consists of a 40-storey building with 484 residential units, 210 m^2 (2,265 ft^2) of ancillary commercial/retail use at grade, and a 433-m^2 (4,661 ft^2) daycare. A total of 90 parking spaces are proposed for Parcel A, which will be provided in a three-level underground garage. Vehicular access to Parcel A is provided via a full-moves driveway on John Street, opposite to Pantelis Kalamaris Lane and adjacent to the existing one-way laneway that will remain and continue to serve as rear yard access for the properties on Weston Road.

Parcel B features a three-storey building with 1,382 m^2 (14,873 ft^2) GFA of flex community space. No on-site parking or loading spaces will be provided for Parcel B. Occasional pick-up/drop-off activities can be accommodated by South Station Street. The site plan is shown in **Figure 1-2**.

The proposed land uses and unit mix are summarized in **Table 1-1**.

Table 1-1: Development Proposal Summary

LAND USE		UNITS	GROSS FLOOR AREA	STOREYS
Parcel A				
Retail/Commercial		--	210 m^2 (2,265 ft^2)	1
Daycare		--	433 m^2 (4,661 ft^2)	1-2
Residential	Studio	**51**	--	9-40
	1-Bedroom	**237**	--	3-40
	2-Bedroom	**150**	**--**	2-40
	3-Bedroom	**46**	**--**	
Total		**484**	**--**	**40**
Parcel B				
Community Centre		--	1,382 m^2 (14,873 ft^2)	3

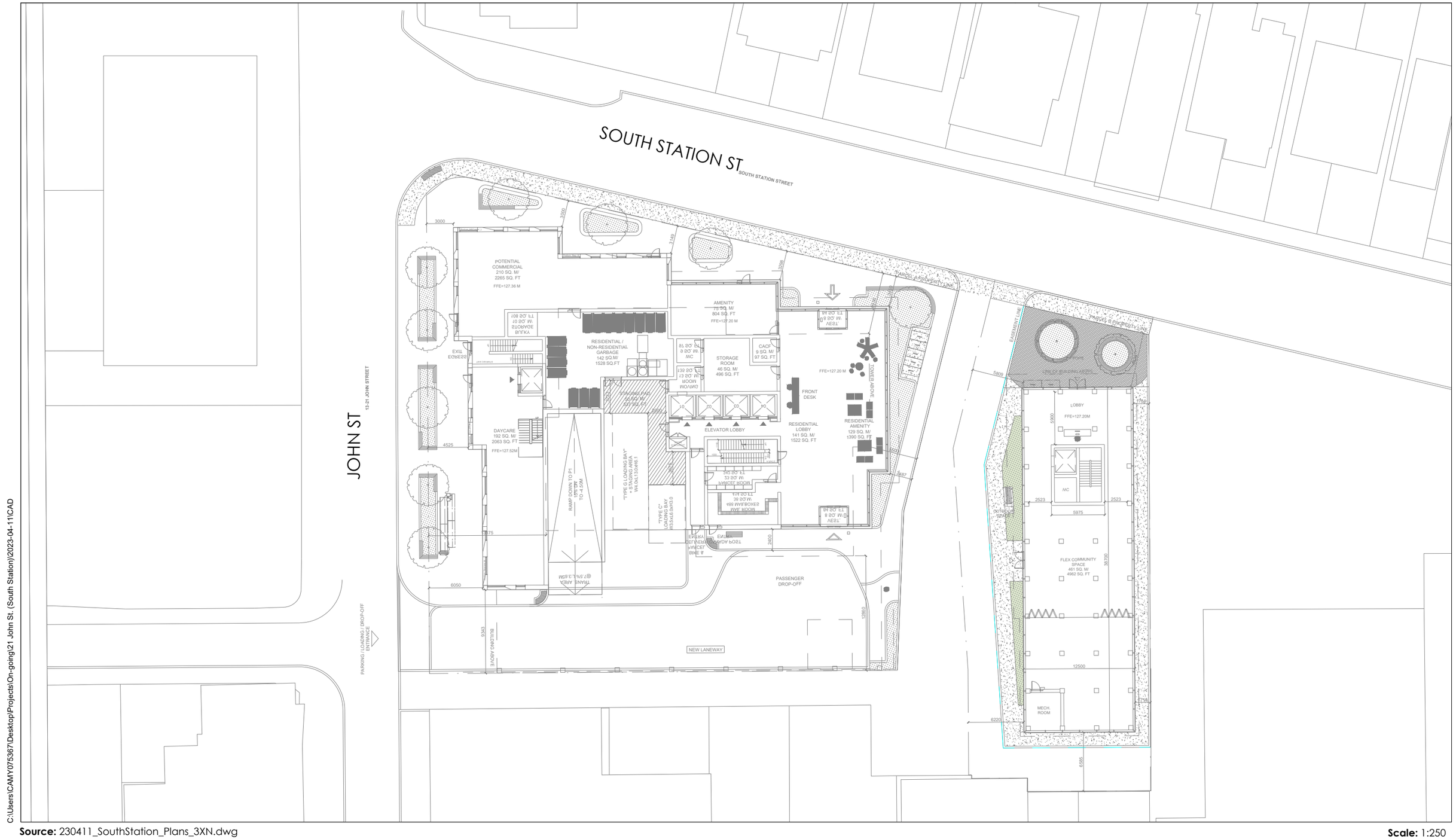
Legend

Site Location

Study Intersection

Figure 1-1

Site Location and Study Area



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Scale: 1:250

Figure 1-2
Site Plan
21 John Street

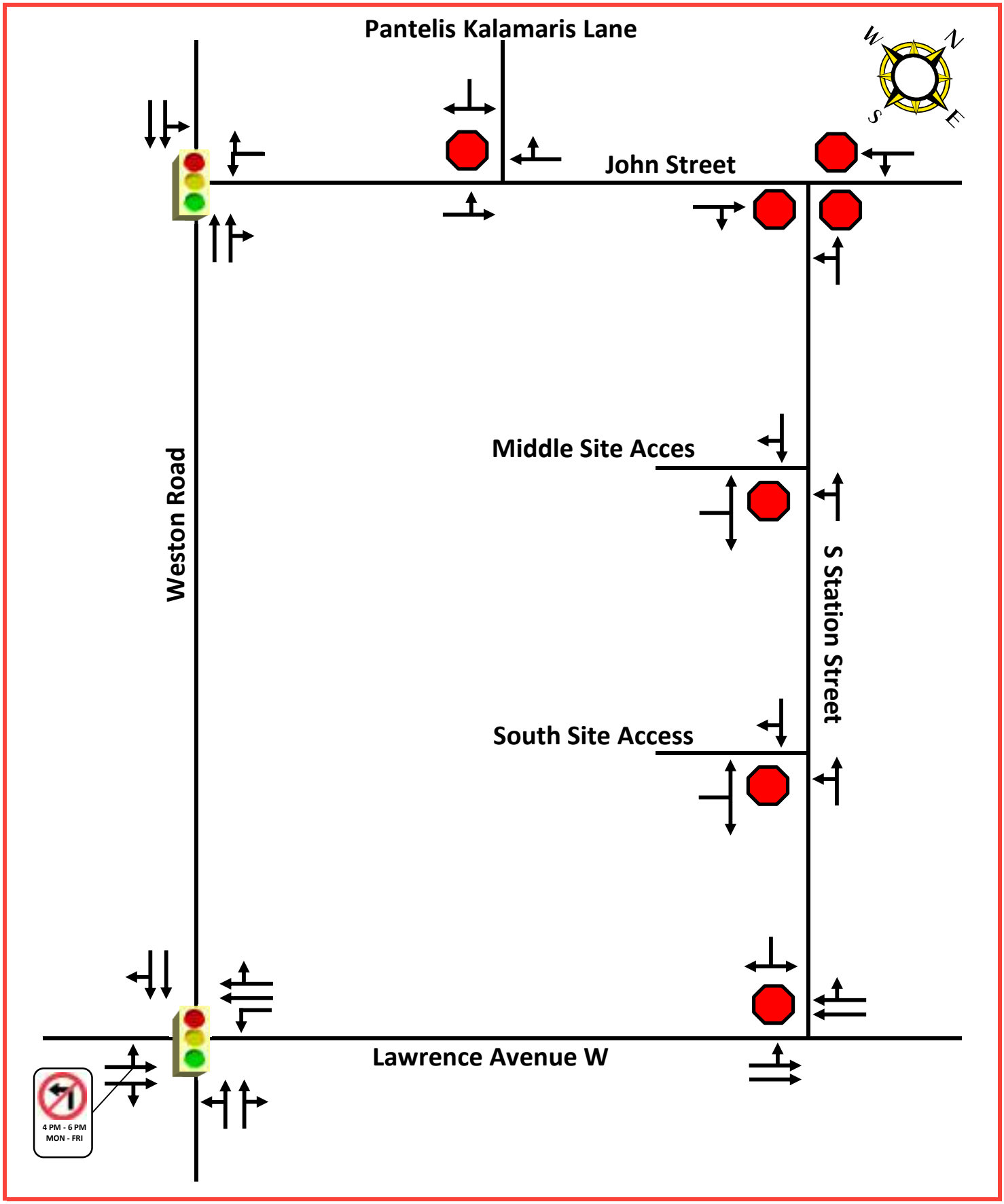
2 EXISTING CONDITIONS

2.1 BOUNDARY ROADWAYS

The site is bounded by John Street to the northwest and South Station Street to the northeast. The southwest and south sides are occupied by other developments that face Weston Road and South Station Street, respectively. The following roadways make up the boundary road network that surrounds the subject site and the block the site is on:

- **John Street** is a northeast – southwest local road with a speed limit of 30 km/h and a two-lane cross-section. Sidewalks are available on both sides of the street. Parking is prohibited on both sides of the street.
- **South Station Street** is a northwest - southeast local road with a speed limit of 50 km/h and a two-lane cross-section. Sidewalks are available on both sides of the street. Parking is available on both sides of the street.
- **Weston Road,** which bounds the block to the southwest, is a northwest-southeast minor arterial road with a speed limit of 50 km/hr and a four-lane cross-section. Sidewalks are available on both sides of the road in the vicinity of the site. Parking is prohibited on both sides of the street in the vicinity of the site.
- **Lawrence Avenue West**, which bounds the block to the south, is an east-west major arterial road with a speed limit of 50 km/hr and a four-lane cross-section. Sidewalks are available on both sides of the road in the vicinity of the site. Parking is prohibited on both sides of the street in the vicinity of the site.

The existing Lane configuration is shown in **Figure 2-1**.



Legend

Signalized Intersection

Stop Control

Lane Configurations

Figure 2-1

Existing Lane Configurations

2.2 EXISTING TRANSIT SERVICES

The subject site is well served by existing transit routes operated by Toronto Transit Commission (TTC) and GO Transit. The existing transit network in the vicinity of the proposed development is described below:

- The **89 Weston** bus route operates along Weston Road, generally in a north-south direction between Albion Road and Keele Station. It operates approximately every 10 minutes throughout the week. Bike racks are available on this route. There are two stops in the vicinity of the site, one for each direction, at Weston Road and Lawrence Ave W. The northbound stop is a near-side stop and the southbound is a far-side stop.
- The **989 Weston Express** bus route operates along Weston Road and old Weston Road, generally in a north-south direction between Steeles Avenue West and Keele Station. It operates approximately every 15 minutes on weekdays. Bike racks are available on this route. The express service can be accessed from Weston Road and Lawrence Avenue West. The northbound stop is a near-side stop and the southbound is a far-side stop.
- The **52 Lawrence West** bus route operates along Lawrence Avenue West and Dixon Road, in an east-west direction between Yonge Street and Pearson International Airport or Westwood Mall. It operates approximately every 5 to 7 minutes throughout the week, with 5 route variations. Bike racks are available on this route. The westbound stop is a near-side stop and the eastbound is a far-side stop.
- The **79 Scarlett Road** bus route operates along Runnymede Road and Scarlett Rd, in a north-south direction between Runnymede Station and Lawrence Avenue West. It operates approximately every 10 minutes throughout the week, with two route variations. Bike racks are available on this route. The westbound stop is a near-side stop and the eastbound is a far-side stop.

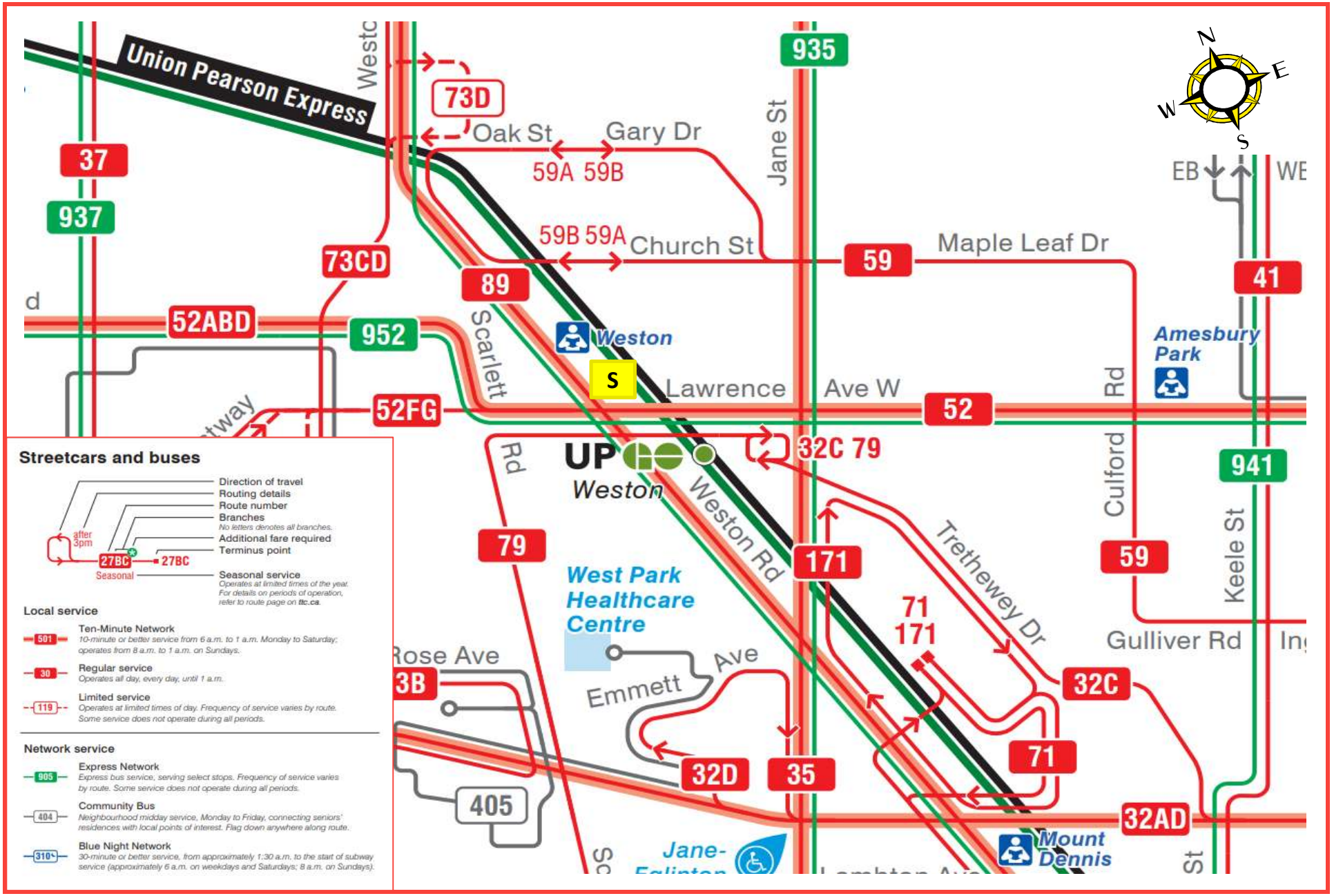
The site is also serviced by the following GO Transit inter-regional train line:

- The **Kitchener Line** operates in an east-west direction from Union GO Station to Kitchener GO Station. This line connects Toronto residents to the Kitchener-Waterloo region. The closest station on the line is the Weston GO Station, which is approximately 300 m from the site and is accessible by walking. The Kitchener Line offers year-round weekday service every 30 minutes during peak periods, and 60 minutes during off-peak periods. This service also connects Weston to Union Station in 15 minutes.

The site is further serviced by the Union Pearson (UP) Express Line:

- The **Union Pearson (UP) Express Line** operates in an east-west direction from Union GO Station to Toronto Pearson International Airport. The closest station on the line is Weston GO Station, which is approximately 300 m from the site and is accessible by walk. The UP Express Line provides access to Bloor GO and Union GO. The line provides a two-way 30-minute service between Pearson Airport and Union Station. Service is provided year-round on weekdays, weekends, and holidays.

The existing transit network in the vicinity of the proposed development is described below and illustrated below in **Figure 2-2**.



Legend

S Site Location

Figure 2-2

Existing Transit Services

2.3 EXISTING ACTIVE TRANSPORTATION FACILITIES

2.3.1 EXISTING CYCLING FACILITIES

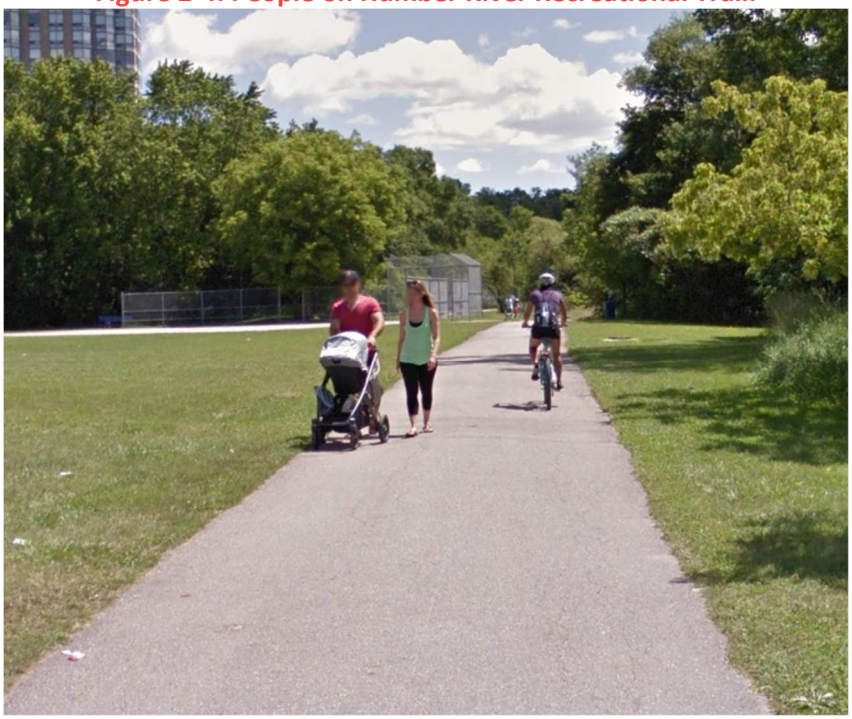
Weston Road and the surrounding local streets generally do not provide adequate infrastructure for safe cycling due to their narrow width. However, a notable facility within 600 m of the subject site is the Humber River Recreational Trail. This trail generally runs in a north-south direction alongside Humber River and connects to bike lanes and trails further south, such as Eglinton Avenue West, Anette Street, Bloor Street West and Lake Shore Boulevard West. The closest entrance to the trail is at the intersection of Hickory Tree Road and Lawrence Avenue West, as shown in **Figure 2-3**, an excerpt from the City of Toronto 2022-2024 Implementation Program – Toronto Etobicoke York District, dated November 2021.

Figure 2-3: Existing and Planned Cycling Network.

Source: City of Toronto

The proximity of the subject site makes this trail highly accessible to cyclists who wish to use its major multi-use path. The path is approximately 4 metres wide, accommodating multiple people at a time, as shown in **Figure 2-4.**

Figure 2-4: People on Humber River Recreational Trail.



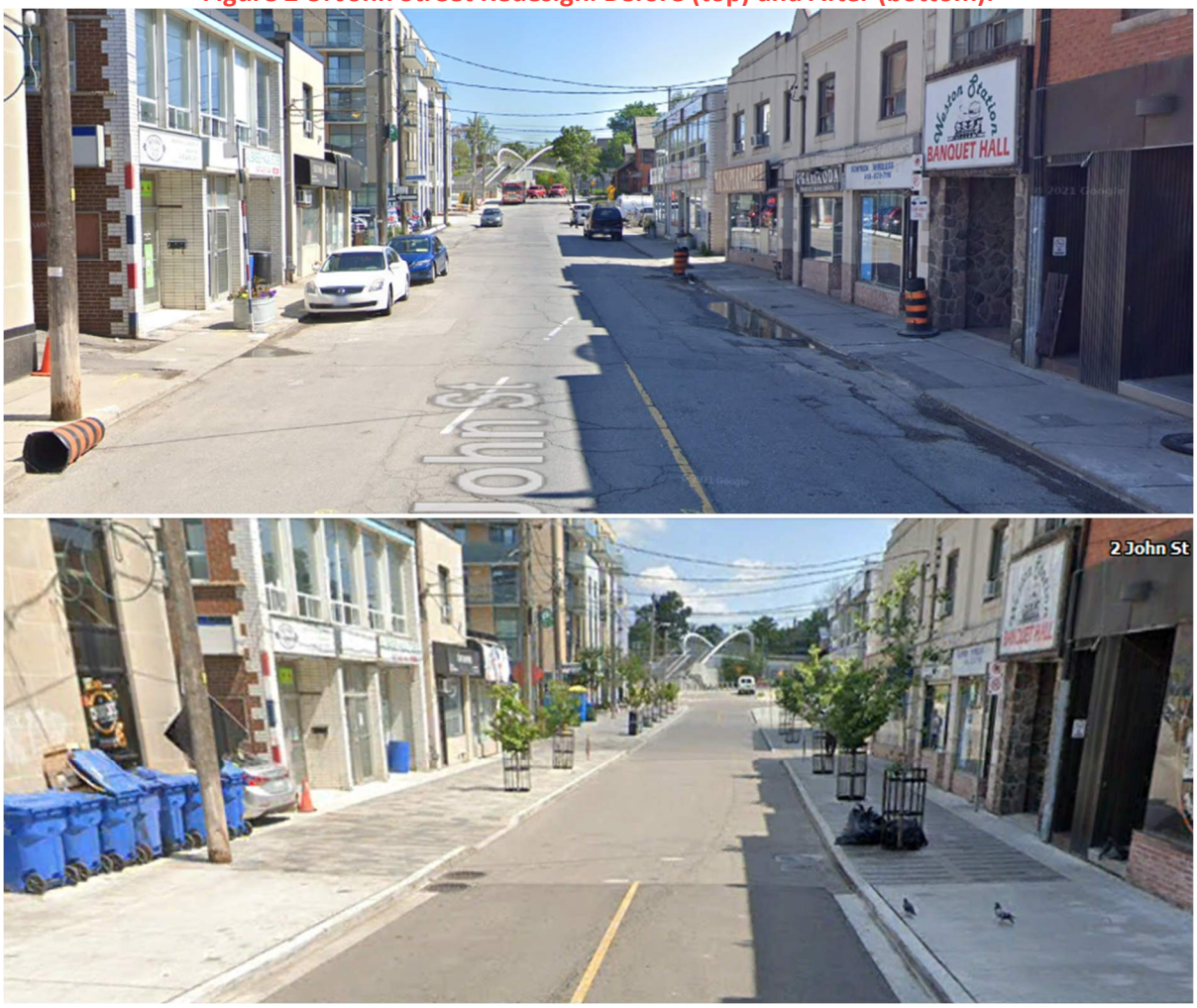
Source: Google Maps.

2.3.2 EXISTING PEDESTRIAN FACILITIES

Overall, the subject site is very well connected for pedestrians with sidewalks on both sides of John Street and South Station Street, and pedestrian bridges across the railway line and Lawrence Avenue West, which are very important for connecting to transit, retail, schools and commercial uses within walking distance.

John Street has recently been redesigned, removing parking on the sides of the street, widening sidewalks, and planting trees along the sides of the road, significantly improving pedestrian infrastructure, safety and comfort. The before and after design of John Street is shown in **Figure 2-5**.

Figure 2-5: John Street Redesign. Before (top) and After (bottom).



Source: Google Maps

Additionally, Weston Road has also undergone a redesign and reconstruction process recently, widening sidewalks and installing streetscaping features, among other things. It is clear that the City has made significant infrastructure improvements to encourage walking and transit within the vicinity of the site. The pedestrian bridge across Lawrence Avenue West also provides direct access to the GO Station, reducing conflict with other modes of transportation and walking time. The bridge reduces the walking distance to the GO Station from 500 to 300 metres, is shown in **Figure 2-6**.

Figure 2-6: Pedestrian Bridge for Direct GO Station Access

Source: Google Maps

In addition to the previously mentioned sidewalks and pedestrian bridges. Pedestrians may also choose to travel along the Humber River Recreational Trail, shown in **Figure 2-4**.

3 VEHICULAR TRAVEL ASSESSMENT

3.1 EXISTING CONDITIONS

3.1.1 TRAFFIC DATA

Table 3-1 summarizes the list of turning movement counts (TMC) collected for this study, as well as the source and date of the counts. Traffic data was collected during typical weekday a.m. and p.m. peak periods. **Figure 3-1** shows recorded traffic volumes at the study intersections identified in **Figure 2-1**. Details of the turning movement counts and volume balancing are included in **Appendix B.**

Table 3-1: Traffic Data Information

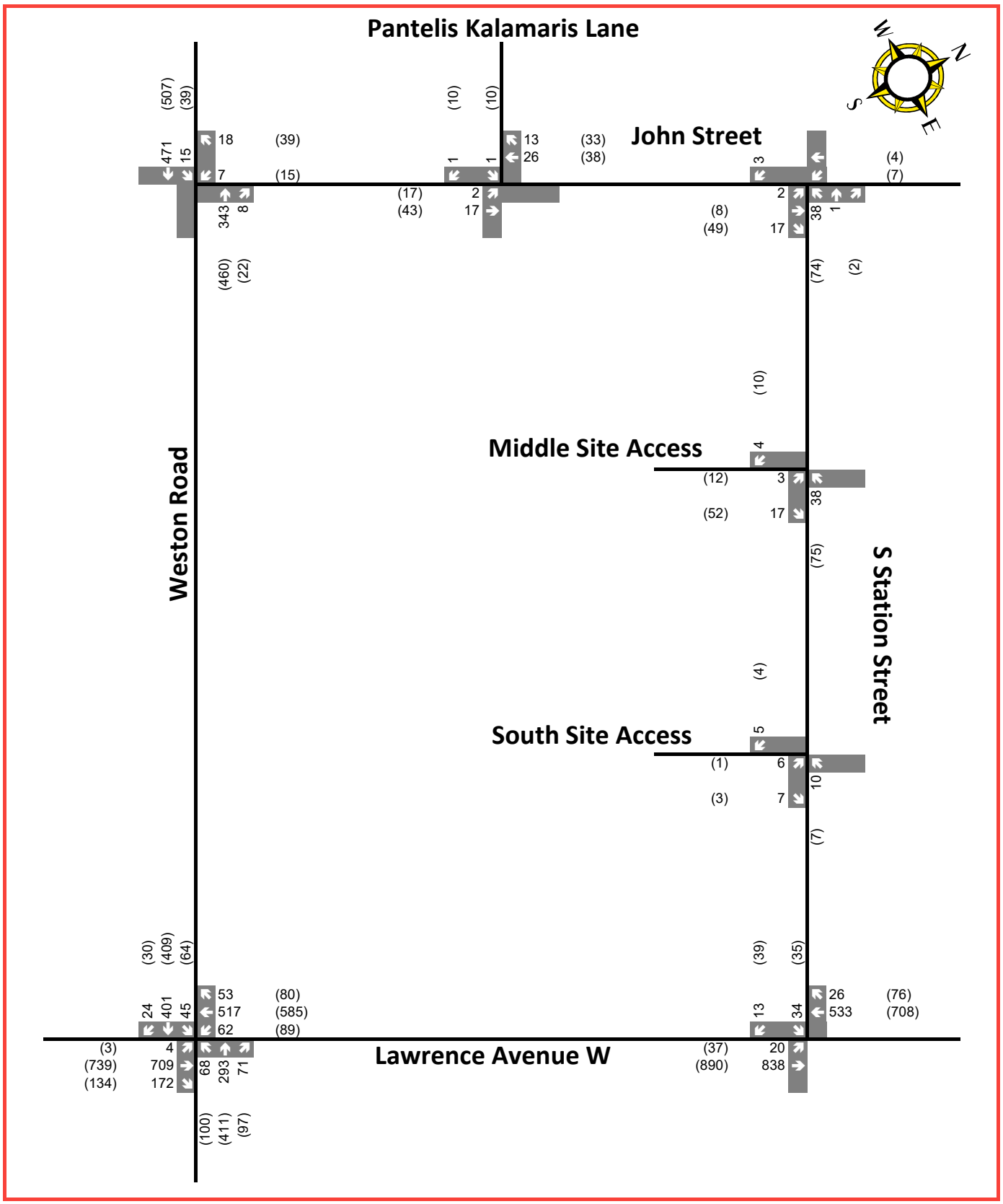
INTERSECTION	SOURCE	SURVEY DATE
Weston Rd & John St	Horizon Data Services	June 21, 2022
Weston Rd & Lawrence Ave W	Horizon Data Services	June 21, 2022
John St & Pantelis Kalamaris Ln	Horizon Data Services	June 21, 2022
John St & 13-19 John St Access[1,2]	Horizon Data Services	June 21, 2022
John St & S Station St	Horizon Data Services	June 28, 2022
Lawrence Ave W & S Station St	Horizon Data Services	June 22, 2022
S Station St & Middle Site Access[1,3]	Horizon Data Services	June 21, 2022
S Station St & South Site Access[1,4]	Horizon Data Services	June 21, 2022

1 For site accesses, only movements in and out of the site were counted.

2 John Street & 13-19 John Street Access will no longer be used as a site access and is not included in the traffic analysis. However, this will remain as access for adjacent properties on Weston Road.

3 The Middle Site Access refers to the existing access serving the religious building at 40 South Station Street.

4 The South Site Access refers to the existing shared access serving 38 South Station Street and adjacent properties on Weston Road. This access will no longer be used as a site access but will remain as access for adjacent properties on Weston Road.



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-1

Existing Traffic Volumes

3.1.2 MODELLING METHODOLOGY

The key parameters used in the analysis include the following:

- Existing lane configurations obtained from Google Maps' satellite and street views;
- Signal timing plans provided by the City of Toronto, and included in **Appendix B** for reference;
- Intersection peak hour factors were calculated from the 15-minute peak hour traffic counts; and
- Heavy vehicle percentages and conflicting pedestrian volumes as derived from the existing turning movement counts.

The Synchro parameters and assumptions in the existing condition models, as outlined above, were carried forward to all future models.

Intersection level of service (LOS) is a method of quantifying the quality of traffic operations at signalized and unsignalized intersections. LOS is indicated through a lettering system, with LOS A representing an excellent level of service (generally under free-flow conditions), and LOS F representing a very poor level of service (generally under congested conditions). **Appendix C** contains the definitions for level of service for both signalized and unsignalized intersections.

In addition to LOS, the volume-to-capacity (v/c) ratio represents the sufficiency of an intersection to accommodate the vehicular demand, as compared to the vehicular capacity. A v/c ratio less than 0.9 generally indicates adequate capacity and vehicles are not expected to experience significant delays or queueing conditions. As the v/c ratio approaches or exceeds 1.00, traffic flow becomes unstable resulting in significant delays and queueing conditions. LOS D is typically considered acceptable peak hour performance in an urban setting, and lower LOS conditions may be tolerable for short-term time periods during peak hours when heavier traffic volumes are expected.

The operations of the study area intersections have been evaluated using Synchro 11, with *Highway Capacity Manual* (HCM) 2000 procedures. The analysis has considered Level-of-Service (LOS), volume-to-capacity (v/c) ratios, and queueing conditions.

3.1.3 TRAFFIC OPERATIONS

Table 3-2 summarizes the results of the analysis of the study intersections for the existing weekday a.m. and p.m. peak hours. Detailed intersection capacity analysis sheets are included in **Appendix D**.

Table 3-2: Existing Traffic Operations

INTERSECTION	CONTROL	A.M. PEAK HOUR		P.M. PEAK HOUR	
		LOS (Delay in seconds)	Critical Movements (v/c ratio)	LOS (Delay in seconds)	Critical Movements (v/c ratio)
Weston Rd at John St	Signalized	A (5.1)	-	A (5.7)	-
Weston Rd at Lawrence Ave W	Signalized	D (36.1)	EB-LTR (0.94)	D (35.7)	EB-TR (0.93)
John St at Pantelis Kalamaris Ln	Unsignalized	A (8.9)	-	B (10.5)	-
John St at S Station St	Unsignalized	A (7.5)	-	A (8.0)	-
Lawrence Ave W at S Station St	Unsignalized	C (16.8)	-	C (22.8)	-
S Station St at S Site Access	Unsignalized	A (9.0)	-	A (9.1)	-
S Station St at Middle Site Access	Unsignalized	A (8.8)	-	A (9.2)	-

1 The LOS at an unsignalized intersection is defined by the movement with the highest delay.

2 Critical movements are those with a volume-to-capacity ratio exceeding 0.85 for a signalized intersection or with a LOS of 'E' or 'F' for an unsignalized intersection.

The results presented in **Table 3-2** indicate that while the signalized intersection of Weston Road and Lawrence Avenue West has an acceptable LOS of "D", the eastbound movements are nearing capacity with critical v/c ratios of 0.94 and 0.93 for the a.m. and the p.m. peak hours, respectively. All other intersections are operating at LOS "C" or better.

3.1.4 QUEUEING ANALYSIS

The signalized queues under existing conditions are listed in **Table 3-3**. The detailed Synchro queuing reports are provided in **Appendix D.** The analysis indicates that all signalized 95th percentile queues are accommodated within their storage length except for the westbound left-turn queue at Weston Road & Lawrence Avenue during the p.m. peak hour. However, its 50th percentile queue is accommodated within the available storage length. The 95th percentile queue length is typically reached only a few times during peak periods; therefore, the impact of the queue would be limited as long as the 50th percentile (average) queue length is within the available storage length.

Table 3-3: Existing Traffic Queueing Analysis.

INTERSECTION	LANE	STORAGE LENGTH (M)	95TH [50TH] PERCENTILE QUEUE (M)	
			A.M. Peak Hour	P.M. Peak Hour
Weston Rd at John St	WB-LR	48	11	16
	NB-TR	110	13	13
	SB-LT	111	23	25
Weston Rd at Lawrence Ave W	EB-LTR	284	161	155
	WB-L	21	18	24 [13]
	WB-TR	320	67	82
	NB-LTR	407	44	66
	SB-LTR	96	65	74

1 The 50th percentile queue is only shown where the 95th percentile queue exceeds the storage length.

3.2 FUTURE BACKGROUND CONDITIONS

3.2.1 HORIZON YEAR

The proposed development is anticipated to be built by the horizon year of 2027, which has been assumed for the purpose of assessing future transportation conditions.

3.2.2 BACKGROUND ROAD NETWORK

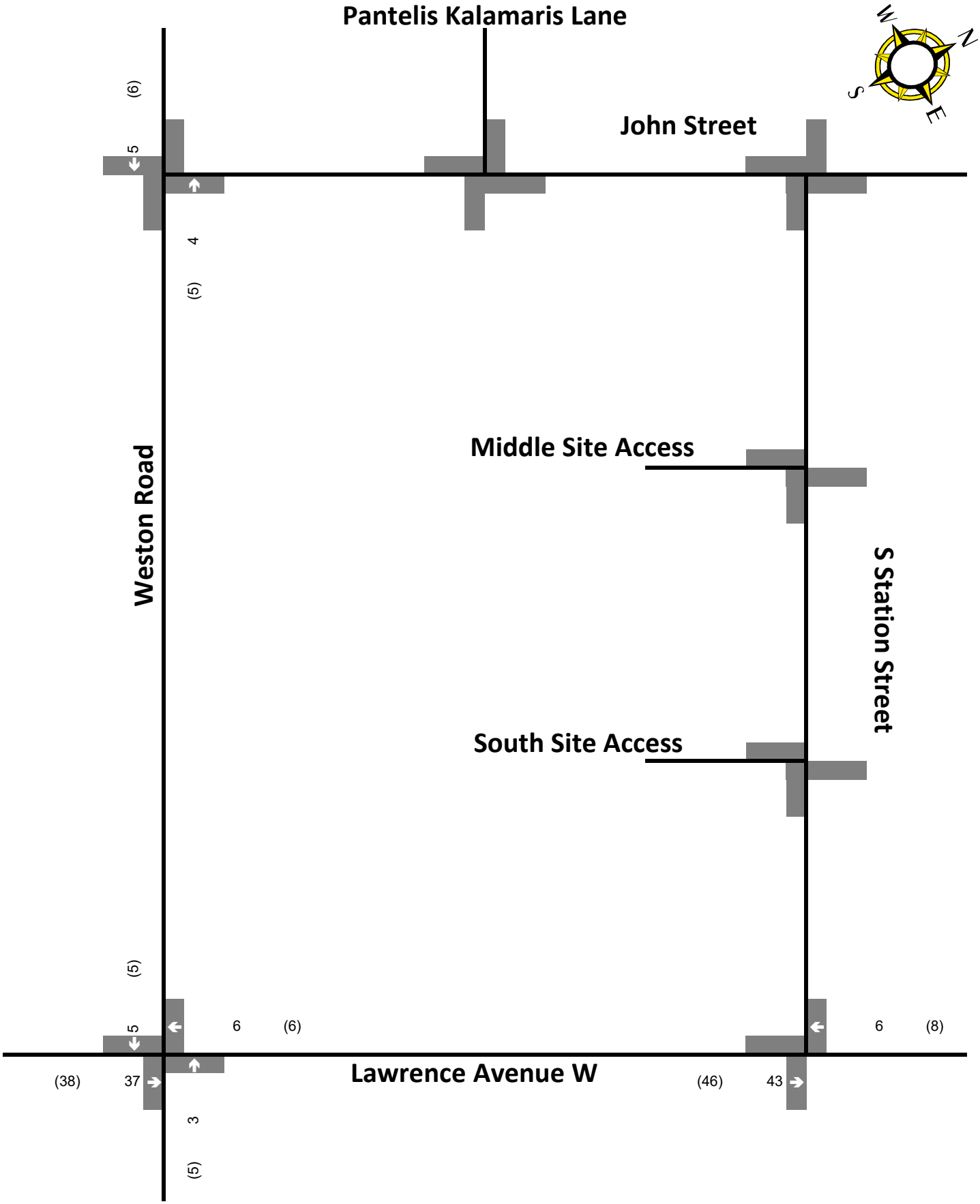
Consistent with the 2021 TIS, there are no roadway improvements or modifications or operational changes to the study intersections planned to occur by the 2027 horizon year.

3.2.3 BACKGROUND TRAFFIC GROWTH

Based on a review of available historic traffic data on the roads in the study area, it was determined that meaningful traffic growth has only been experienced on the eastbound through movements along Lawrence Avenue, with historical data showing less than a 1.0-percent growth per annum.

To be conservative, a 1.0-percent annual growth rate has been assumed for eastbound movements along Lawrence Avenue West. Other through movements along Weston Road and Lawrence Avenue West are assumed to experience a 1.0-percent growth in five years, reflecting the five-year horizon (from TMC year 2022 to 2027).

It is expected that local developments will make up most of the traffic growth in this area. This is studied and described in **Section 3.2.4** and captures a list of area developments confirmed with City staff in the Terms of Reference, in **Appendix A**. **Figure 3-2** illustrates general background traffic growth in the Study Area.



xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Legend

Figure 3-2

General Background Traffic Growth

3.2.4 BACKGROUND DEVELOPMENTS

Consistent with the 2021 TIS, there are three proposed developments in the vicinity of the site that will contribute additional traffic to the roads in the study area. Based on a review of the City's development application website, the background developments included in this study are summarized in **Table 3-4**.

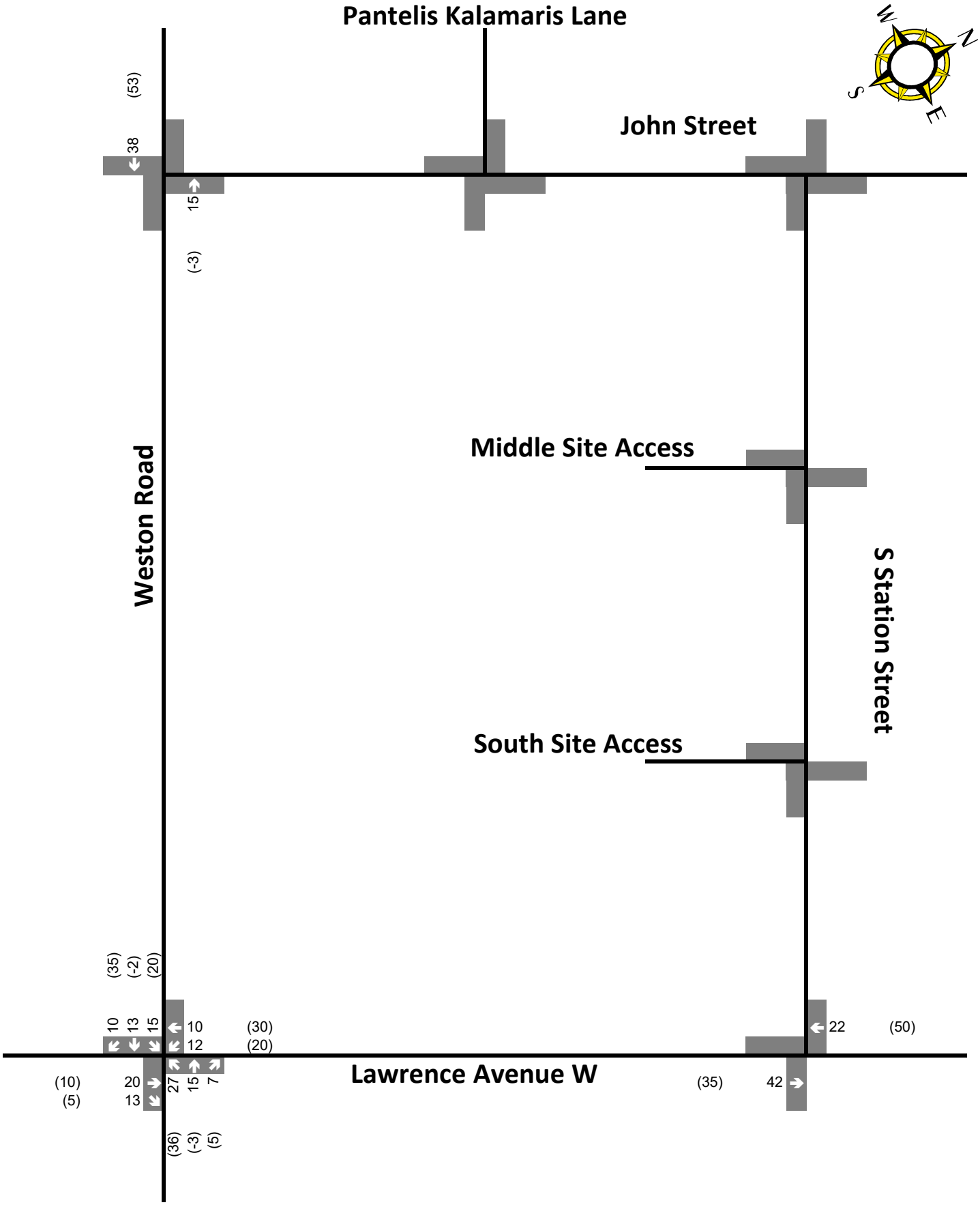
The traffic volumes generated by the background developments were taken from their corresponding traffic impact studies. It is assumed these background developments would be constructed and occupied by horizon year 2027.

It should also be noted that the existing 2022 Turning Movement Counts used in this study capture the occupancy of recently constructed developments including West22 Apartments and Condominiums at John Street and South Station Street, and the recent relocation of the GO Station.

Table 3-4: Background Development Information

DEVELOPMENT	STATUS	STATISTICS	TRAFFIC VOLUME SOURCE
1821-1831 Weston Road	Appeal Received	485 residential units. 256 m^2 of retail space.	LEA Consulting, 2022
1865-1885 Weston Road	Under Review	538 residential units. 1,250 m^2 of retail space.	BA Group, 2021
1956 Weston Road	Council Approved	592 residential units. 3,991 m^2 of retail space.	BA Group, 2019

Background development traffic to be added to the Future Background network is shown in **Figure 3-3**.



xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Legend

Figure 3-3

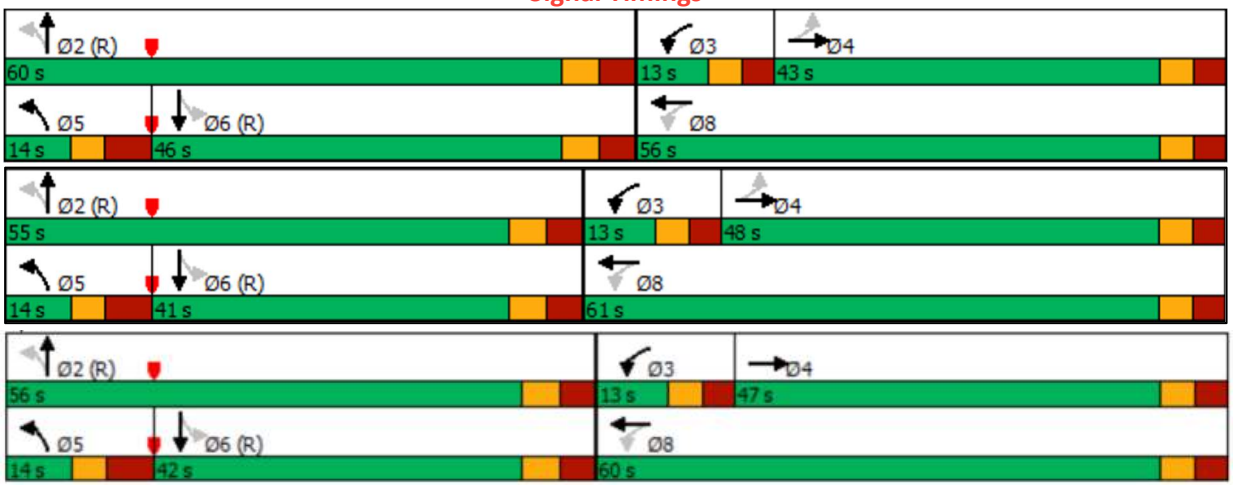
Background Development Traffic Volumes

3.2.5 TRAFFIC OPERATIONS

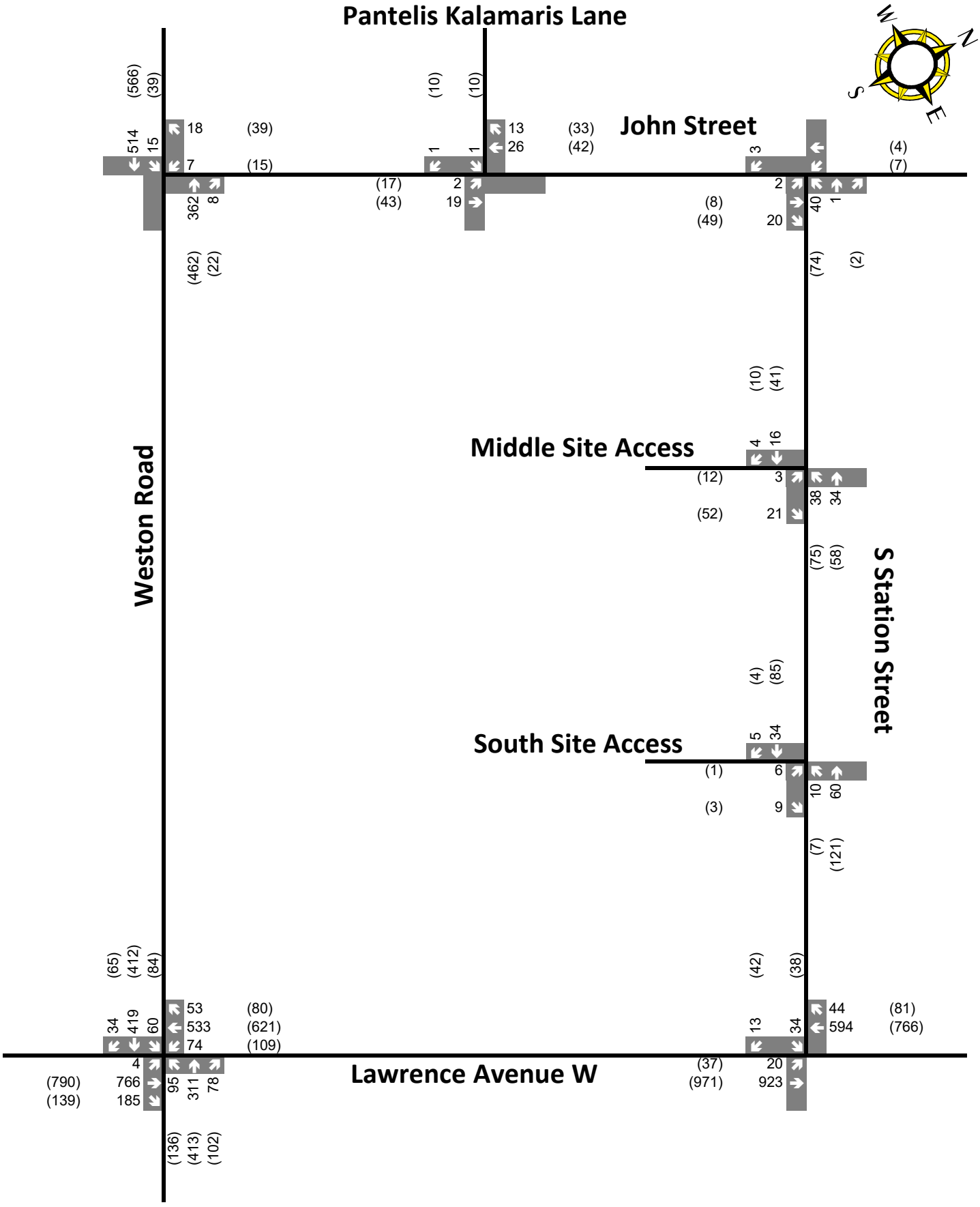
The projected future background traffic volumes were developed by adding the background development volumes to the existing volumes after applying the corridor growth rates. The resulting 2027 future background volumes are shown in **Figure 3-5**.

If the existing signal timings are maintained under future background conditions, the critical eastbound movements at the intersection of Weston Road and Lawrence Avenue exceed capacity during the a.m. peak hour and approach capacity during the p.m. peak hour. However, it is possible to improve the performance of the critical movements by adjusting the phase splits for the intersection, while maintaining the existing cycle length. This adjustment consists of reducing the time assigned to northbound through and southbound through phases by four to five seconds and adding this time to eastbound through and westbound through phases, as presented in **Figure 3-4**.

Figure 3-4: Weston Rd & Lawrence Ave Existing (top), Optimized A.M. (middle) and P.M. (bottom) Signal Timings



The resulting levels of service (including conditions before and after adjusting the signal timings) are outlined in **Table 3-5** and the details related to intersection operations are provided in **Appendix E**.



xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Legend

Figure 3-5

Future Background Traffic Volumes

Table 3-5: Future Background Traffic Operations

		A.M. PEAK HOUR		P.M. PEAK HOUR	
INTERSECTION	**CONTROL**	**LOS (Delay in seconds)**	**Critical Movements (v/c ratio)**	**LOS (Delay in seconds)**	**Critical Movements (v/c ratio)**
Weston Rd at John St	Signalized	A (5.1)	-	A (5.7)	-
Weston Rd at Lawrence Ave W **(existing splits)**	Signalized	D (42.8)	EB-LTR (1.02)	D (41.1)	EB-TR (0.99)
Weston Rd at Lawrence Ave W **(optimized)**	Signalized	C (34.5)	EB-LTR (0.91)	D (36.2)	EB-TR (0.90)
John St at Pantelis Kalamaris Ln	Unsignalized	A (8.9)	-	B (10.5)	-
John St at S Station St	Unsignalized	A (7.5)	-	A (8.0)	-
Lawrence Ave W at S Station St	Unsignalized	C (15.3)	-	D (25.8)	-
S Station St at S Site Access	Unsignalized	A (9.0)	-	A (9.1)	-
S Station St at Middle Site Access	Unsignalized	A (8.8)	-	A (9.2)	-

1 The LOS at an unsignalized intersection is defined by the movement with the highest delay.

2 Critical movements are those with a volume-to-capacity ratio exceeding 0.85 for a signalized intersection or with a LOS of 'E' or 'F' for an unsignalized intersection.

As shown above, the intersection of Weston Road and Lawrence Avenue is projected to operate with an acceptable LOS and below capacity, after signal timing splits are optimized. The other study intersections continue to operate similarly to existing conditions.

3.2.6 QUEUEING ANALYSIS

The projected queues under Future Background conditions are listed in **Table 3-6**. The detailed Synchro queueing reports are provided in **Appendix E**.

Table 3-6: Future Background Traffic Queueing Analysis

INTERSECTION	LANE	STORAGE LENGTH (M)	95TH [50TH] PERCENTILE QUEUE (M)	
			A.M. Peak Hour	P.M. Peak Hour
Weston Rd at John St	WB-LR	48	10	16
	NB-TR	110	13	13
	SB-LT	111	24	27
Weston Rd at Lawrence Ave W (existing splits)	EB-LTR	284	180	169
	WB-L	21	20	40 [16]
	WB-TR	320	68	87
	NB-LTR	407	49	71
	SB-LTR	96	72	86
Weston Rd at Lawrence Ave W (optimized)	EB-LTR	284	165	156
	WB-L	21	19	32 [15]
	WB-TR	320	63	81
	NB-LTR	407	54	77
	SB-LTR	96	78	91

1 The 50th percentile queue is only shown where the 95th percentile queue exceeds the storage length.

The analysis indicates that under future background conditions with the signal timing splits optimized at the intersection of Weston Road and Lawrence Avenue, all signalized 95th percentile queues continue to be accommodated within their storage length except for the westbound left-turn queue at Weston Road and Lawrence Avenue during the p.m. peak hour. In this case, the forecasted 95th percentile queue exceeds the available spacing by about two vehicles' length. The 95th percentile queue length is reached only about five percent of the time; therefore, the impact of the queues would be limited given that the 50th percentile (average) queue lengths are within the available storage length.

3.3 FUTURE TOTAL CONDITIONS

3.3.1 SITE TRIP GENERATION RATES

Trip generation was considered for the proposed 484 residential units. The proposed non-residential components including 224 m^2 (2,411 ft^2) of commercial/retail use, a 433-m^2 (4,661 ft^2) daycare, and 1,382 m^2 (14,873 ft^2) of stand-alone flex community space are intended to be ancillary in nature and provide community benefits to the immediate neighbourhood, and no designated transportation facilities (loading or parking) are proposed or required per the Zoning By-law. Therefore, no vehicular trip generation is assumed for the proposed non-residential uses. It is acknowledged that walking and cycling trips would be generated by these non-residential uses, however, the walking and cycling trip volumes are not quantified since they will not impact the findings and recommendations of this study.

New vehicle trips generated by the proposed development were estimated based on trip generation data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual (11th Edition)* for Land

Use Code 222 – Multifamily Housing (High-Rise) and adjusted to local modal split characteristics using the Transportation Tomorrow Survey (TTS) data. The rates used and the estimated person trips generated by the site are presented in **Table 3-7**.

Table 3-7: ITE Trip Generation

LAND USE/ MAGNITUDE	PARAMETER	A.M. PEAK HOUR			P.M. PEAK HOUR		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Multifamily Housing (High-Rise) – LUC 222 484 units	ITE Equation (X = # units)	T = 0.22 X + 18.85			T = 0.26 X + 23.12		
	Directional Split	26%	74%	100%	62%	38%	100%
	ITE Vehicle Trips	32	93	125	92	57	149
ITE Total Person Trips [1]		**34**	**98**	**132**	**97**	**60**	**157**

1 The ITE equations are based on surveys conducted in areas that are assumed to have a 5% non-auto mode share per the ITE *Trip Generation Handbook (3rd Edition)*, section 5.5.2

The proposed development is expected to generate 34 inbound and 98 outbound person trips during the weekday a.m. peak hour, and 97 inbound and 60 outbound person trips during the weekday p.m. peak hour.

3.3.2 MODAL SPLIT

Modal split data from the 2016 TTS database was reviewed for the traffic zone where the site is located (zone 133) and the adjacent zones 132 and 134 to determine the proportion of trips currently being made by auto, transit, cycling, and walking during the weekday a.m. and p.m. peak periods. **Table 3-8** summarizes the extracted mode split data from TTS, for home-based trips. The associated TTS data are provided in **Appendix F**.

Table 3-8: Study Area Mode Split Characteristics

PEAK HOUR AND DIRECTION	MODE OF TRAVEL				
	Auto	Transit	Cycling	Walk	Other
A.M. Inbound	86%	6%	0%	8%	0%
A.M. Outbound	62%	32%	0%	6%	0%
P.M. Inbound	72%	25%	0%	3%	0%
P.M. Outbound	87%	13%	0%	0%	0%

It is important to note that this site is expected to have a lower auto mode share than the findings from the TTS data, due to its proximity to the Weston GO station. Based on the results in **Table 3-8**, non-auto trip reductions were applied to site trip generation, and the resulting vehicular trips generated by the site are calculated in **Table 3-9**.

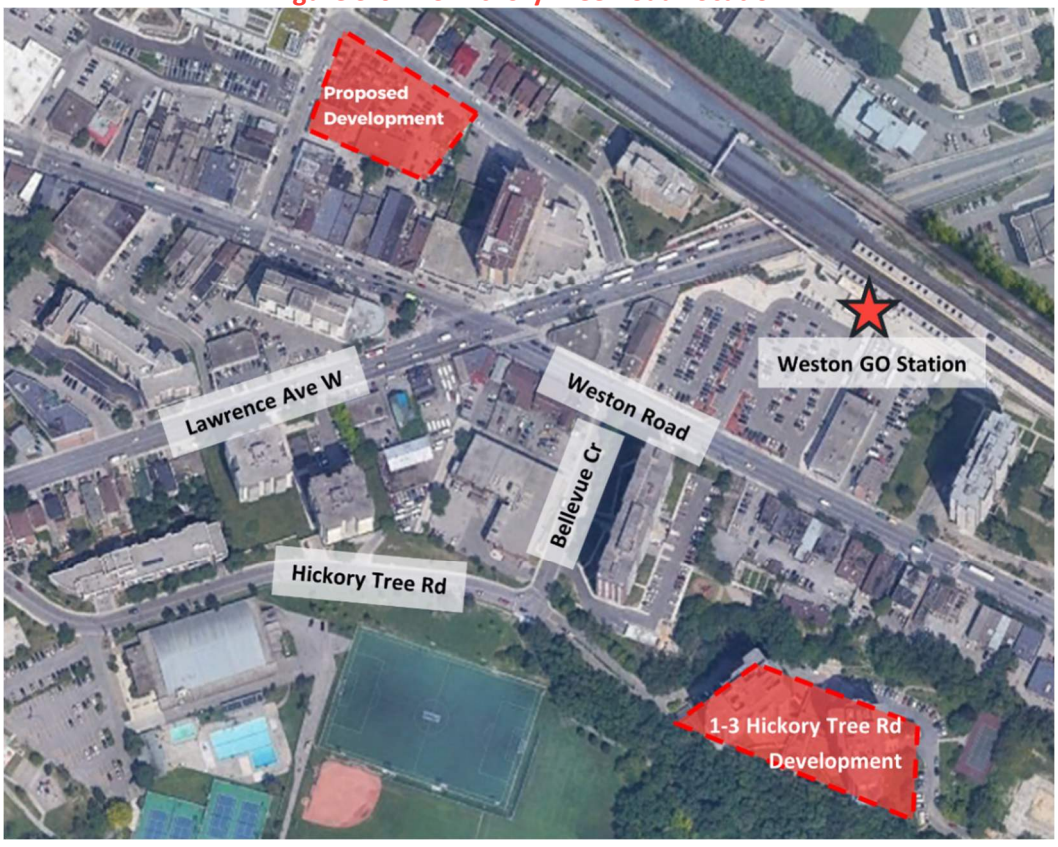
Table 3-9: Site Vehicular Trip Generation

LAND USE/ MAGNITUDE	PARAMETER	A.M. PEAK HOUR			P.M. PEAK HOUR		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Multifamily Housing (High-Rise) – LUC 222 484 units	ITE Person Trips	34	98	132	97	60	157
	Non-Auto Mode Percentage	14%	38%	--	28%	13%	--
	Non-Auto Mode Reduction	-5	-37	-42	-27	-8	-35
Total Auto Trips		**29**	**61**	**90**	**70**	**52**	**122**

As shown above, the proposed development is estimated to generate 29 inbound and 61 outbound auto trips during the weekday a.m. peak hour and 70 inbound and 52 outbound auto trips during the weekday p.m. peak hour.

A survey and analysis of vehicular trips generated by another development in the area have been conducted for comparison purposes. WSP obtained Turning Movement Counts for the Hickory Tree Road and Bellevue Crescent intersection, which serves as the sole access to 1-3 Hickory Tree Road, a 413-unit residential development. This site, its proximity to the GO Station and its relative position to the study site are shown in **Figure 3-6**.

Figure 3-6: 1-3 Hickory Tree Road Location



Base image source: Google Earth

Table 3-10 compares the auto trip generation rates for the proxy site at 1-3 Hickory Tree Road the site trip rates developed using ITE trip generation manual and TTS mode share data (derived from the total auto trips in **Table 3-9**).

Table 3-10: Auto Trip Generation Rate Comparison

DEVELOPMENT	PERIOD	IN	OUT	TOTAL
Proxy Site: 1-3 Hickory Tree Road	AM	0.08	0.11	0.19
	PM	0.15	0.10	0.24
Subject Site (based on ITE and TTS data)	AM	0.06	0.13	0.19
	PM	0.14	0.11	0.25

The results presented in **Table 3-10** indicate that the derived site trip rates are very similar to the surveyed rates for existing developments in the area. The adopted trip generation method is considered conservative as it shows a slightly higher total trip rate during the p.m. peak hour compared to the surveyed results.

3.3.3 TRIP GENERATION VOLUMES

Since the study site is currently occupied by a mix of uses, net trip generation considers new trips generated by the development and the removal of current trips related to existing uses. For conservative estimation, the only trips to be removed for this analysis are the movements in and out of the Middle Site Access on South Station Street, which contains parking and access to the religious building (Hadi Islamic Association, formerly known as l-Rowda Masjid). This mosque hosts prayer services at various times of the day, plus an afterschool program for kids. Trips observed at the South Site Access will not be removed for the analysis, as they could be related to adjacent properties on Weston Road which will maintain in the future. Trips observed at the driveway on John Street (13-17 John Street Access) will not be removed either, since there is insufficient data to separate traffic related to the subject site and adjacent properties. **Tables 3-11** shows trip generation calculations by mode and **Table 3-12** shows net auto trips.

Table 3-11: Trip Generation Volumes

	A.M. PEAK HOUR			P.M. PEAK HOUR		
MODE	Inbound	Outbound	Total	Inbound	Outbound	Total
Auto	29	61	90	70	52	122
Transit	2	31	39	24	8	32
Cycling[1]	0	0	0	0	0	0
Walk[1]	3	5	9	3	0	3
Other	0	0	0	0	0	0
Total	**34**	**98**	**132**	**97**	**60**	**157**

1 Additional walking and cycling trips are anticipated for the proposed community centre, daycare, and commercial/retail.

Table 3-12: Net Auto Trip Generation

	A.M. PEAK HOUR			P.M. PEAK HOUR		
	Inbound	**Outbound**	**Total**	**Inbound**	**Outbound**	**Total**
New Trips	29	61	90	70	52	122
Existing Site Trips	-42	-20	-62	-85	-64	-149
Net Total	**-13**	**41**	**28**	**-15**	**-12**	**-27**

As shown in **Table 3-12**, the site is expected to generate no more than 28 net two-way auto trips during the weekday a.m. peak hour and no additional net trips during the weekday p.m. peak hour.

3.3.4 TRIP DISTRIBUTION AND ASSIGNMENT

TTS trip distribution data for the study traffic zones was reviewed to determine site traffic distribution patterns for the proposed development. **Table 3-13** outlines the resulting trip distribution. The associated TTS data are provided in **Appendix F**.

Table 3-13: TTS Trip Distribution

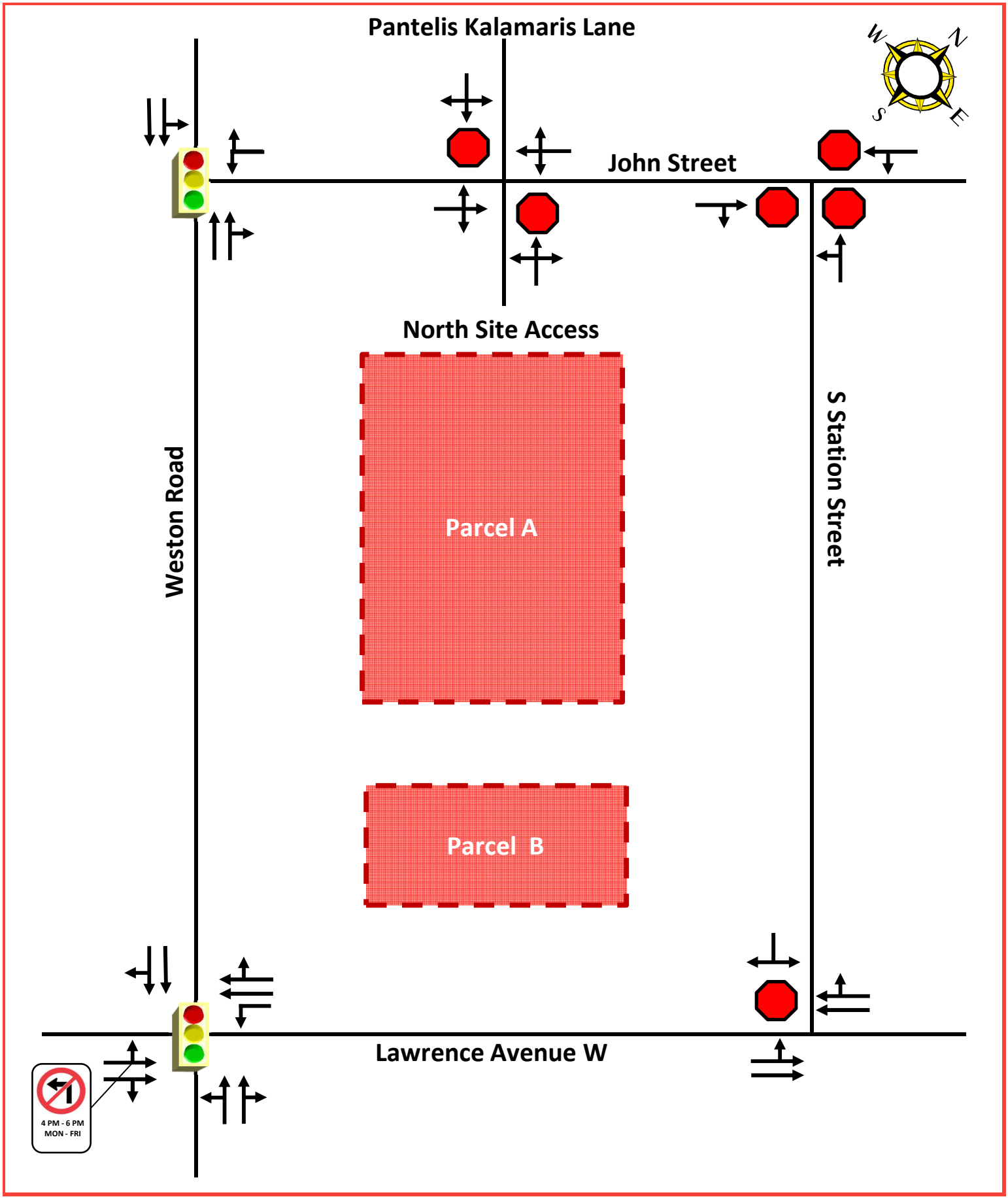
DIRECTION	A.M. INBOUND	A.M. OUTBOUND	P.M. INBOUND	P.M. OUTBOUND
North	48%	20%	22%	24%
East	15%	43%	42%	40%
South	28%	15%	15%	24%
West	9%	22%	21%	12%

Using the assessment in **Table 3-13**, the new site trips were assigned to the individual movements within the study area based on factors such as site access location, ease of turning, shortest distances, the convenience of route choices and intersection configurations.

One new North Site Access for Parcel A is proposed onto John Street, opposite Pantelis Kalamaris Lane and abutting the existing laneway providing rear yard access to the adjacent properties on Weston Road. Since the flex community space in Parcel B is anticipated to generate negligible vehicular traffic during the roadway peak hours, all new site traffic will travel via the North Site Access. It is anticipated that South Station Street will accommodate occasional pick-up/drop-off activities for Parcel B.

The removal of the existing site traffic from the study network was based on the traffic patterns reflected in the existing TMCs.

The resulting road network, removed existing site traffic, and new site auto traffic volumes are presented in **Figure 3-7**, **Figure 3-8** and **Figure 3-9**, respectively.



Legend

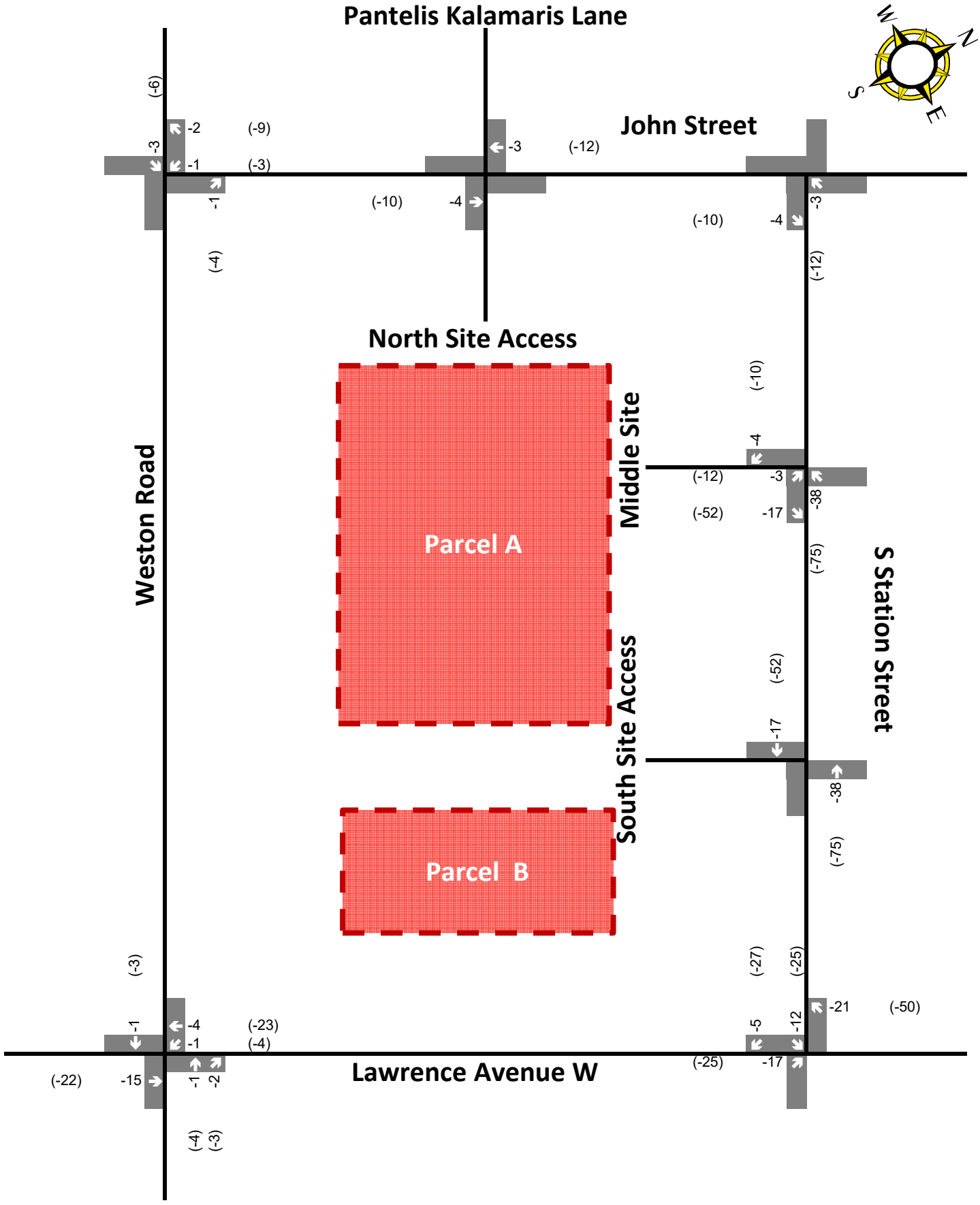
Signalized Intersection

Stop Control

Lane Configurations

Figure 3-7

Future Total Lane Configurations



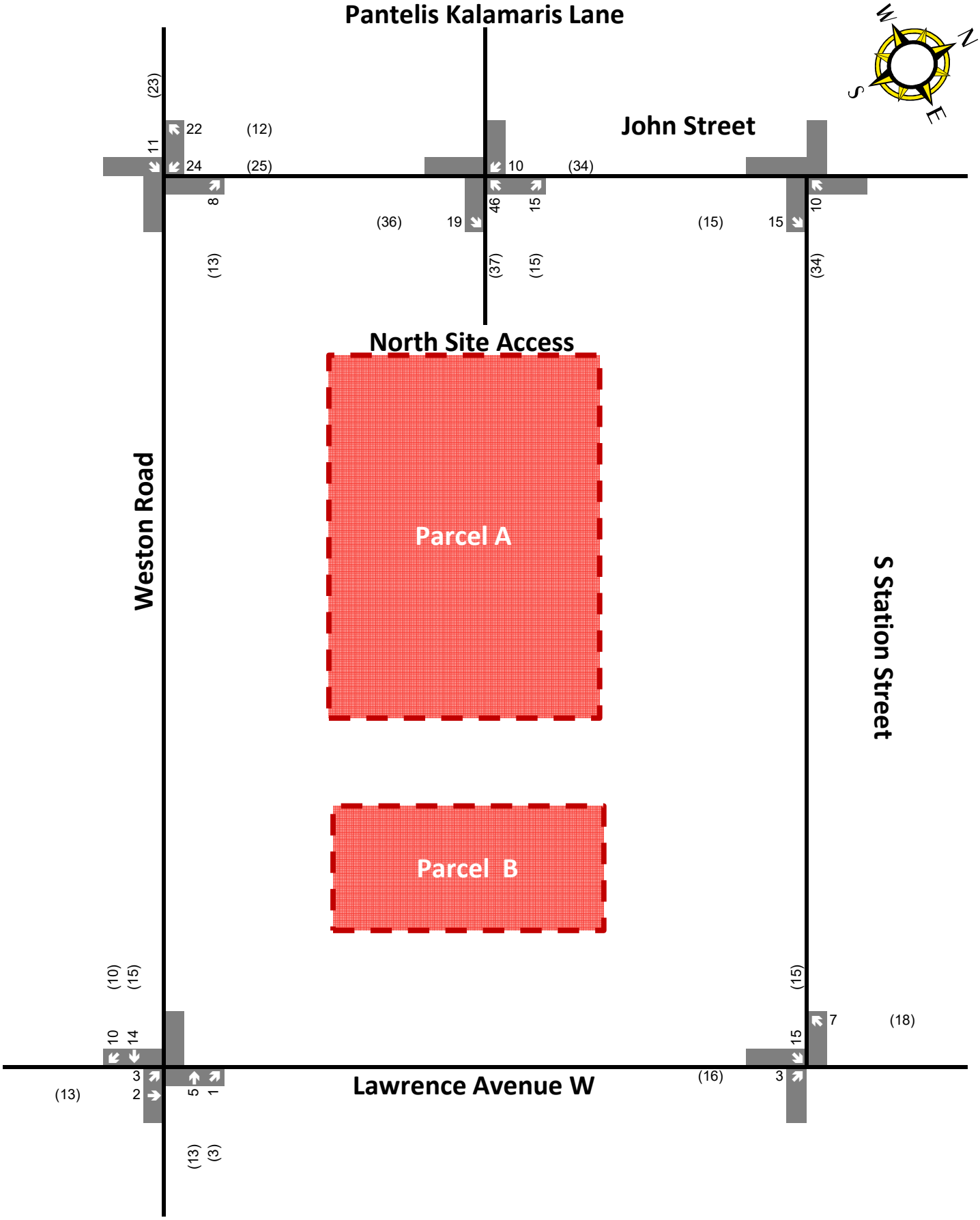
Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-8

Removed Existing Site Traffic Volumes



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-9

New Site-Generated Traffic Volumes

3.3.5 TRAFFIC OPERATIONS

The projected future total traffic volumes were developed by adding the site traffic volumes to the future background volumes. The resulting 2027 future total volumes are shown in **Figure 3-10**.

The resulting levels of service are outlined in **Table 3-14** and the details related to intersection operations are provided in **Appendix G**.

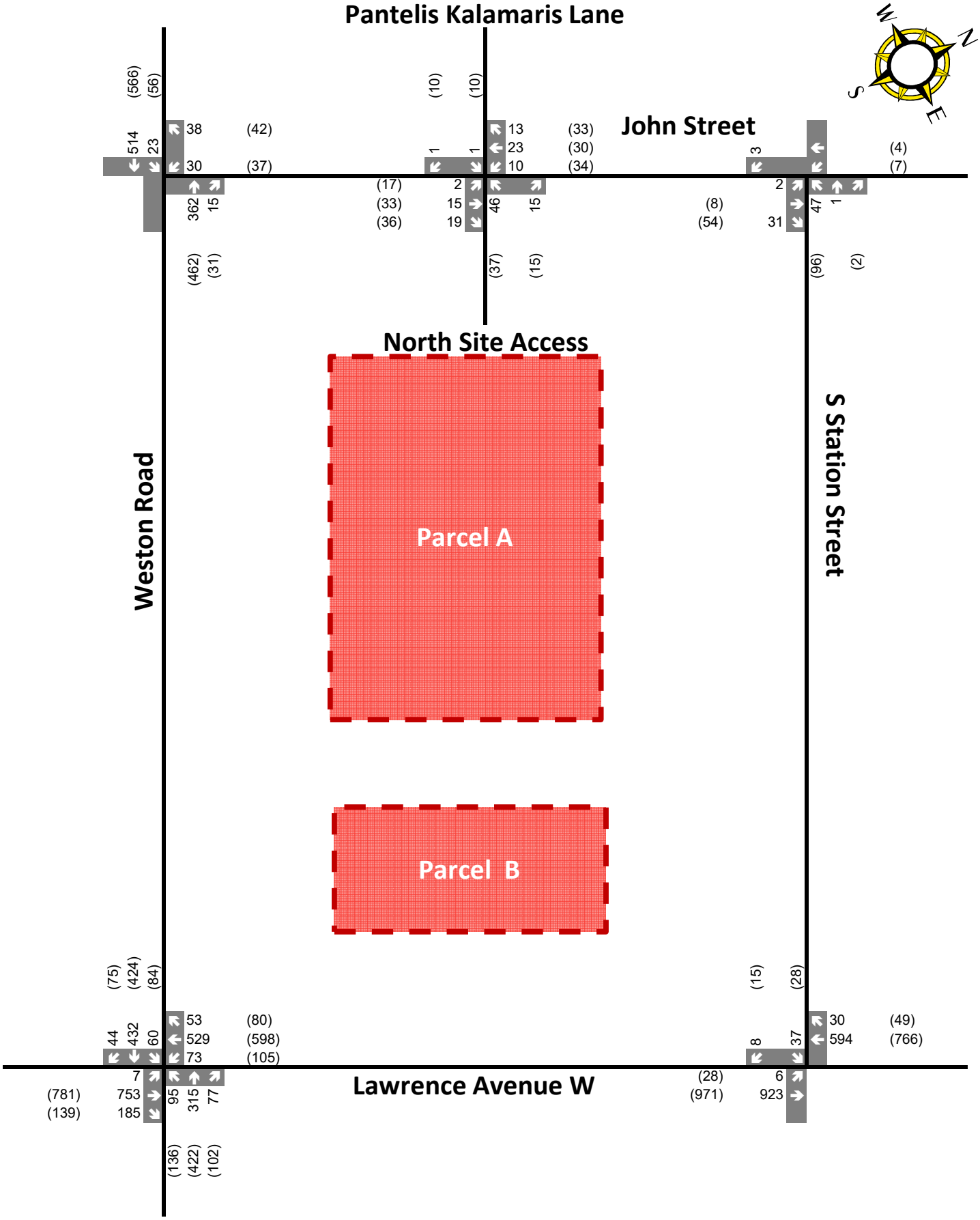
Table 3-14: Future Total Traffic Operations

		A.M. PEAK HOUR		P.M. PEAK HOUR	
INTERSECTION	**CONTROL**	**LOS (Delay in seconds)**	**Critical Movements (v/c ratio)**	**LOS (Delay in seconds)**	**Critical Movements (v/c ratio)**
Weston Rd at John St	Signalized	A (6.2)	-	A (6.6)	-
Weston Rd at Lawrence Ave W **(existing splits)**	Signalized	D (42.2)	EB-LTR (1.01)	D (40.5)	EB-TR (0.98)
Weston Rd at Lawrence Ave W **(optimized)**	Signalized	C (34.6)	EB-LTR (0.90)	D (36.5)	EB-TR (0.89)
John St at Pantelis Kalamaris Ln / N Site Access	Unsignalized	A (9.4)	-	B (11.7)	-
John St at S Station St	Unsignalized	A (7.6)	-	A (7.9)	-
Lawrence Ave W at S Station St	Unsignalized	C (15.1)	-	C (19.8)	-

1 The LOS at an unsignalized intersection is defined by the movement with the highest delay.

2 Critical movements are those with a volume-to-capacity ratio exceeding 0.85 for a signalized intersection or with a LOS of 'E' or 'F' for an unsignalized intersection.

With the removal of existing trips and the addition of new site trips, under future total conditions, the study intersections continue to operate with the same LOS as under future background conditions, with similar delays at most intersections. The intersection of Weston Road and Lawrence is expected to operate with acceptable levels of service and within capacity provided that signal timing splits are optimized without changes to the cycle length (same optimized timings as future background). The proposed site access intersection is projected to operate at LOS "B" or better and well within capacity. As such, the proposed development is not expected to have an adverse impact on traffic conditions within the study area.



Legend

xx A.M. Peak Hour Traffic Volumes

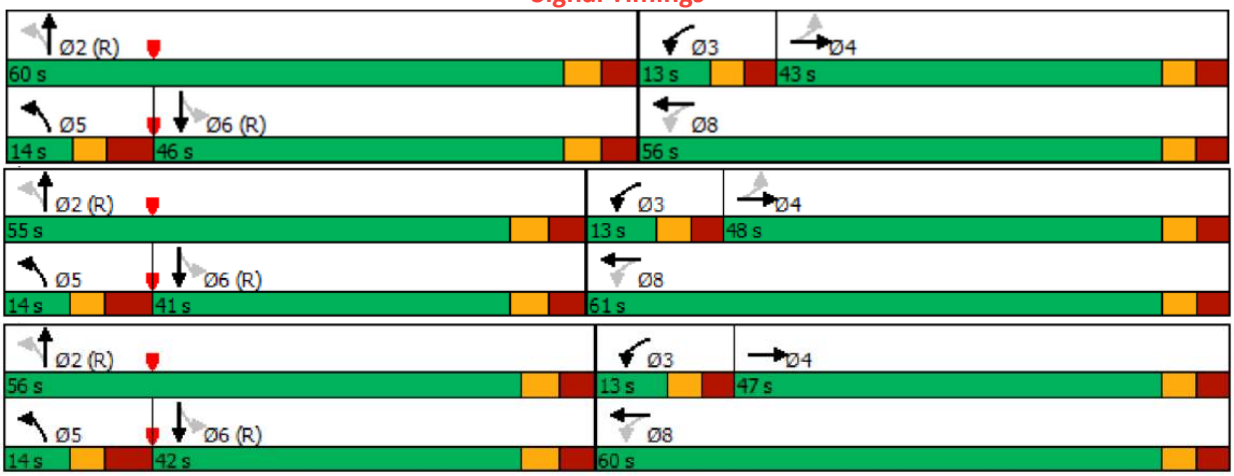
(xx) P.M. Peak Hour Traffic Volumes

Figure 3-10

Future Total Traffic Volumes

Figure 3-11 compares the existing and optimized signal timings at Weston Road and Lawrence Avenue. The optimized signal timings are consistent with those adopted under future background conditions.

Figure 3-11: Weston Rd & Lawrence Ave Existing (top), Optimized A.M. (middle) and P.M. (bottom) Signal Timings



3.3.6 QUEUEING ANALYSIS

The projected 95th percentile queues for signalized intersections under 2027 Future Total conditions are listed in **Table 3-15**. The detailed Synchro queueing reports are provided in **Appendix G**.

Table 3-15: Future Total Traffic Queueing Analysis.

INTERSECTION	LANE	STORAGE LENGTH (M)	95TH [50TH] PERCENTILE QUEUE (M)	
			A.M. Peak Hour	P.M. Peak Hour
Weston Rd at John St	WB-LR	48	22	25
	NB-TR	110	13	13
	SB-LT	111	25	29
Weston Rd at Lawrence Ave W (existing splits)	EB-LTR	284	178	167
	WB-L	21	20	38 [16]
	WB-TR	320	68	83
	NB-LTR	407	50	72
	SB-LTR	96	77	91
Weston Rd at Lawrence Ave W (optimized)	EB-LTR	284	162	153
	WB-L	21	18	28 [15]
	WB-TR	320	62	78
	NB-LTR	407	54	78
	SB-LTR	96	82	68

1 The 50th percentile queue is only shown where the 95th percentile queue exceeds the storage length.

The analysis indicates that, under future total conditions with the signal timing changes applied at the intersection of Weston Road and Lawrence Avenue, all signalized 95th percentile queues continue to be accommodated within their storage length with the continuing exception of the westbound left-turn

queue at Weston Road and Lawrence Avenue during the p.m. peak hour which exceeds the available spacing by approximately one vehicle length. However, the 50th percentile queue continues to be accommodated within the available storage length. As previously mentioned, the 95th percentile queue length is reached only about five percent of the time, and the 50th percentile queue represents the queue length in an average cycle. Therefore, the impact of the westbound left-turn queue at Weston Road and Lawrence Avenue would be limited given the 50th percentile queue is well within the available storage. These results are similar to the future background queuing conditions.

4 MULTIMODAL TRAVEL ASSESSMENT

4.1 TRANSIT ASSESSMENT

The majority of transit trips generated by the proposed development are anticipated to use TTC Route 89 Weston, 52 Lawrence, and the GO Kitchener Line. This transit assessment tests the transit capacity to accommodate site generate transit trips. In this theoretical assessment, it is assumed that all site-generated transit trips will use Route 89 Weston.

Existing ridership volumes from TTC dated October 2019 for Route 89 Weston are provided in **Appendix H**. Average passenger volumes at the Weston Road bus stops in the vicinity of the development were also obtained and transit utilization rates were calculated based on the standard bus capacity. It should also be noted that these October 2019 ridership volumes were conducted before the COVID-19 pandemic, and therefore these volumes should represent typical conditions as a conservative estimate. Furthermore, TTC did not provide a growth rate to apply.

Also, it is anticipated that a significant portion of transit trips originating from the site would use the Weston GO Station as a mode of travel as opposed to the local TTC routes. However, for the purposes of this assessment, only Route 89 Weston was analyzed as a conservative assumption.

The transit utilization rates were calculated based on the standard bus capacity. The existing transit ridership at the study transit stops is presented in **Table 4-1**, along with the resulting utilization.

4.1.1 EXISTING CONDITIONS

As presented in **Section 2.3**, the site is served by a variety of transit services. As shown in **Table 4-1**, the 89 Weston bus route operates within the available capacity during the weekday a.m. and p.m. peak periods under the existing conditions at the transit stop location nearest to the site, which is Weston Road at Lawrence Avenue West.

Table 4-1: Existing Transit Ridership Utilization

			WEEKDAY A.M. PEAK HOUR		WEEKDAY P.M. PEAK HOUR	
ROUTE	**CAPACITY PER TRANSIT UNIT**	**DIRECTION**	Average Ridership per transit line	Utilization	Average Ridership per transit line	Utilization
89 Weston	51	NB	13	25%	17	34%
	51	SB	14	27%	17	34%

4.1.2 FUTURE 2027 CONDITIONS

Within the horizon period, considerable transit service improvements are expected to begin operating, which could have an impact on the transportation decisions of the residents of the proposed development:

— GO Train Kitchener Line will increase service, providing all-day two-way service with a 15-minute frequency. This will greatly improve connectivity between the Study Area and Union Station, providing a rapid and direct transit service that was previously unavailable outside rush hours and directions.

— As shown in **Figure 4-1**, the Kitchener GO Line will add new stops to the service. Most notably, there will be a new stop at Weston Road and Eglinton Avenue West (Mount Dennis Station), which will be a transit hub that connects with the new Eglinton Crosstown LRT.

— As mentioned above, the new Eglinton Crosstown LRT will provide a new mass-transit service along Eglinton Avenue, connecting Mount Dennis to Kennedy Station, and providing connections with Stations Eglinton West and Eglinton of the TTC Line 1. This new mass transit alternative will greatly improve connectivity from the Study Area to Midtown Toronto and Scarborough.

Figure 4-1: Future Kitchener Line Network

Source: Metrolinx.

The trip generation and mode share analysis presented before do not consider these improvements, which will probably considerably increase transit usage in the area, further reducing private vehicle trips.

Site-generated transit trips were added to the existing 2019 transit ridership to estimate the future 2027 transit ridership. These trips have been assigned to each bus direction generally following TTS trip distribution (40 percent northbound and 60 percent southbound) and assigned to individual buses according to service frequency. On top of the site-generated transit trips, an assumed annual ridership growth rate of 1.5 percent was also applied to the existing transit ridership (from 2019 to 2027), since no route-specific growth information was provided by TTC.

The resulting utilization rates of the 89 Weston bus route within the study area by the future 2027 horizon year are shown in **Table 4-2**. Details of the calculations are provided in **Appendix H**.

As shown in **Table 4-2**, the 89 Weston bus route continues to operate within the available capacity during both the weekday a.m. and p.m. peak hours under future 2027 conditions at the nearest transit stop location.

Table 4-2: Future 2027 Transit Ridership Utilization

ROUTE	CAPACITY PER TRANSIT UNIT	DIRECTION	WEEKDAY A.M. PEAK HOUR		WEEKDAY P.M. PEAK HOUR	
			Average Ridership per transit line	Utilization	Average Ridership per transit line	Utilization
89 Weston	51	NB	15	29%	19	38%
	51	SB	16	31%	20	39%

4.2 CYCLING ASSESSMENT

The cycling level of service criteria is based on the methodology outlined in the York Region Transportation Mobility Plan Guidelines. York Region's methodology assesses the level of service (LOS) of cycling facilities along road segments and at intersections. Segment facilities are mainly assessed by type, signage, and width. Intersection facilities are assessed mainly based on how safe it is for cyclists to cross the intersection. **Table 4-3** below summarizes the LOS criteria for the cyclist active transportation mode.

Table 4-3: Active Transportation LOS Criteria – Cyclists

LEVEL OF SERVICE	CYCLISTS	
	Segment	**Intersection**
A	Separated cycling facilities (e.g. cycle tracks, multi-use path)	Separated cycling facilities Bicycle box or clearly delineated bicycle treatment or bicycle signal head
B	≥1.8 m dedicated cycling facilities (e.g. bicycle lanes with and without buffer)	>1.8 m dedicated cycling facilities (e.g. bicycle lanes with and without buffer), Bicycle box, clearly delineated bicycle treatment or bicycle signal head
C	<1.8 m dedicated cycling facilities with no buffer	<1.8 m dedicated cycling facilities with no buffer, Bicycle box, clearly delineated bicycle treatment or bicycle signal head
D	≤1.5 m bicycle lane with no buffer	≤1.5 m bicycle lane and no buffer Bicycle treatment
E	Shared facilities (e.g. signed routes, sharrows or paved shoulder with minimum 1.2 m in constrained area)	Shared facilities (e.g. signed routes, sharrows or paved shoulder with minimum 1.2 m in constrained area) No clearly delineated bicycle treatment
F	No bicycle provision	No bicycle provision

It should be noted that the York Region methodology assesses on-road infrastructure and does not consider other factors such as off-road cycling facilities and connectivity and travel distance to area amenities. Also, in the site's urban context, there may be limited opportunity to provide the separate or dedicated cycling facilities on-road that would provide a good level of service as defined in the York Region criteria. Therefore, the York Region Cycling LOS assesses a component of cycling supportiveness, and other factors such as connectivity to amenities also need to be considered.

4.2.1 EXISTING CYCLING NETWORK

The LOS of cycling facilities within the site study area under existing conditions are summarized in **Table 4-4**. The cycling facilities at the signalized intersections were assessed for the purposes of this study.

Table 4-4: Existing Cycling Level-of-Service.

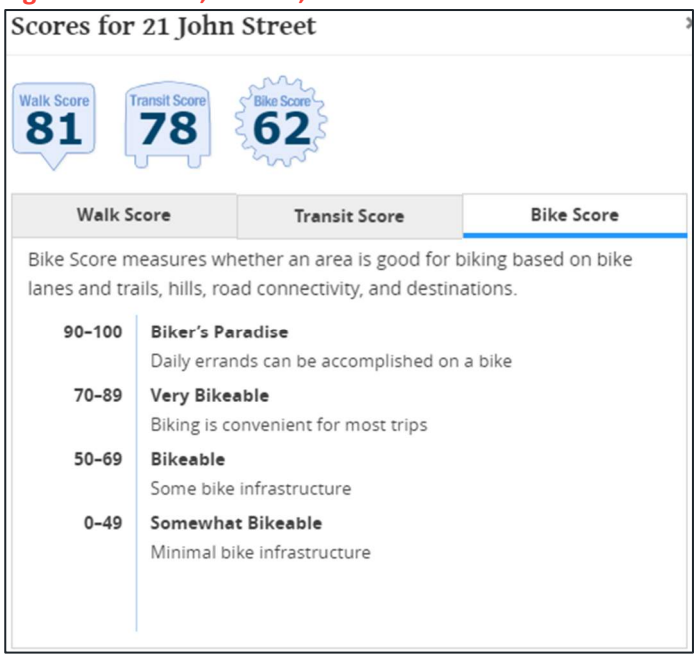
INTERSECTION	DIRECTION	DESCRIPTION	SEGMENT	INTERSECTION
Weston Road at John Street	Northbound	Weston Road	F	F
	Southbound	Weston Road	F	F
	Westbound	John Street	F	F
Weston Road at Lawrence Avenue West	Northbound	Weston Road	F	F
	Southbound	Weston Road	F	F
	Eastbound	Lawrence Avenue West	F	F
	Westbound	Lawrence Avenue West	F	F

The performance evaluation of the existing cycling mode indicates that there are no cycling provisions along road segments and at intersections within the study area. Typically, dedicated cycling facilities are outlined with clear lane markings and shared facilities are marked with *sharrows*. As neither is provided, all segments and intersections were assessed at LOS F.

However, as previously noted, there are other factors contributing to cycling supportiveness. As discussed in **Section 2.3.1**, the Humber River Recreational Trail is within 500 m of the subject site, providing a high-quality off-road cycling facility connecting to amenities to the north and south of the site area.

To supplement the York Region cycling LOS assessment, the site's "Walk Score" was also reviewed. "Walk Score" is a system that is often used to measure a site's walkability, cycling amenities, and transit amenities based on availability. The purpose of these scores is to provide understandable information for prospective renters and buyers looking to invest in real estate. As shown in **Figure 4-2**, the subject site has a Bike Score of 62 out of 100. This score falls in the "Bikeable; Some bike infrastructure" description.

Figure 4-2: Walk, Transit, and Bike Score – 21 John Street



Source: Walkscore.com

4.2.2 FUTURE CYCLING NETWORK

As shown in **Figure 2-3**, there are no proposed planned cycling improvements within the study area based on the City of Toronto 2022-2024 Implementation Program – Toronto Etobicoke York District, dated November 2021. The nearest cycling projects to the site are currently listed as a study. It is unknown when all the cycling projects in the figure will be fully implemented, or what the specific details are. Therefore, to be conservative for the purposes of this assessment, it is assumed that the pedestrian and cycling networks are to remain the same as under existing conditions for the study intersections.

As it is assumed that there are no proposed changes in the cycling facility network pertaining to the study area segments or intersections, the future cycling facilities will remain at the same existing LOS summarized in **Table 4-4**. The site's Bike Score is also expected to remain at 62/100, described as "bikeable".

4.3 PEDESTRIAN ASSESSMENT

The pedestrian level of service criteria is based on the requirements of the York Region Transportation Mobility Plan Guidelines. **Table 4-5** summarizes the level of service criteria for the pedestrian mode of travel along road segments and at intersections. It should be noted that only signalized intersections have been assessed for pedestrian signal heads.

Table 4-5: Active Transportation LOS Criteria – Pedestrians

LEVEL OF SERVICE	PEDESTRIANS	
	Segment	**Intersection**
A	≥2.0 m sidewalk with minimum 3.5 m buffer including planting and edge zone; or ≥3.0 m multi-use path	≥2.0 m sidewalk with minimum 3.5 m buffer including planting and edge zone; or ≥3.0 m multi-use path Pedestrian signal head with sufficient pedestrian clearance time Clearly delineated cross-walk
B	≥1.5 m sidewalk with minimum 1.0 m buffer including edge zone; or <3.0 m multi-use path	≥1.5 m sidewalk with minimum 1.0 m buffer including edge zone; or <3.0 m multi-use path Pedestrian signal head with sufficient pedestrian clearance time Clearly delineated cross-walk
C	≥1.5 m curb-faced sidewalk (no buffer)	≥1.5 m curb-faced sidewalk (no buffer) Pedestrian signal head with sufficient pedestrian clearance time Clearly delineated cross-walk
D	<1.5 m sidewalk	<1.5 m sidewalk Pedestrian signal head sufficient pedestrian clearance time No clearly delineated crosswalk
E	Paved shoulder or no sidewalk provision	Paved shoulder or no sidewalk provision No pedestrian signal head No clearly delineated cross-walk
F	No sidewalk provision	No sidewalk provision No pedestrian signal head Not clearly delineated cross-walk

4.3.1 EXISTING PEDESTRIAN LEVEL-OF-SERVICE

The existing LOS of pedestrian facilities within the site study area are summarized in **Table 4-6**.

Table 4-6: Existing Pedestrian Level-of-Service

INTERSECTION	DIRECTION	DESCRIPTION	SEGMENT	INTERSECTION
Weston Road at John Street	Northbound	Weston Road	C	C
	Southbound	Weston Road	C	C
	Westbound	John Street	C	C
Weston Road at Lawrence Avenue West	Northbound	Weston Road	B	B
	Southbound	Weston Road	B	B
	Eastbound	Lawrence Avenue West	B	B
	Westbound	Lawrence Avenue West	B	B

The performance evaluation of the existing pedestrian facilities indicates that the study area has relatively good levels of service for pedestrian infrastructure. The typical target of LOS C or better is met

at all the intersections assessed. Overall, the existing pedestrian facilities along Weston Road, John Street, and Lawrence Avenue West can adequately accommodate pedestrians.

In addition, as indicated in **Section 2.3.2**, the City has made significant improvements to encourage walking within the vicinity of the site, such as the redesign of the sidewalks and streetscape along Weston Road and John Street. The pedestrian bridge connecting the north side of Lawrence Avenue West to the Weston GO Station also significantly enhances pedestrian access from the site area to the GO Station.

4.3.2 FUTURE PEDESTRIAN LEVEL-OF-SERVICE

There are no proposed changes in the pedestrian facility network pertaining to the study area segments or intersections. Therefore, the future pedestrian facilities will remain at the same existing LOS summarized in **Table 4-6**.

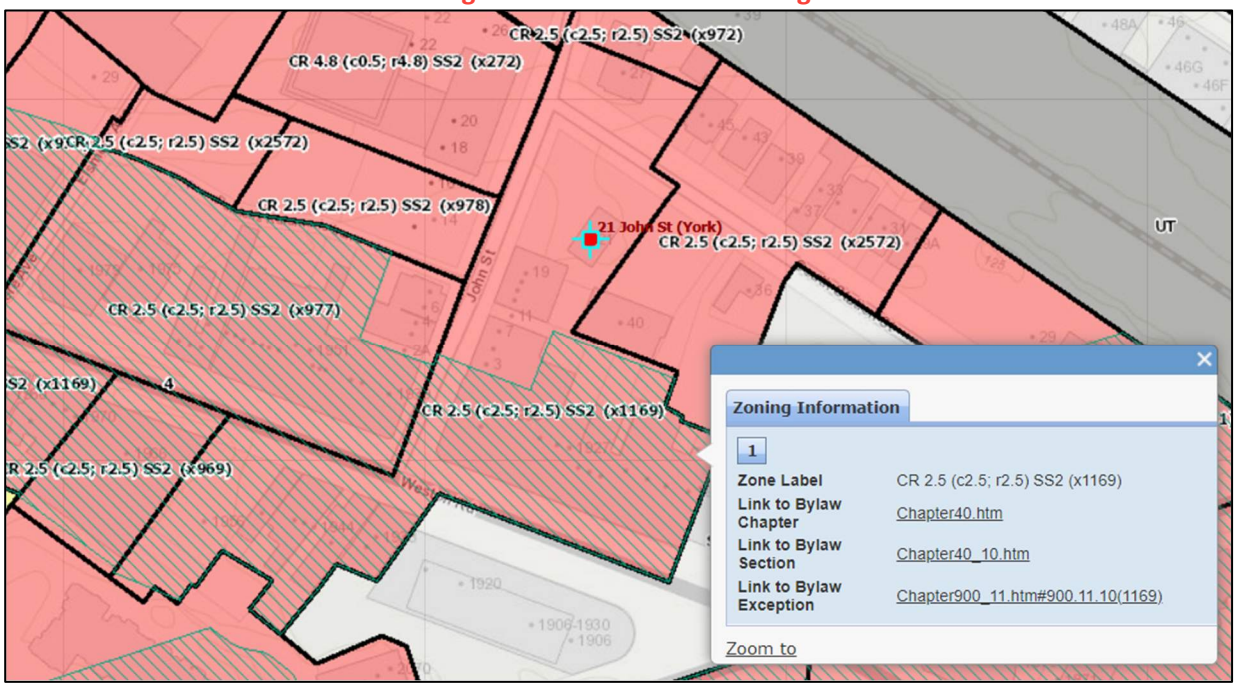
5 PARKING ASSESSMENT

5.1 AUTO PARKING

5.1.1 ZONING BY-LAW REQUIREMENTS

The site is subject to the City of Toronto Zoning By-law 569-2013 requirements and is currently zoned as Commercial Residential Zone CR 2.5, as shown in **Figure 5-1**.

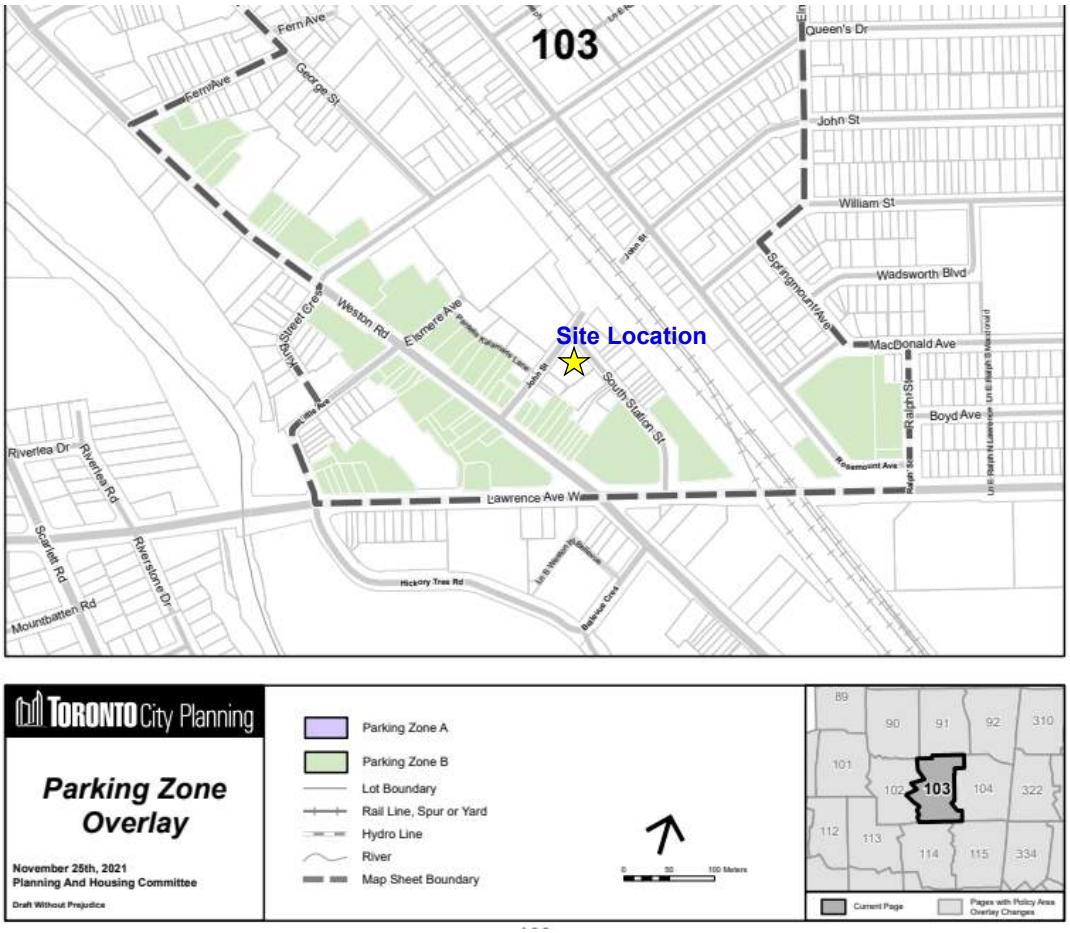
Figure 5-1: Current Site Zoning



Zoning By-law 569-2013 has been amended by By-law 89-2022 on February 3, 2022, which removes or lowers the minimum automobile parking requirements and establishes maximum parking requirements for most land uses. The City of Toronto adopted By-law 125-2022 on February 3, 2022, with respect to correcting the mapping errors contained in By-law 89-2022. An appeal to By-laws 89-2022 and 125-2022 was received and has been resolved through an order issued by the Ontario Land Tribunal (OLT), and the decision was made under OLT-22-002960. Updated parking standards for automobiles as part of By-law 89-2022 are included in the September 30, 2022 office consolidation Zoning By-law 569-2013.

Based on the mapping of By-law 125-2022, the subject site is within grid 103 in Index Map B and classified as "*all other areas of the City*", as shown in **Figure 5-2**.

Figure 5-2: Site By-law 125-2022 Mapping



Based on By-law 89-2022, the minimum and maximum parking standards for *all other areas of the City* and the resulting requirements for each parcel of the proposed development are presented in **Table 5-1**.

Table 5-1: By-Law 89-2022 Parking Supply Requirements

UNIT TYPE	UNITS / GFA	REQUIRED RATE	REQUIRED SPACES[1]
Parcel A			
Studio / Bachelor	51	Minimum: none Maximum: 0.8 per unit	Minimum:0 Maximum: 40
One-Bedroom	237	Minimum: none Maximum: 0.9 per unit	Minimum:0 Maximum: 213
Two-Bedroom	150	Minimum: none Maximum: 1.0 per unit	Minimum:0 Maximum: 150
Three-Bedroom	46	Minimum: none Maximum: 1.2 per unit	Minimum: 0 Maximum: 55
Parcel A Residential Sub-Total	484	--	Minimum: 0 Maximum: 458
Residential Visitor	484	Minimum: 2.0 spaces plus 0.05 per unit Maximum: 1.0 per unit for the first 5 units plus 0.1 per subsequent unit	Minimum: 26 Maximum: 52
Daycare	433 m^2	Minimum: none Maximum: 3.5 per 100 m^2	Minimum: 0 Maximum: 15
Commercial/Retail	210 m^2	Minimum: none Maximum: 6.0 per 100 m^2	Minimum: 0 Maximum: 12
Parcel A Total	--	--	**Minimum: 26 Maximum: 537**
Parcel B			
Flex Community Space	1,382 m^2	Minimum: none Maximum: 3.5 per 100 m^2	Minimum: 0 Maximum: 48
Overall Total Required for Development			**Minimum: 26 Maximum: 585**

1 The LOS at an unsignalized intersection is defined by the movement with the highest delay.

As shown in **Table 5-1**, Parcel A of the proposed development is required to provide a minimum of 26 spaces (visitors) and a maximum of 537 spaces. Parcel B has no minimum parking requirement, and the maximum parking requirement is 48 parking spaces. In total, the proposed development is required to provide a minimum of 26 spaces and a maximum of 585 spaces are permitted for the site.

5.1.2 PROPOSED AUTO PARKING SUPPLY

A total of 90 parking spaces are proposed for Parcel A of the development in three levels of underground parking, satisfying the minimum and maximum requirements. The current site plan does not identify the allocation between residential and non-residential parking. **Therefore, it is recommended that 26 parking spaces be allocated for visitors to meet the visitor parking requirement.** The remaining 64 spaces may be allocated for residents and non-residential tenants who

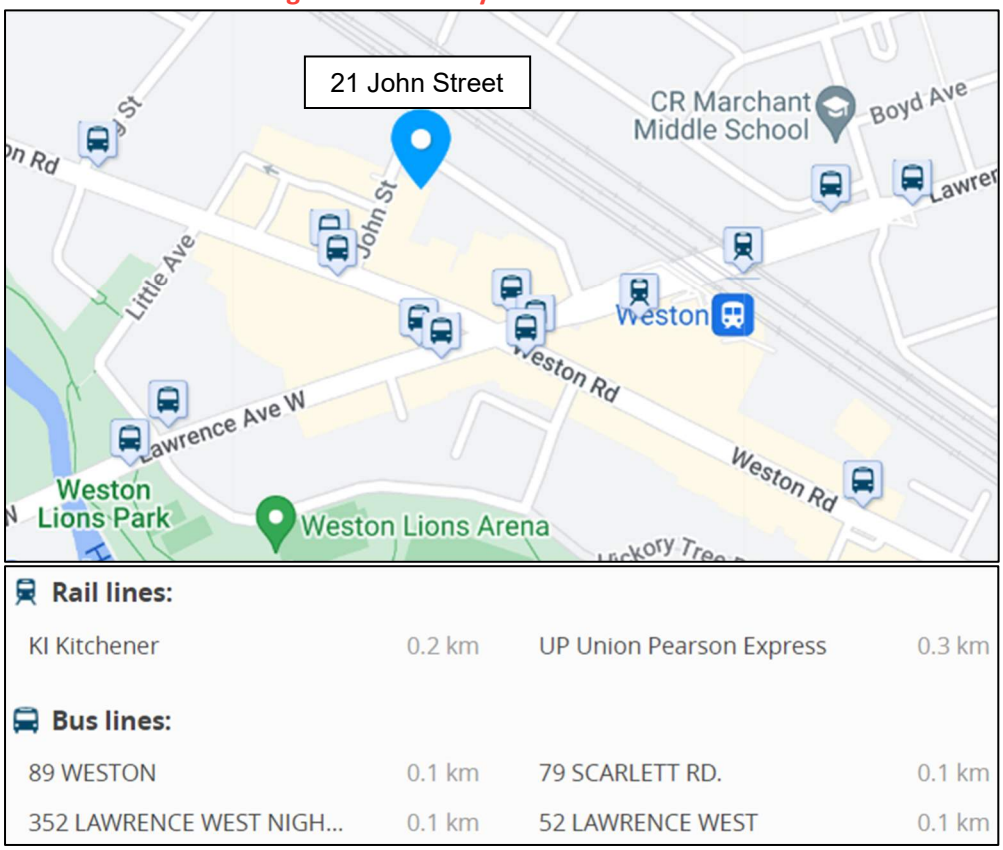
may have specific parking requirements. There is no minimum parking requirement for Parcel B, and none is proposed.

The proposed parking supply of the subject development satisfies the requirements under the governing Zoning By-law 569-2013 (as amended) and hence, no parking justification is required. Nonetheless, the following sections further rationalize the appropriateness of the proposed parking supply.

MULTI-MODAL CONTEXT

The subject site is situated with convenient access for pedestrians and transit. For pedestrians, the site is within a short walking distance to a large commercial area, public parks, schools, and other amenities. For transit connections, there are several surface bus routes and higher-order rail transit routes, as discussed in **Section 2.2** and summarized in **Figure 5-3** by distance to the site.

Figure 5-3: Nearby Transit Connections



Base Image Source: Google Maps

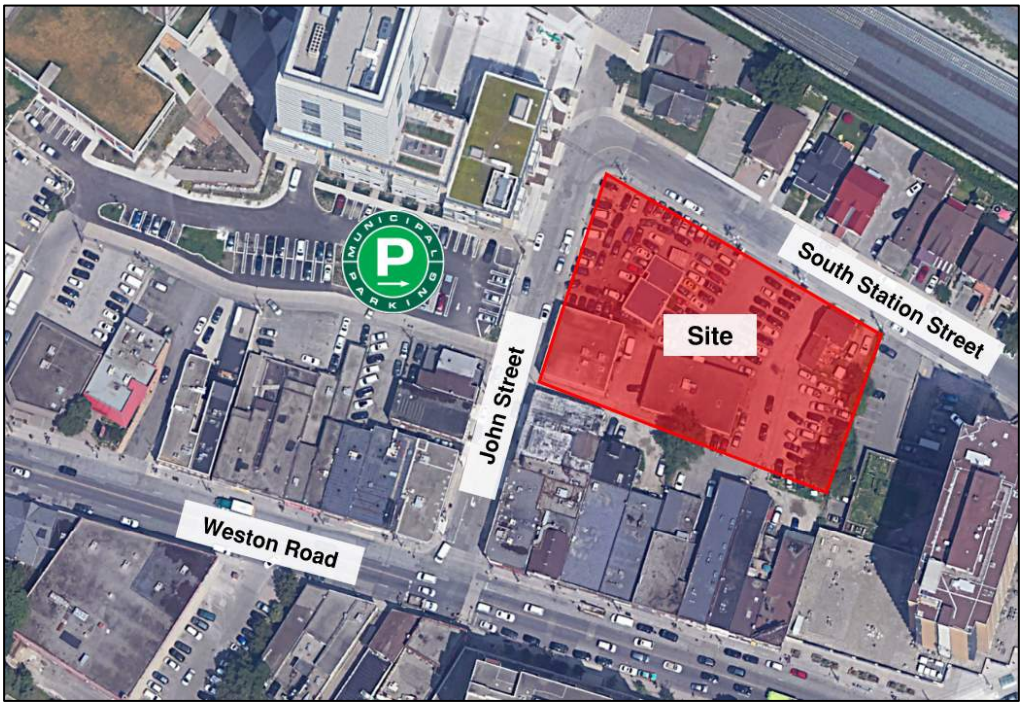
As noted in **Section 3.3.2**, the 2016 TTS results indicate that up to 38 percent of peak-hour trips in the study area are already being made via non-auto travel modes. In particular, the site is expected to have even higher percentages of non-auto travel due to its proximity to nearby amenities and transit connections.

MUNICIPAL PARKING LOT

There is a public municipal parking lot located west of the site, directly across John Street, as shown in **Figure 5-4.** The public lot provides paid parking with 76 parking spaces. While the site is expected to adequately accommodate its own visitor and non-residential parking demand, during atypical peaks, this

municipal lot can serve as overflow parking for the site if required. Site visitors and customers may also prefer to use this public surface parking over on-site underground parking, as a matter of convenience, especially for short-duration stays.

Figure 5-4: Nearby Municipal Parking Lot



Base Image Source: Google Maps Satellite View

NON-RESIDENTIAL PARKING

The proposed community space, daycare, and commercial/retail uses are intended to serve the immediate walkable neighbourhood. Similar community uses exist in various locations in this neighbourhood, these uses generate mostly foot traffic and require minimal parking. Given the character of this neighbourhood, walkability and multi-modal context, and the ancillary nature of the proposed non-residential uses, non-residential parking demand is expected to negligible. **Depending on the needs of specific tenants, a nominal number of parking spaces may be allocated for non-residential use.** In addition, as previously noted that public parking is also available nearby, offering another parking option for visitors.

5.1.3 ACCESSIBLE PARKING ASSESSMENT

According to By-law 89-2022, which amended the governing Zoning By-law 569-2013, the required amount of accessible parking spaces should be based on the number of effective parking spaces calculated using the rates from Table 200.15.10.5 in the By-law. **Table 5-3** provides the calculation of effective parking spaces.

Table 5-2: By-law 89-2022 Effective Parking (Accessible Parking Supply Calculation)

PROPOSED DEVELOPMENT		EFFECTIVE PARKING SUPPLY	
	Units/GFA	Rate	No. of Spaces[1]
Parcel A			
Studio / Bachelor	51	0.8 per unit	40
One-Bedroom	237	0.9 per unit	213
Two-Bedroom	150	1.0 per unit	150
Three-Bedroom	46	1.2 per unit	55
Resident Subtotal	**484**	**--**	**458**
Visitor	484	0.1 per unit	48
Commercial/Retail	210 m^2	2.0 per 100 m^2	4
Daycare	433 m^2	1.0 per 100 m^2	4
Parcel A Visitor/Non-residential Subtotal	--	--	56
Parcel A Total	--	--	514
Parcel B			
Flex Community Space	1,382 m^2	1.0 per 100 m^2	13
Development Total	--	--	527

1 Rounded down to the nearest whole number.

Based on the By-law rates shown below, Parcel A is required to provide 14 accessible parking spaces and Parcel B is required to provide one accessible space.

(A) if the number of effective **parking spaces** is less than 13, a minimum of 1 accessible **parking space** must comply with all regulations for an accessible **parking space** in Section 200.15;

(B) if the number of effective **parking spaces** is 13 to 100, a minimum of 1 accessible **parking space** for every 25 effective **parking spaces** or part thereof must comply with all regulations for an accessible **parking space** in Section 200.15; and

(C) if the number of effective **parking spaces** is more than 100, a minimum of 5 accessible **parking spaces** plus 1 accessible **parking space** for every 50 effective **parking spaces** or part thereof in excess of 100 **parking spaces** must comply with all regulations for an accessible **parking space** in Section 200.15.

Since there is no proposed non-residential parking provision for Parcel B, the above requirement is not applicable to Parcel B and thus no accessible parking is required under By-law 1048-2022 that amended By-law 89-2022.

As for Parcel A, a total of 14 acceessible parking spaces are proposed, meeting the minimum By-law requirements.

5.2 BICYCLE PARKING ASSESSMENT

At its meeting of July 19 to 22, 2022, the City Council enacted By-law 0839-2022, which contains bicycle parking-related amends to Zoning By-law 569-2013. The proposed development is located in Bicycle Zone 2 and with the bicycle parking rates based on the harmonized By-law and Toronto Green Standard requirements, the required bicycle parking for the proposed development is calculated in **Table 5-4**.

Table 5-3: Zoning By-law 569-2013 (Bicycle Zone 2) and TGS Bicycle Parking Requirements

		BICYCLE PARKING RATES			BICYCLE PARKING REQUIREMENTS		
USE	**UNITS / GFA**	**Short-Term**	**Long-Term**	**Total[1]**	**Short-Term**	**Long-Term**	**Total[1]**
Parcel A							
Residential	484 units	0.07 per unit	0.68 per unit	0.75 per unit	34	330	364
Retail/ Commercial	210 m^2	None <2000 m^2	None <2000 m^2	--	--	--	--
Daycare	433 m^2	None	None	--	--	--	--
Parcel A Total					**34**	**330**	**364**
Parcel B							
Community Space	1,382 m^2	None	None	--	0	0	0
Development Total					**34**	**330**	**364**

1 Rounded up to the nearest whole number.

As shown in **Table 5-4**, a total of 364 bicycle parking spaces are required for Parcel A, including 34 short-term and 330 long-term spaces. A total of 380 bicycle parking spaces (34 short-term and 346 long-term) are proposed, which satisfies the minimum By-law requirements with a surplus of 16 for long-term spaces. There is no bicycle parking requirement for Parcel B, and none is proposed. In addition, per the By-law, bicycle maintenance facilities (repair station) should be provided for a building for which five or more long-term bicycle spaces are required, and one is provided on the P1 level.

The City has expressed a desire to locate Bike Share stations on the development site to expand the City's Bike-Share network. A Bike-Share station is proposed at the southwest corner of the site, next to the site driveway and behind a landscape planter.

5.3 PICK-UP AND DROP-OFF

The proposed development features a pick-up and drop-off (PUDO) loop in Parcel A. Th e anticipated PUDO activity at this site includes taxis, ride-hailing services such as Uber and Lyft, and carpooling pick-

up and drop-off. While the proposed non-residential uses are intended to serve the walkable community, these uses may also generate a small PUDO demand during their respective peak periods.

The vehicle dwell time for passenger drop-offs tends to be very short, i.e. within seconds. The vehicle dwell time for passenger pick-up tends to be longer and more variable since the vehicle may need to wait for the passenger to arrive at the lay-by. Conservatively assuming that the PUDO loop can accommodate two vehicles at a time and an average dwell time of two minutes per pick-up or drop-off, the proposed PUDO loop can accommodate 60 PUDO activities in an hour.

WSP reviewed PUDO survey data presented in other traffic impact studies for sites near higher-order transit. The short-term parking rates observed in the background review are summarized in **Table 5-5**.

Table 5-4: Proxy PUDO Rates

PROXY SITE	UNITS	95TH PERCENTILE VEHICLE ACCUMULATION	RATE PER UNIT
18 Yorkville Avenue	313	4	0.013
1000 Bay Street/ 57 St. Joseph Street	458	2	0.004
		3	0.007
		2	0.004
Average		**3**	**0.007**

Source: Table 36 of the 906 Yonge Street TIS (BA Group, October 14, 2021)

As shown in **Table 5-5**, the 95th percentile vehicle accumulation is 0.007 per unit. Applying the 95th percentile rate to the proposed 484 units, the site is estimated to need 3 short-term parking spaces to accommodate simultaneous PUDO activities. This can be accommodated in a combination of on-site PUDO loop and curbside where stopping is permitted. It is noted that the PUDO loop is located at the end of the site driveway, and any occasional queues at the PUDO loop can be accommodated within the length of the driveway. Also, PUDO activities related to ride-hailing are discretional in nature and therefore highly variable from day to day, and that the peak vehicle accumulation may not coincide with the roadway peak hour.

In addition to the on-site PUDO loop, temporary stopping is permitted on the south side of John Street (abutting the site), and TPA on-street parking is provided on both sides of South Station Street including along the Parcel A frontage. The available curb space provides additional capacity for PUDO activities and short term parking for small deliveries made by auto. It should be noted that in this urban setting, many food deliveries and other small couriers tend to be undertaken by bike or on foot. Small delivery drivers are incentivized to complete their delivery quickly and would not dwell at the site or on the street.

Given the above considerations, it is our opinion that the proposed PUDO loop is appropriate to accommodate PUDO activity on-site along with the curb spaces and does not represent an oversupply of PUDO space.

6 SITE PLAN REVIEW

This site plan review is based on plans provided by 3XN Architects on April 14, 2023. Vehicle manoeuvring is tested using the AutoTURN 11.0 software package.

6.1 SITE ACCESS

Vehicular site access will be provided via a 7.0-metres-wide driveway on John Street, as shown on the site plan in **Figure 1-2**. The intersection is proposed midblock on John Street and will operate with full moves. It will provide access to the underground parking ramp, internal loading area, and the pick-up-drop-off loop.

Fire trucks and TTC Wheel-Trans vehicles can serve the site from South Station Street.

6.1.1 SIGHTLINE ANALYSIS

On John Street, the design speed is assumed to be 40km/h since the posted speed is 30km/h. **Figure 6-1** shows no obstructions based on aerial and street view images. The sidewalk on the south side of John Street is wide, and no structures are blocking the required 50m stopping sight distance.

Due to the street's geometry, the required 85.0 metres turning sight distance is not available. 60.3 metres on the north and 55.8 metres on the south are available. Vehicles turning onto John Street from Weston Road or South Station Street will have reduced speed while turning, which allows a vehicle leaving the site to have enough time to make a decision to enter the roadway.

6.2 LOADING REQUIREMENT

The City of Toronto Zoning By-Law 569-2013 loading requirements for the proposed development are summarized in **Table 6-1**. In total, one Type 'G' and one Type 'C' loading spaces are required.

Table 6-1: Summary of Loading Requirement and Supply

PROPOSED DEVELOPMENT		REQUIRED LOADING SPACES	PROVIDED LOADING SPACES
Residential	458 units	1 Type 'G' 1 Type 'C'	1 Type 'G' 1 Type 'C'
Retail	78 m^2	None	
No loading requirement for community space and daycare use.			

As shown in **Table 6-1**, the proposed loading spaces fully satisfy the residential requirements of the site.

6.3 MINIMUM DIMENSIONS

The proposed Type 'G' and Type 'C' loading spaces satisfy the minimum horizontal dimensions of 13.0 metres in length by 4.0 metres in width and 6.0 metres in length by 3.5 metres in width, respectively, based on Section 220.5.1.10(8) of Zoning By-law 569-2013. These dimensions are illustrated in **Figure 6-**

2. The ground floor plan architectural drawing also notes a minimum clear height of 6.1 metres at the Type 'G' and at least 3.0 metres at the Type 'C' loading spaces.

As for dimensions related to parking, the following key criteria are noted:

- Section 200.5.1.10 of the By-law requires perpendicular parking spaces to be 2.6 metres in width and 5.6 metres long. It states that if any part of a fixed object is within 0.3 metres of the side of the parking space and more than 1.0 metres from the front or rear of the parking space, then the minimum width needs to be increased by 0.3 metres from each side of obstruction (2.9 metres for a space obstructed on one side, 3.2 metres in case both sides are obstructed).
- The 2021 Toronto Accessibility Design Guideline indicates that accessible parking spaces are to have a continuous barrier-free aisle of 1.5 metres, a minimum width of 3.4 metres and a length of 5.6 metres.
- Section 20.5.1 of By-law 569-2013 states that the minimum width of 6.0 metres where the centreline of a parking space is at an interior angle of 70 to 90 degrees to the centreline of the drive aisle providing vehicle access.

Critical dimensions of the driveway, loading spaces, ramps and the driving aisles for the ground floor and the parking garages are illustrated in **Figures 6-2** and **6-3.**

6.4 VEHICLE MANOEUVRING ASSESSMENT

6.4.1 FIRE TRUCK

A City of Toronto fire truck will be able to serve the development from South Station Street since it can reach within 15m of the primary building entrances (lobbies) of both buildings. Therefore, fire truck circulation through the site has not been tested.

6.4.2 GARBAGE TRUCK

As for vehicle maneuverability at the Type 'G' loading space, a custom garbage truck representative of the City of Toronto front-end-loader has been tested using AutoTURN. The garbage truck template has been developed based on the vehicle dimensions in the reference document entitled *City of Toronto Requirements for Garbage and Recycling Collection from New Developments and Redevelopments*.

The City of Toronto garbage truck was modelled to enter the Type G loading space in a forward motion. To exit, the truck would reverse onto the driveway and leave the site in a forward direction. The garbage truck maneuvers, including the inner and outer turning radii, are demonstrated in **Figure 6-4**.

6.4.3 MEDIUM SINGLE-UNIT TRUCK

Maneuverability at the Type 'G' loading spaces was also tested using a TAC medium single-unit (MSU) truck. As shown in **Figure 6-5**, the maneuvers of an MSU at the Type 'G' loading space can be accommodated. The MSU can enter the site in a forward manner, then reverse into the Type G loading space and exit in a forward motion to leave the site.

6.4.4 LIGHT SINGLE-UNIT TRUCK

The Type 'C' loading bay was assessed with a light single-unit (LSU) vehicle. **Figures 6-6** shows an LSU accessing the Type C loading space. The truck reverses into the Type 'C' loading space and leaves the site in a forward motion. No conflicts were indicated as shown in the figure.

6.4.5 PASSENGER VEHICLE

To test the site maneuverability for a passenger vehicle, a typical Transportation Association of Canada (TAC) passenger vehicle or 'P-TAC' was tested entering, exiting, and circulating. As shown in the figures below. Based on this assessment, the tested maneuvers are feasible throughout the proposed development.

A TAC passenger vehicle or 'PTAC' was tested entering, exiting and circulating the site and the ramp, as shown in **Figures 6-7** and **Figure 6-8**. It should be noted that a 5.6-metre P-TAC vehicle is, in fact, representative of a large truck (Ford F150), which is not representative of the average vehicle size. Based on this assessment, the tested maneuvers are accommodated throughout the ground floor. Simultaneous movement is possible both at the ramp and at the driveway entrance.

Maneuvers of a P-TAC into and out of critical parking spaces have been simulated and confirmed. These maneuvers are shown in **Figures 6-9**.

6.4.6 SAFETY MITIGATION

It is recommended that a warning system with a flashing beacon be provided to enhance driver awareness of on-site loading activity. A warning light and a sign are to be placed at the ramp exit. The light will flash while sensors detect trucks in the loading area.

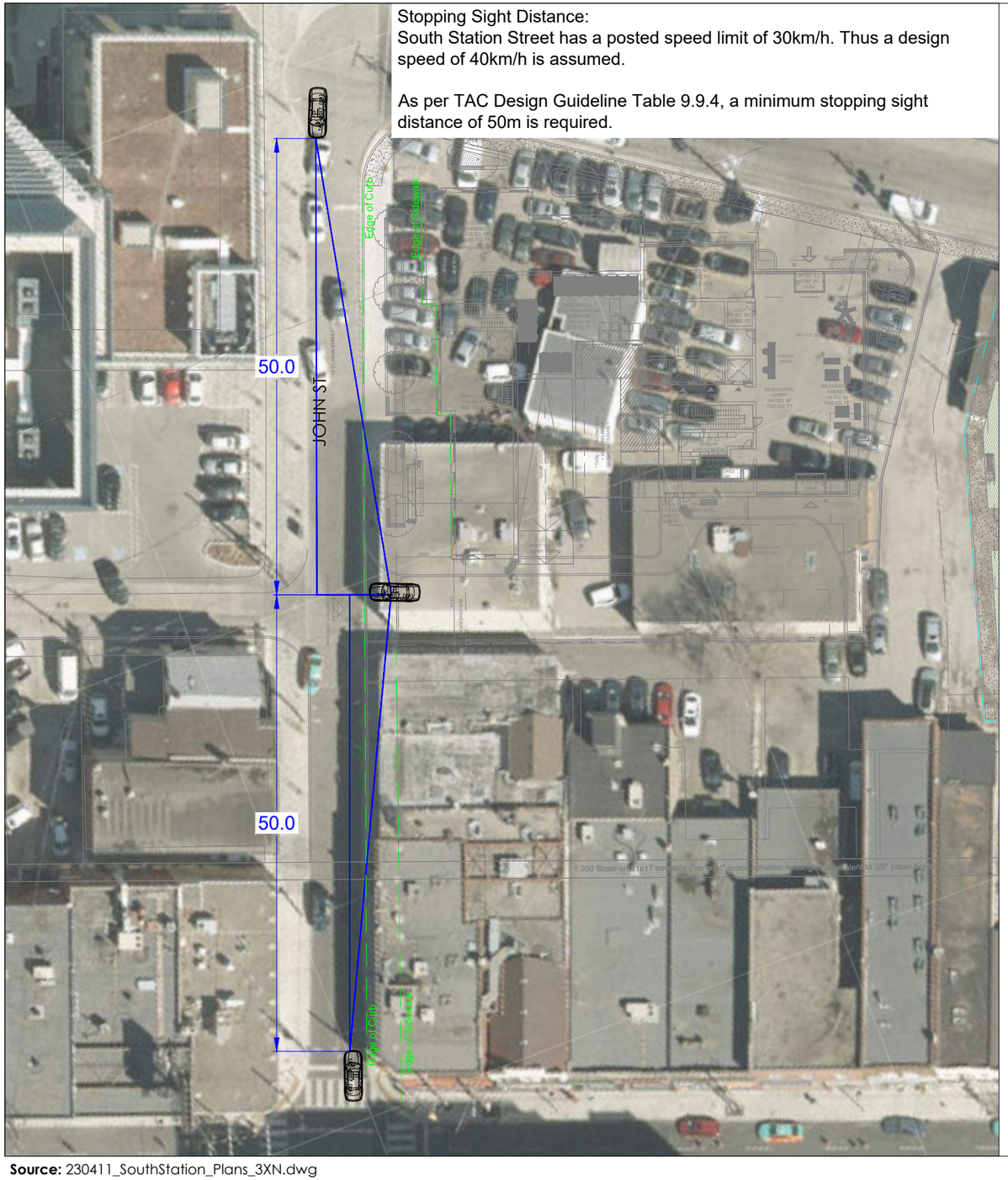
In addition to the warning system, convex mirrors are proposed at all corners of the parking garage to enhance motorists' visibility.

6.5 PAVEMENT MARKING AND SIGNAGE PLAN

Figure 6-10 and **Figure 6-11** proposes approximate locations of signage, pavement markings, mirrors and the warning system.

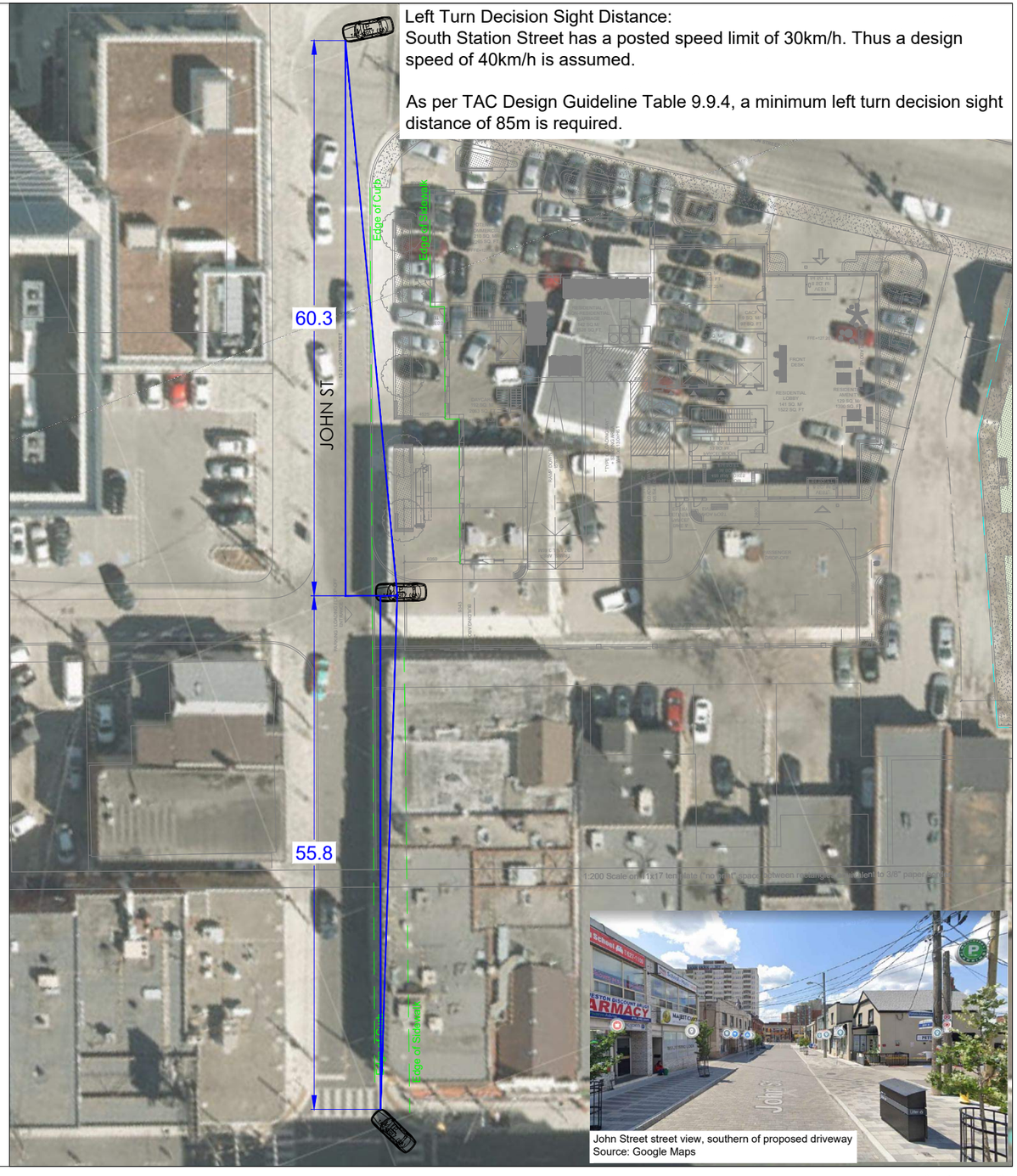
Stopping Sight Distance:
South Station Street has a posted speed limit of 30km/h. Thus a design speed of 40km/h is assumed.

As per TAC Design Guideline Table 9.9.4, a minimum stopping sight distance of 50m is required.



Left Turn Decision Sight Distance:
South Station Street has a posted speed limit of 30km/h. Thus a design speed of 40km/h is assumed.

As per TAC Design Guideline Table 9.9.4, a minimum left turn decision sight distance of 85m is required.



John Street street view, southern of proposed driveway
Source: Google Maps

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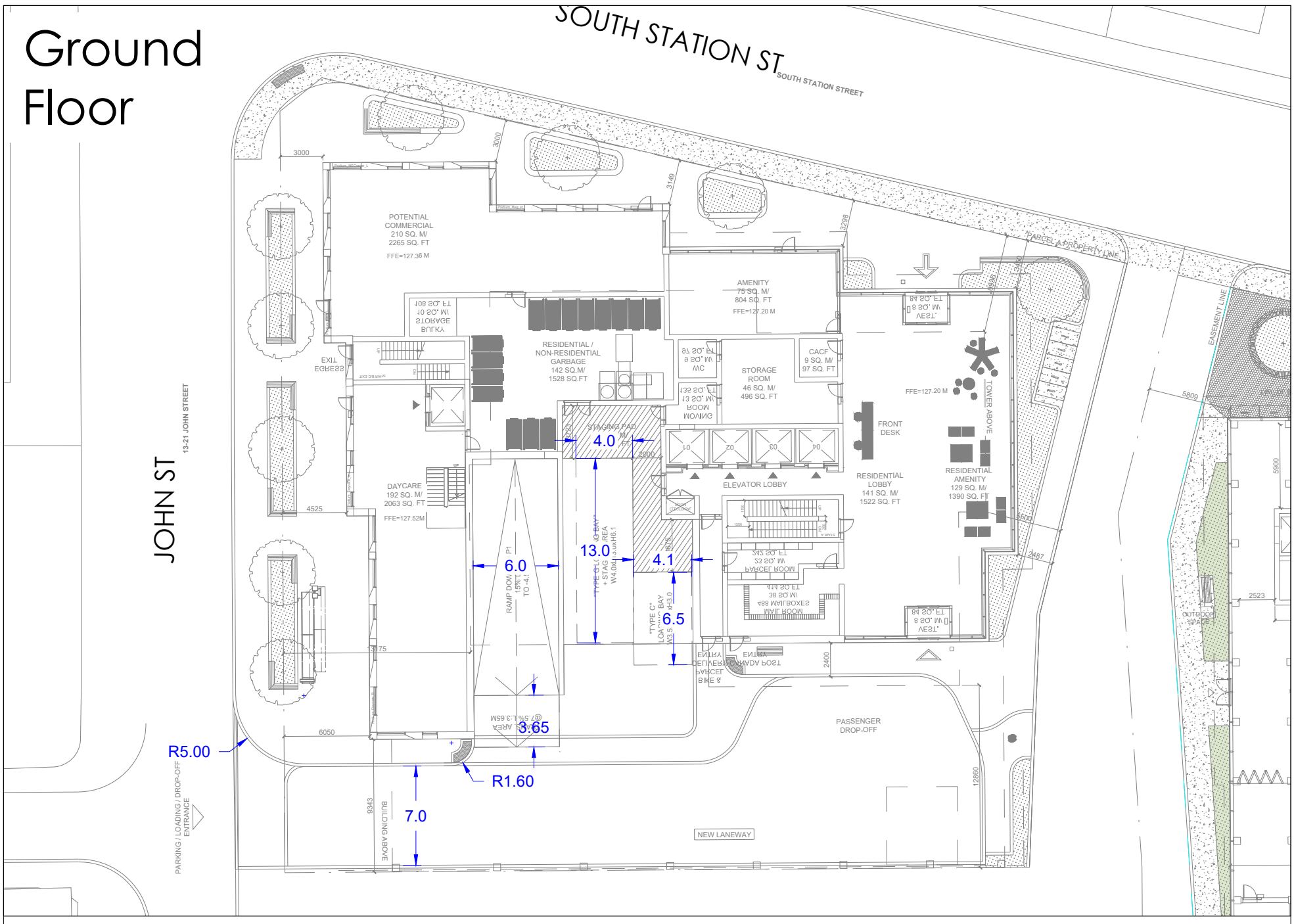
Source: 230411_SouthStation_Plans_3XN.dwg

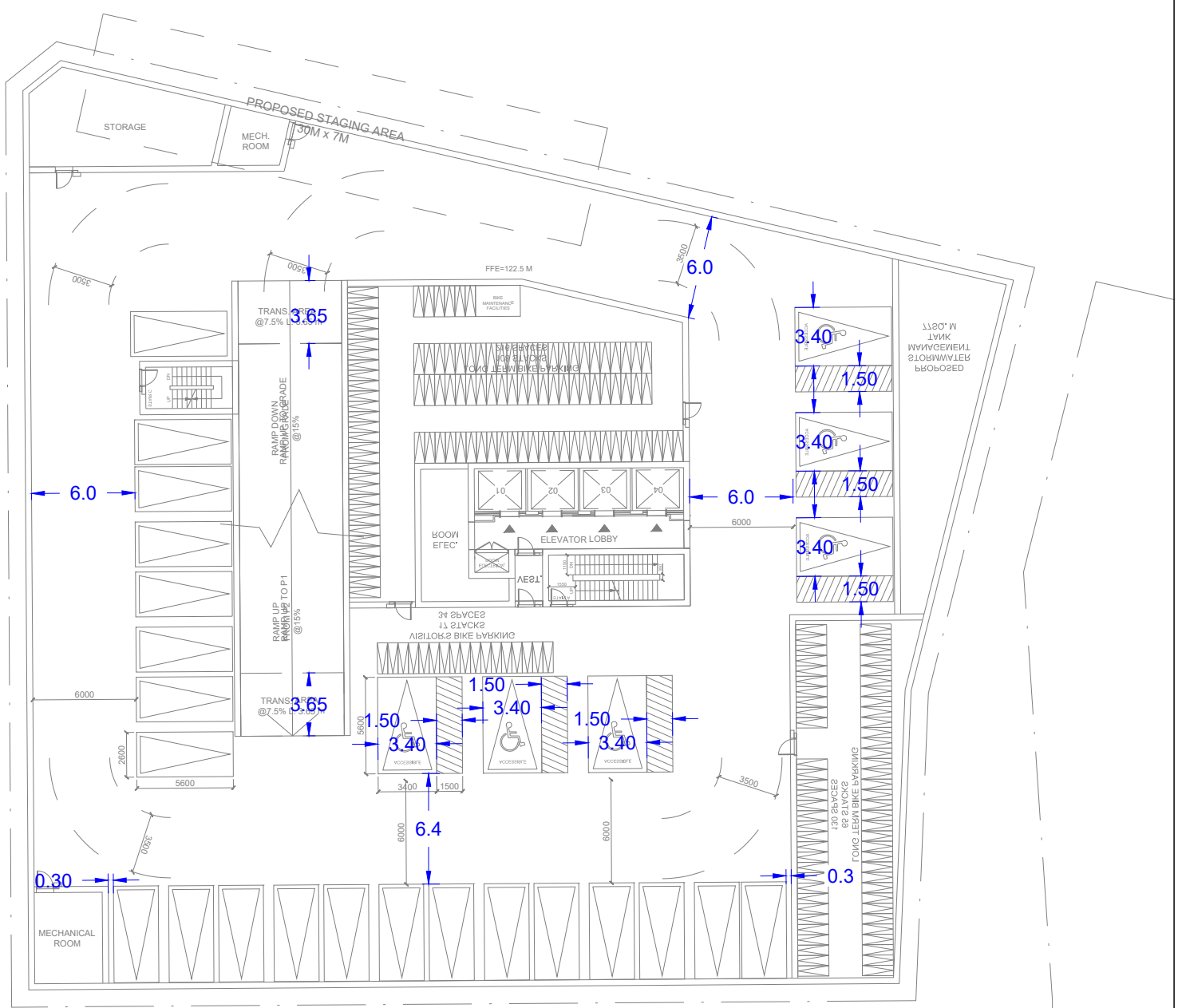
Scale: 1:550

Figure 6-1
Sightline Analysis
21 John Street

Ground Floor



P1



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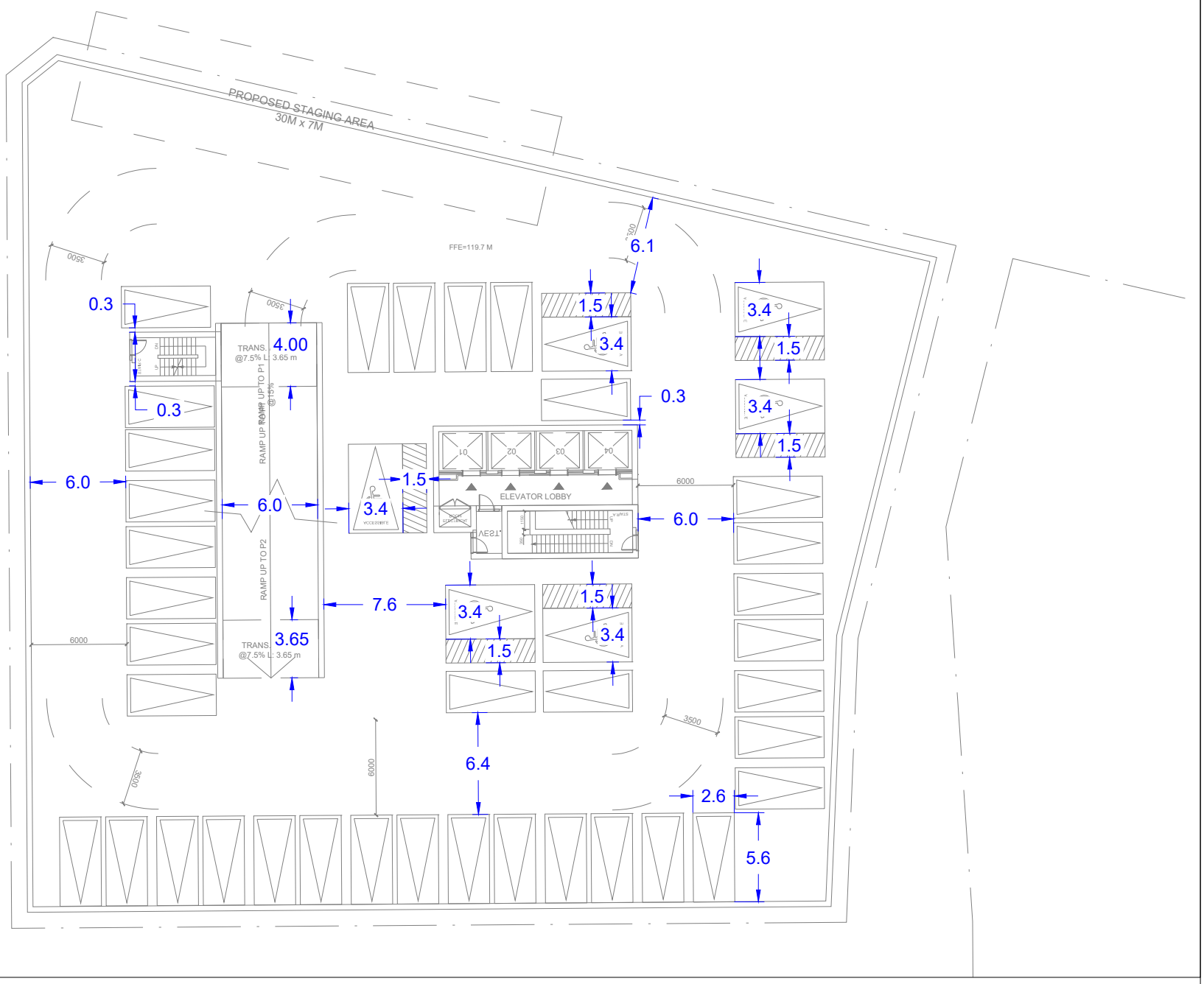
Source: 230411_SouthStation_Plans_3XN.dwg

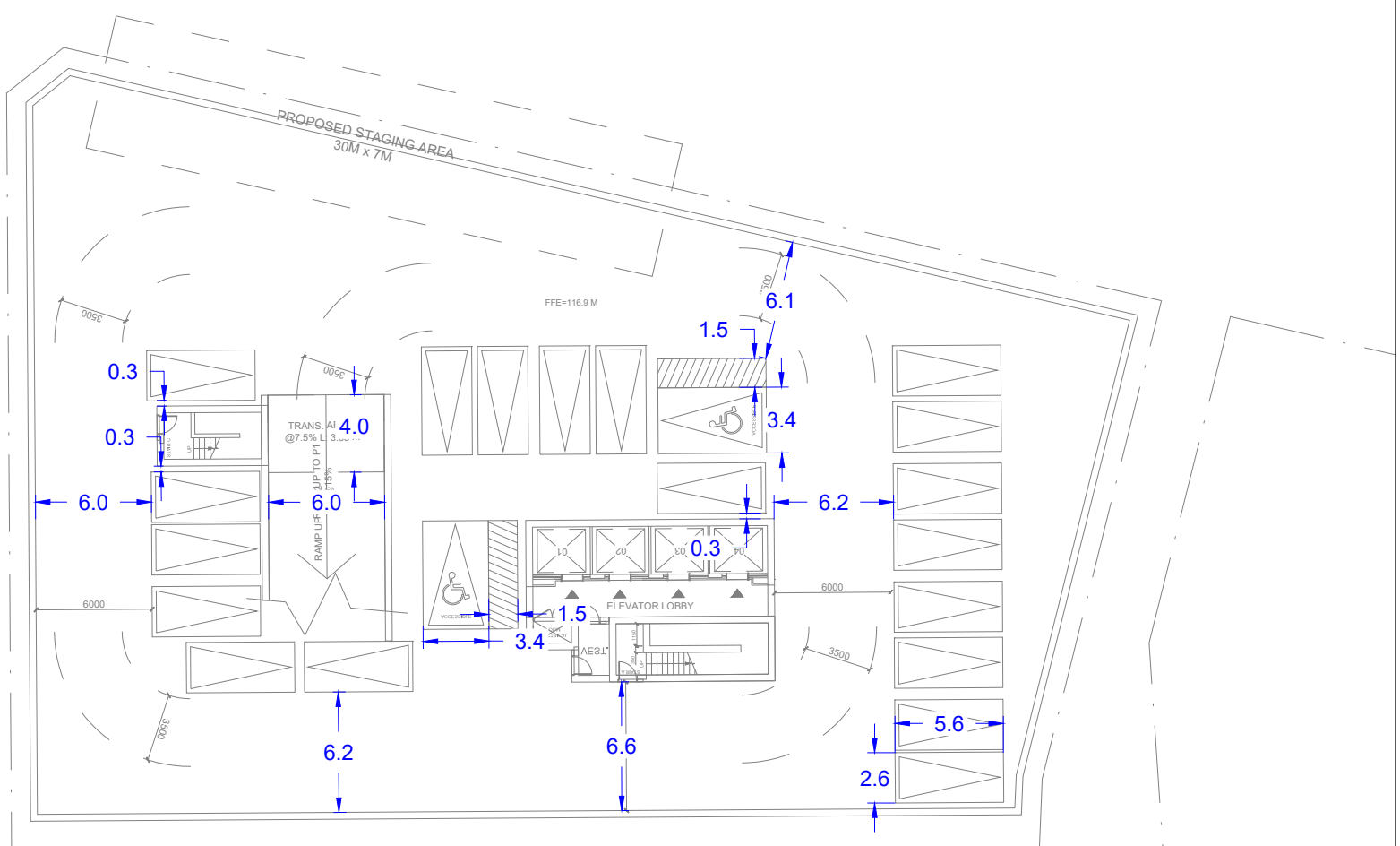
Scale: 1:350

Figure 6-2
Dimensions, Ground Floor, P1
21 John Street

P2



P3



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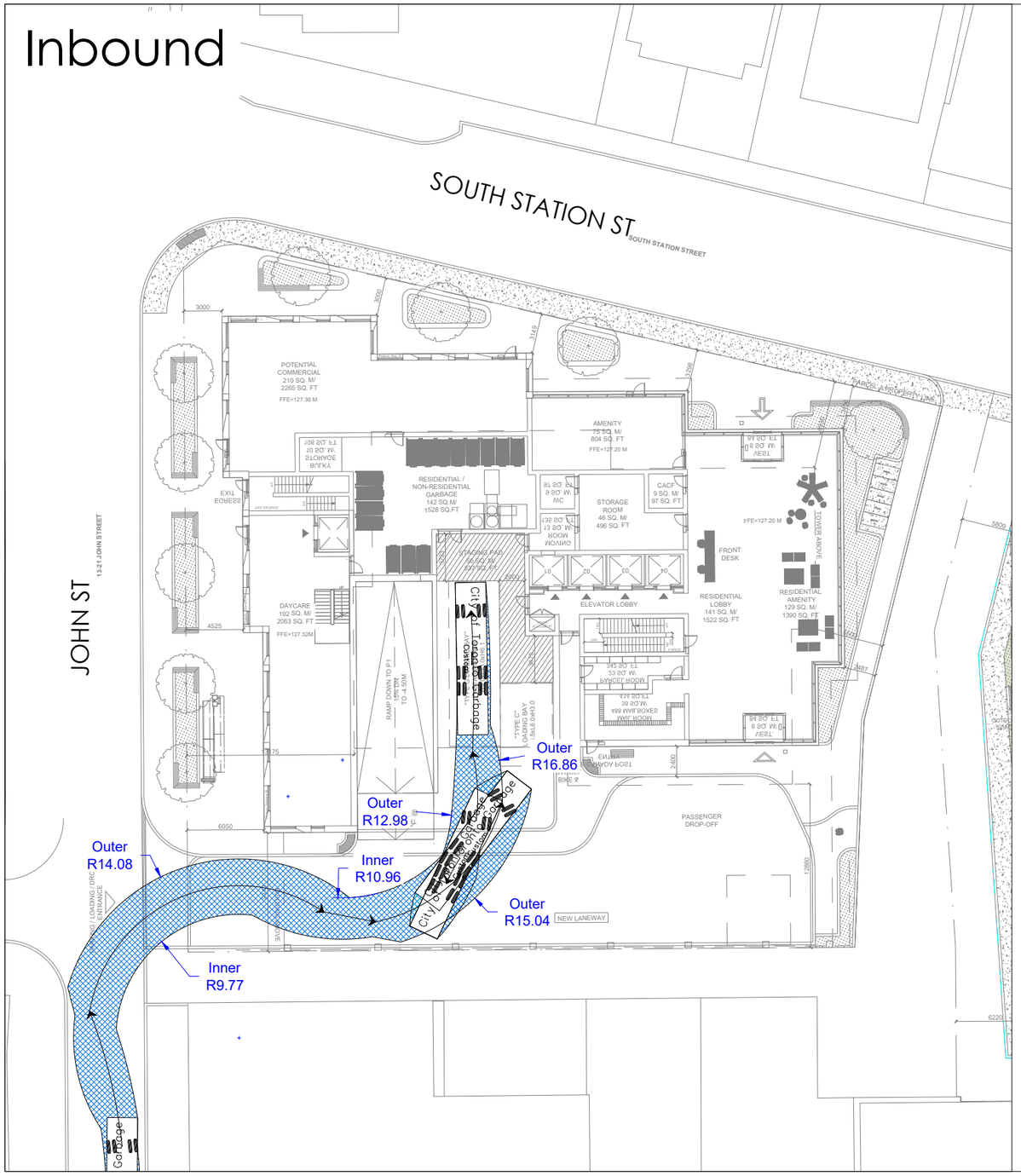
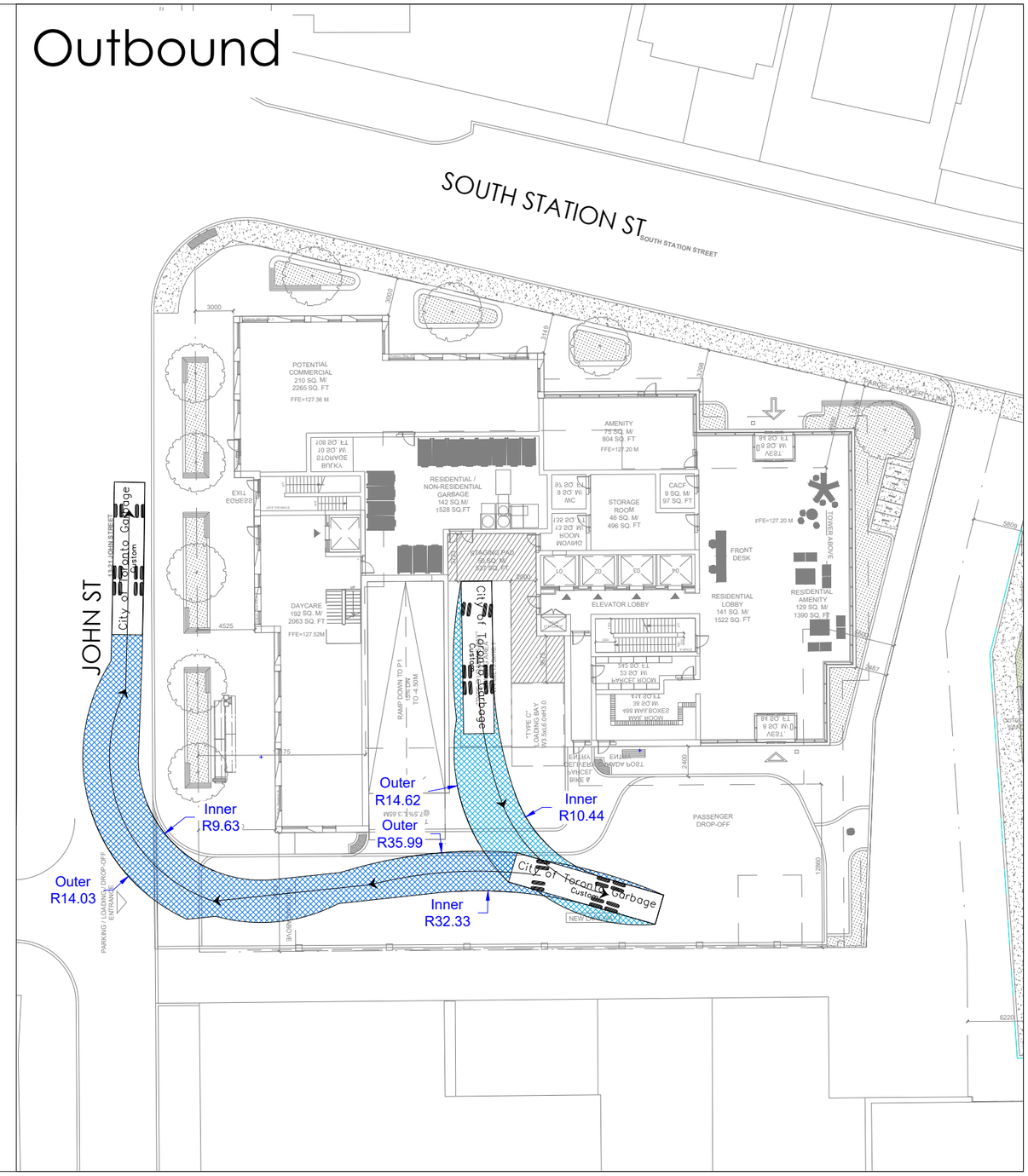
Scale: 1:350

Figure 6-3
Dimensions, P2, P3
21 John Street

Inbound



Outbound



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Source: 230411_SouthStation_Plans_3XN.dwg

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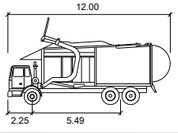
Figure 6-4
City of Toronto Garbage Truck Turning Movements
21 John Street

City of Toronto Garbage

meters

Width	: 2.40
Track	: 2.40
Lock to Lock Time	: 6.0
Steering Angle	: 24.1



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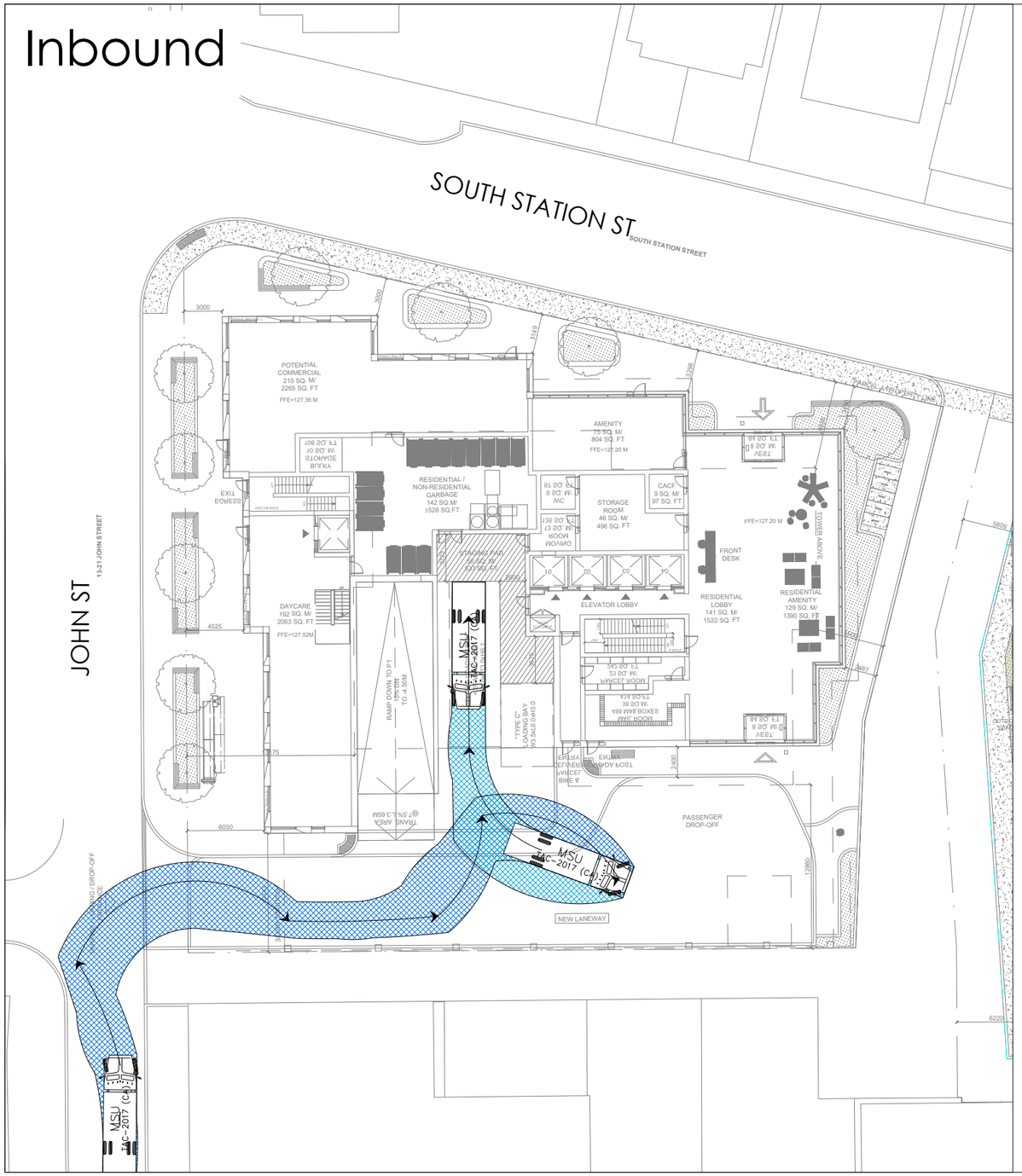
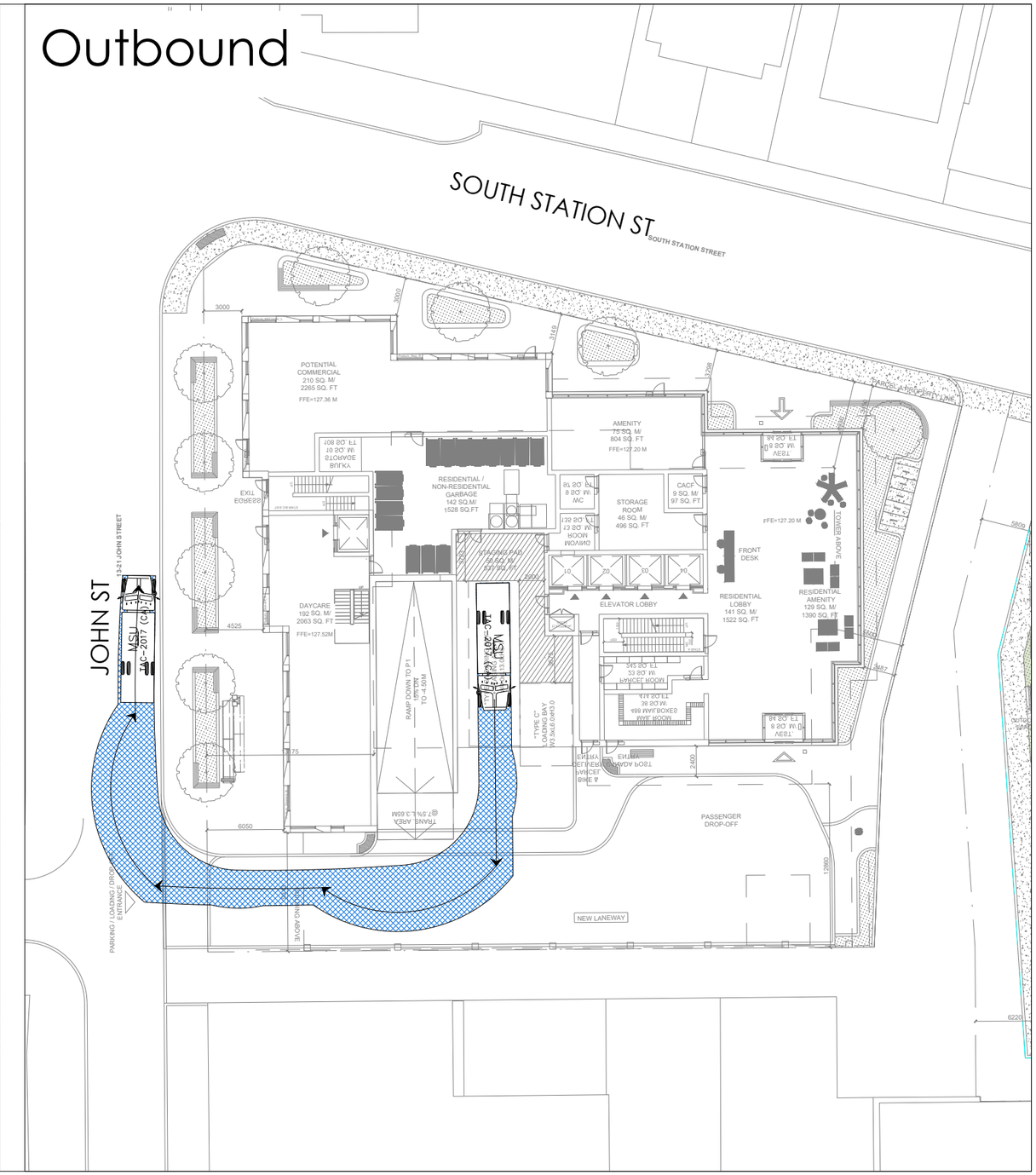
Inbound



Outbound



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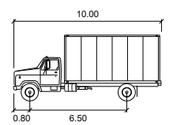
Source: 230411_SouthStation_Plans_3XN.dwg

Scale: 1:400

Figure 6-5
Medium Delivery Truck Site Circulation
21 John Street

MSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.2



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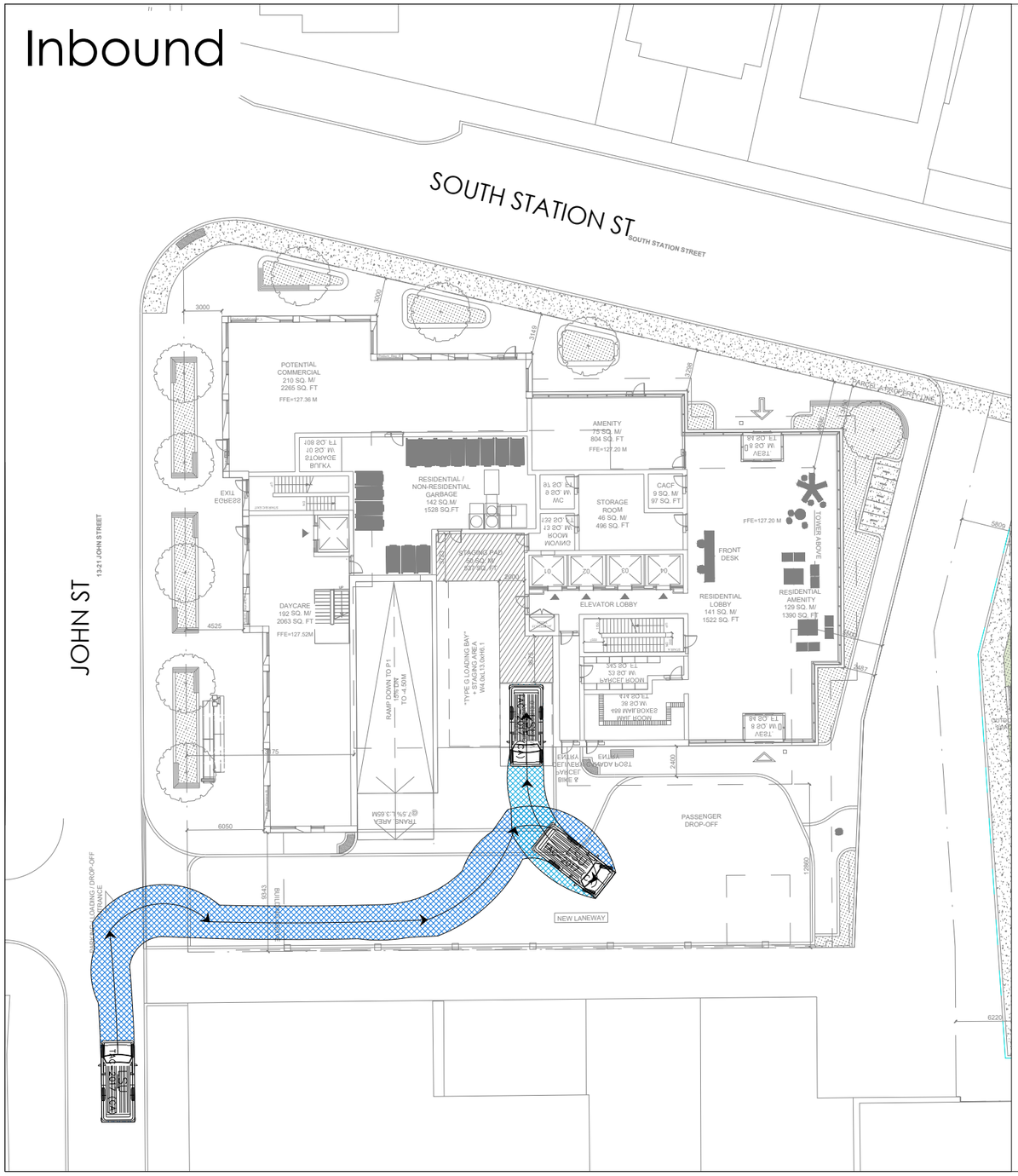
Inbound



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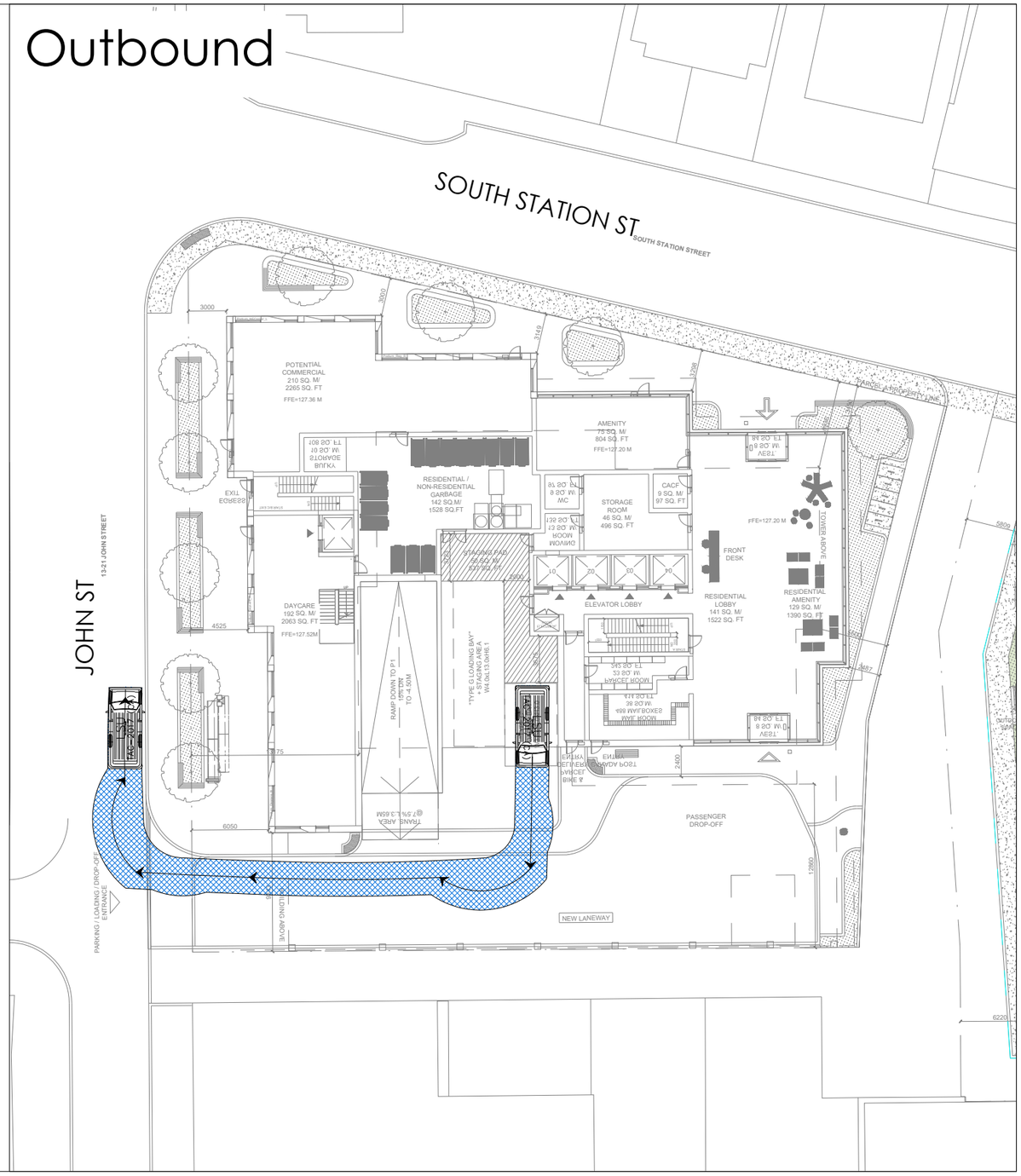

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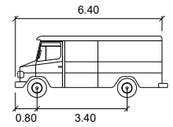
Figure 6-6
Small Delivery Truck Site Circulation
21 John Street

LSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.3



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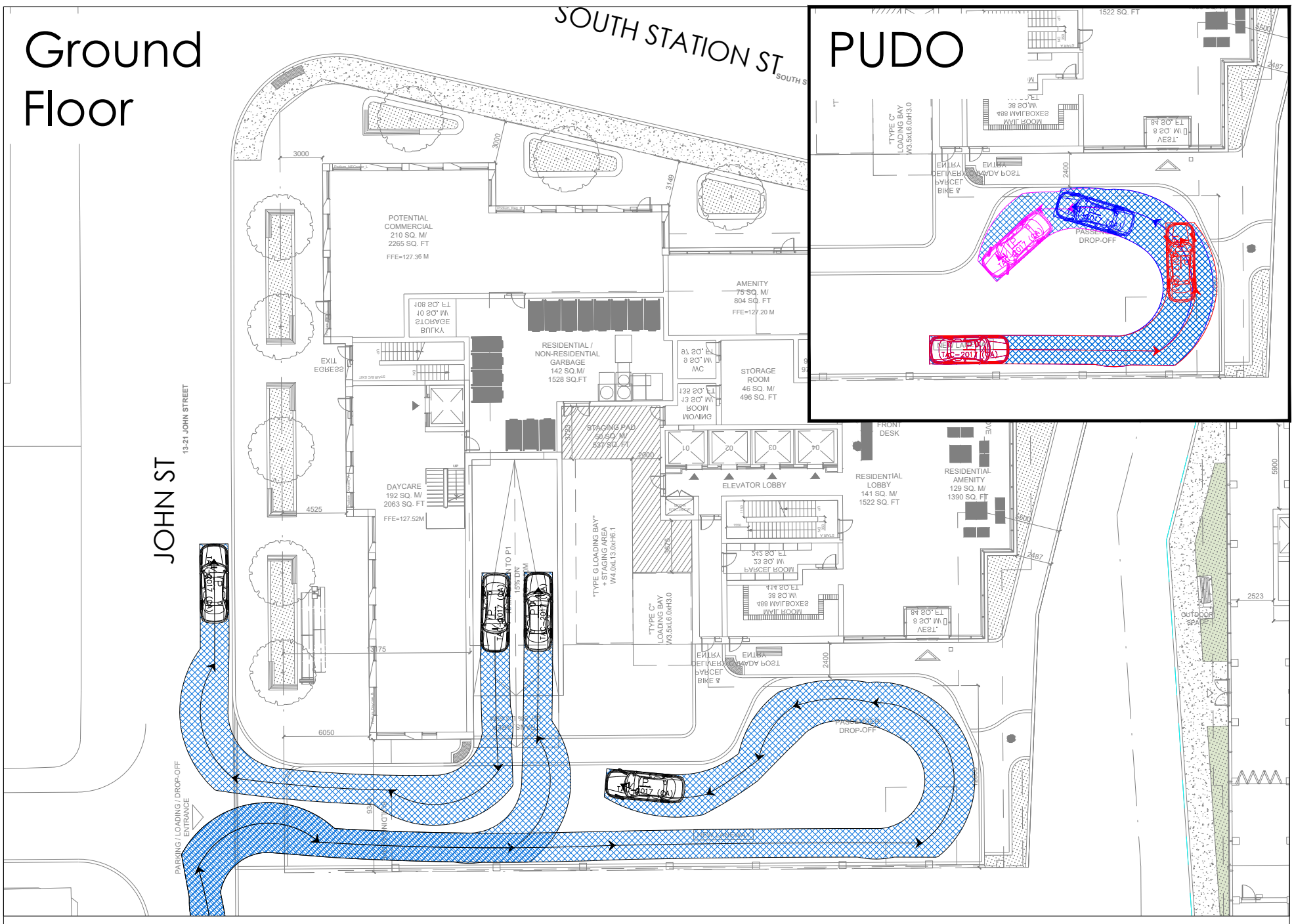
Ground Floor



PUDO

P1

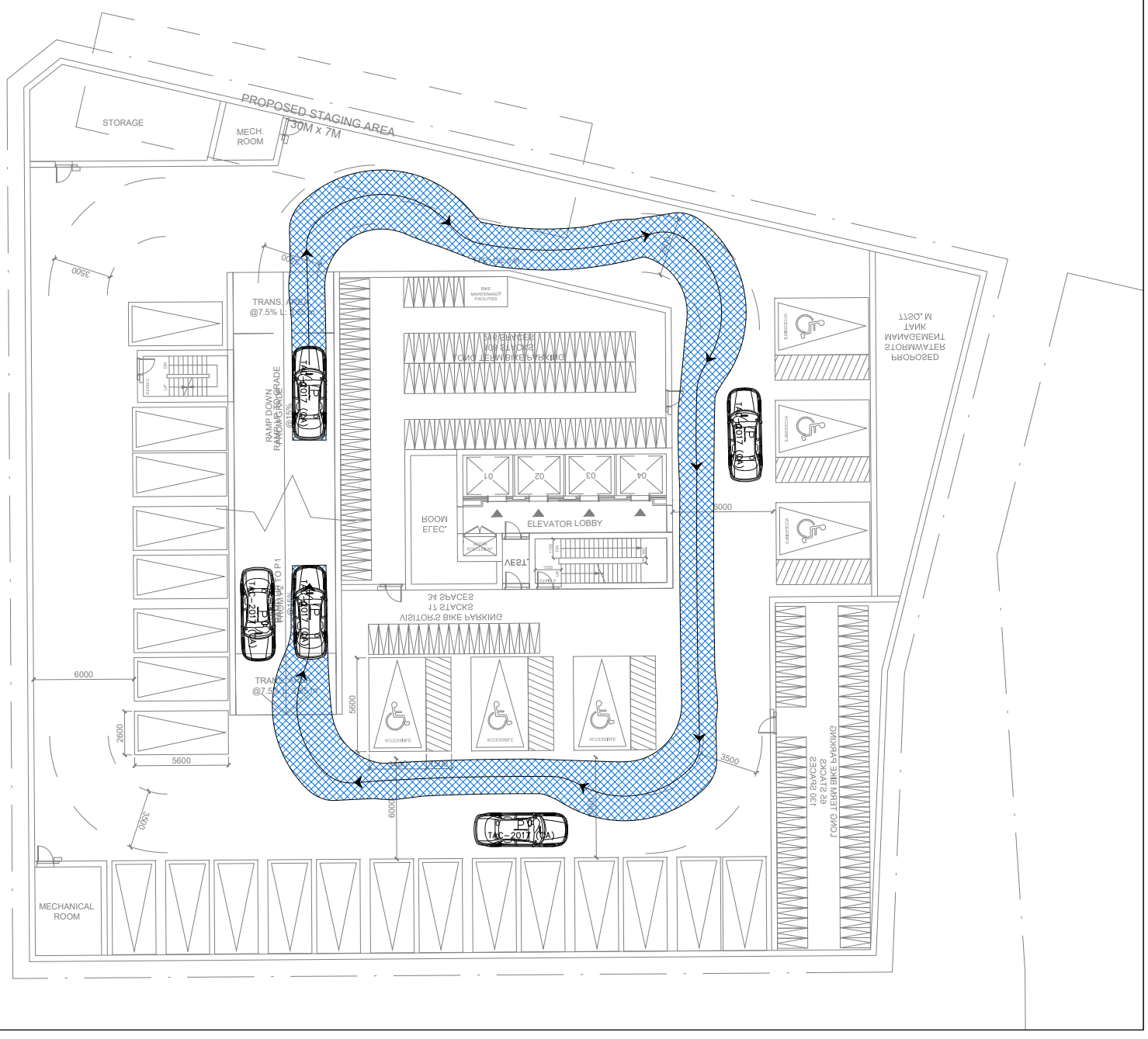


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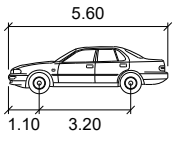
Figure 6-7
Passenger Vehicle Site Circulation, Ground Floor, P1
21 John Street

P-TAC

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9



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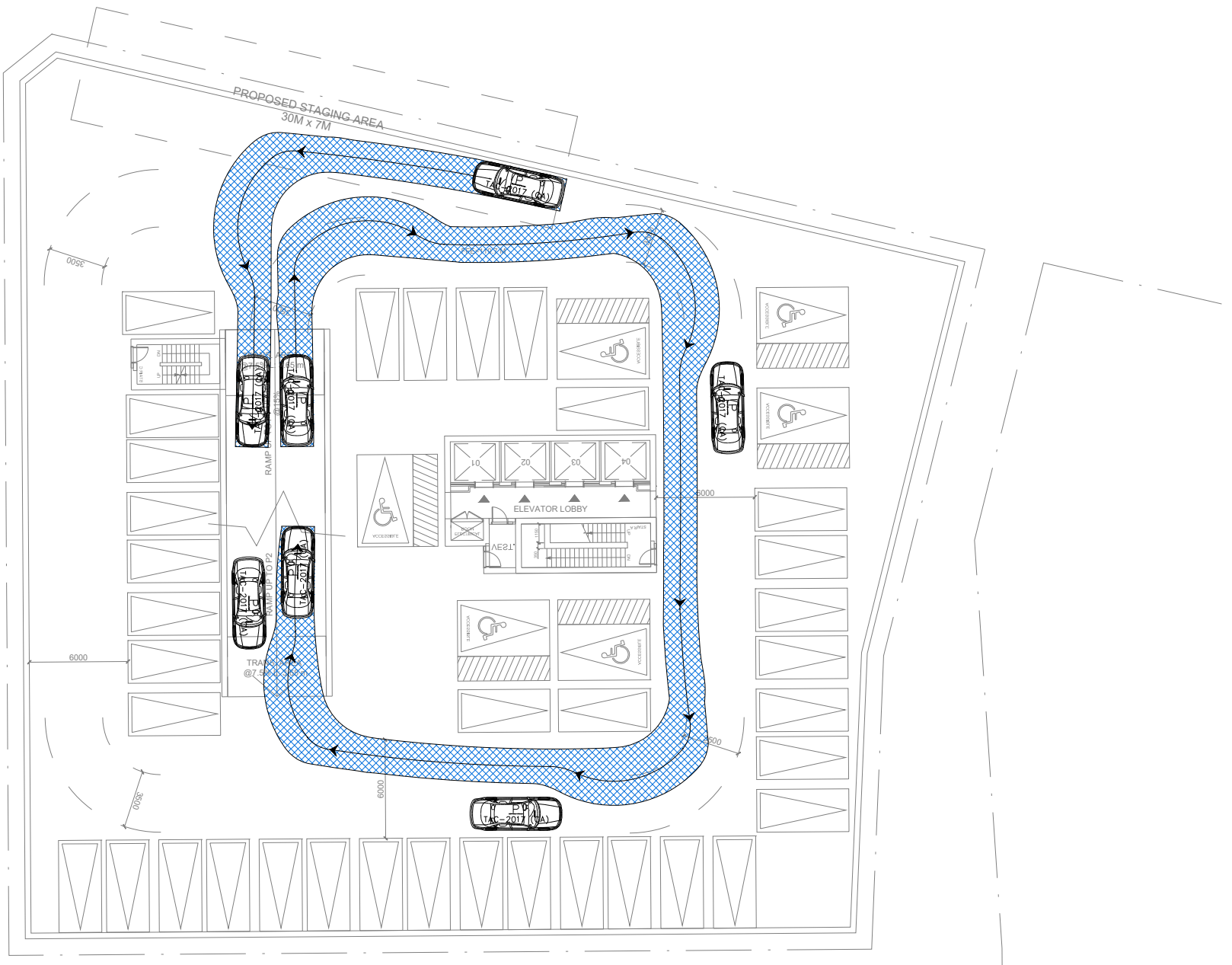
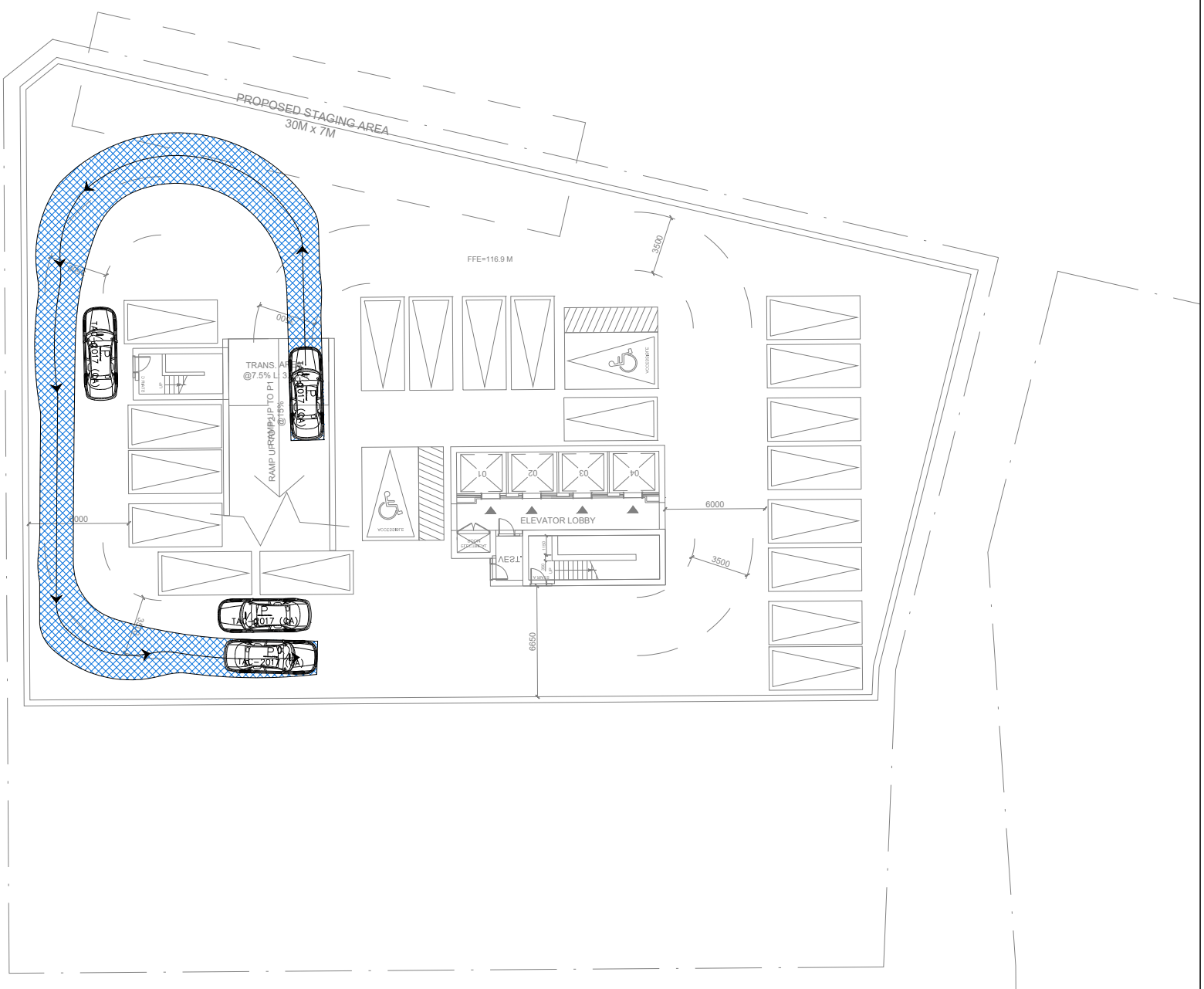
P2



P3



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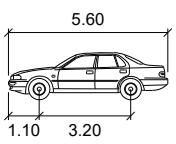
Scale: 1:350

Figure 6-8
Passenger Vehicle Site Circulation, P2, P3
21 John Street

P-TAC

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9



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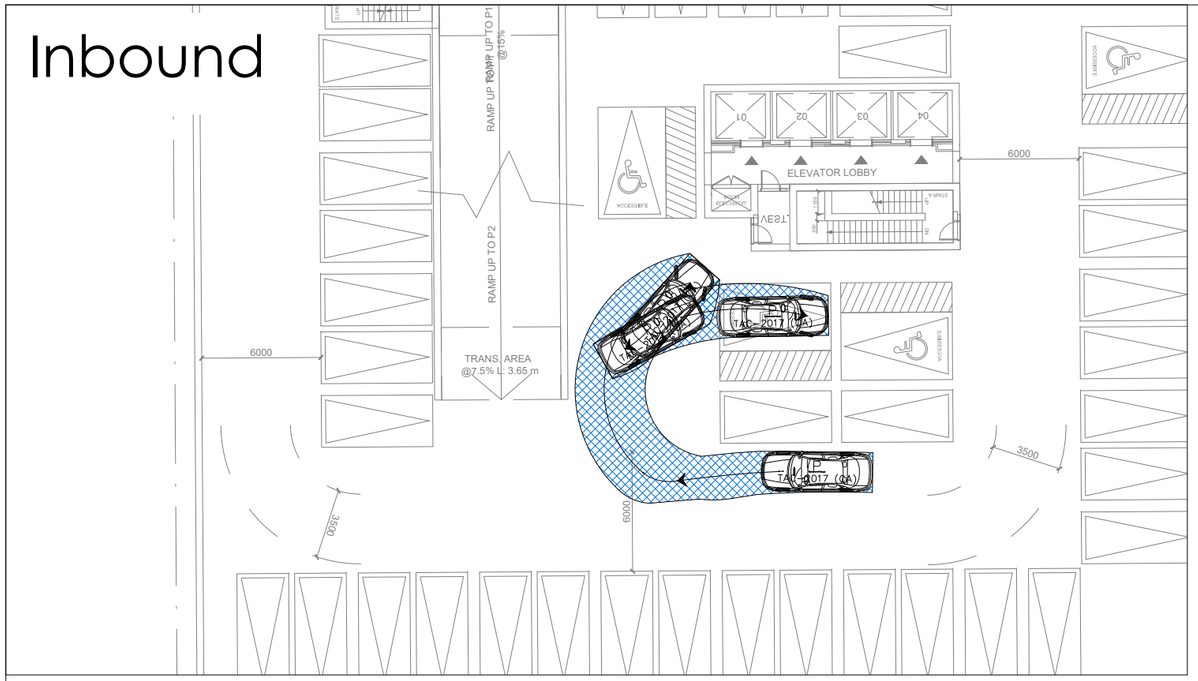

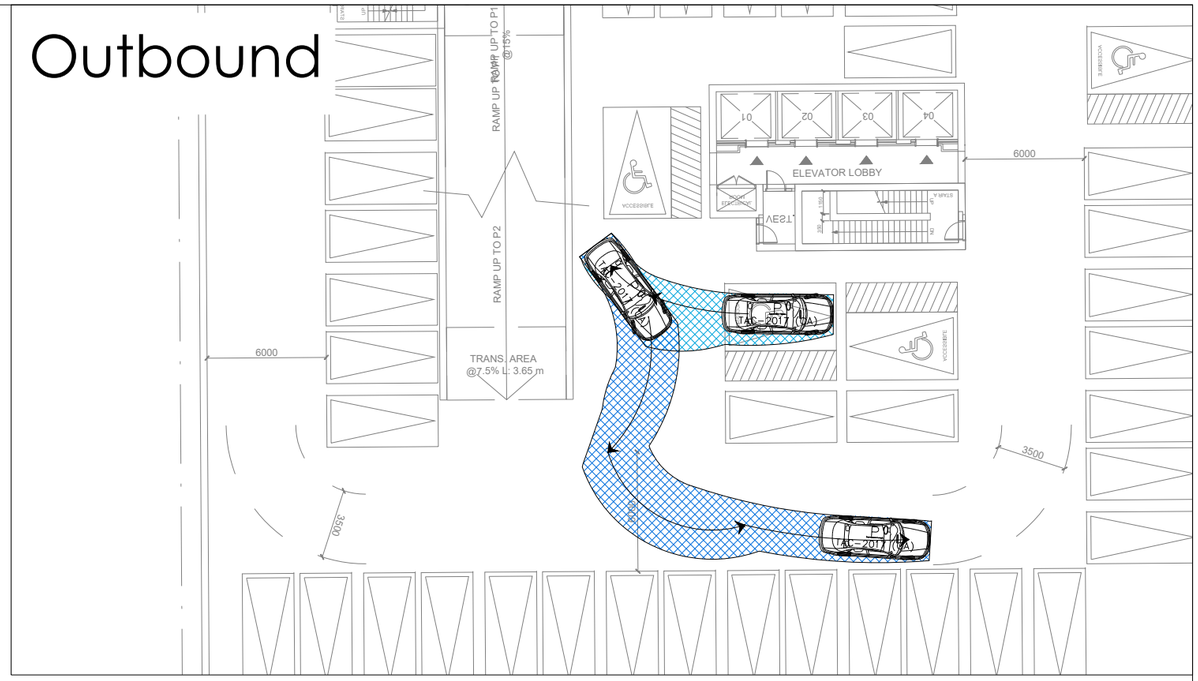

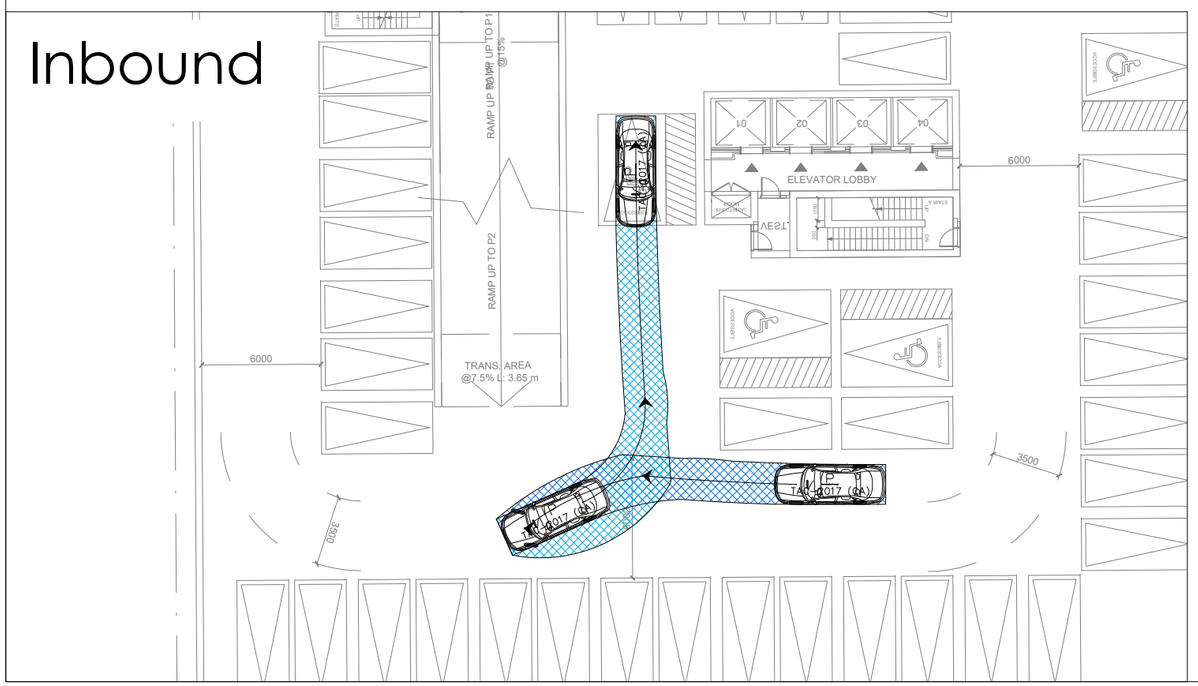

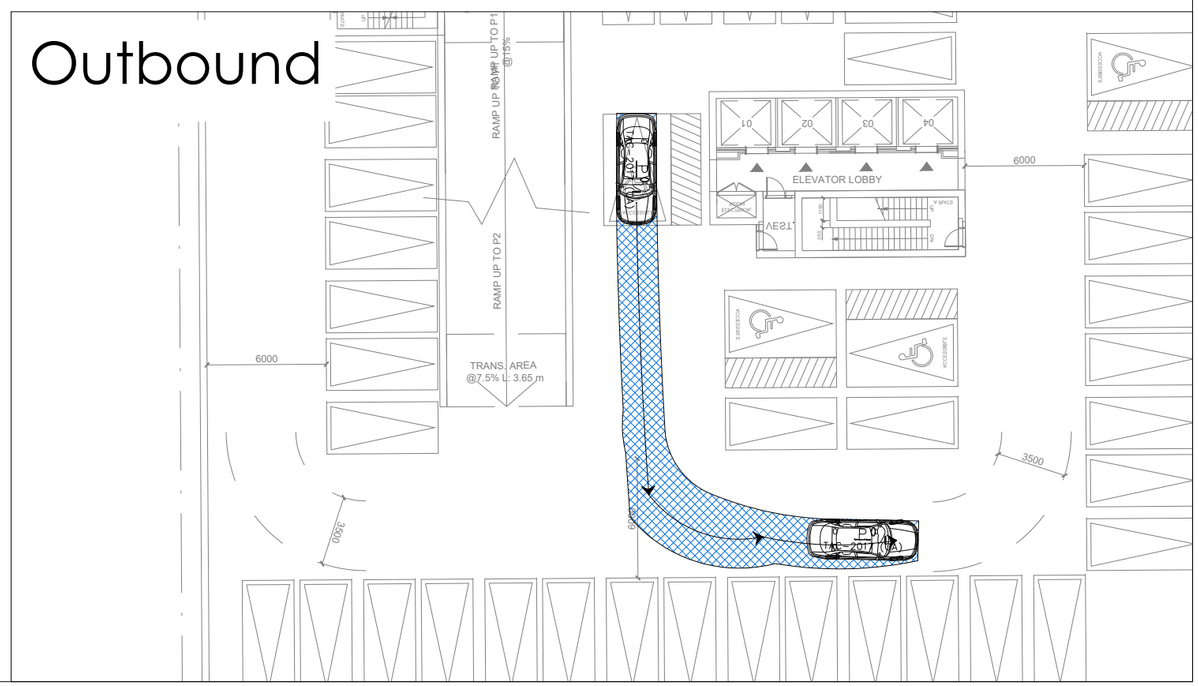

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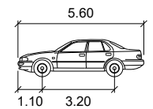
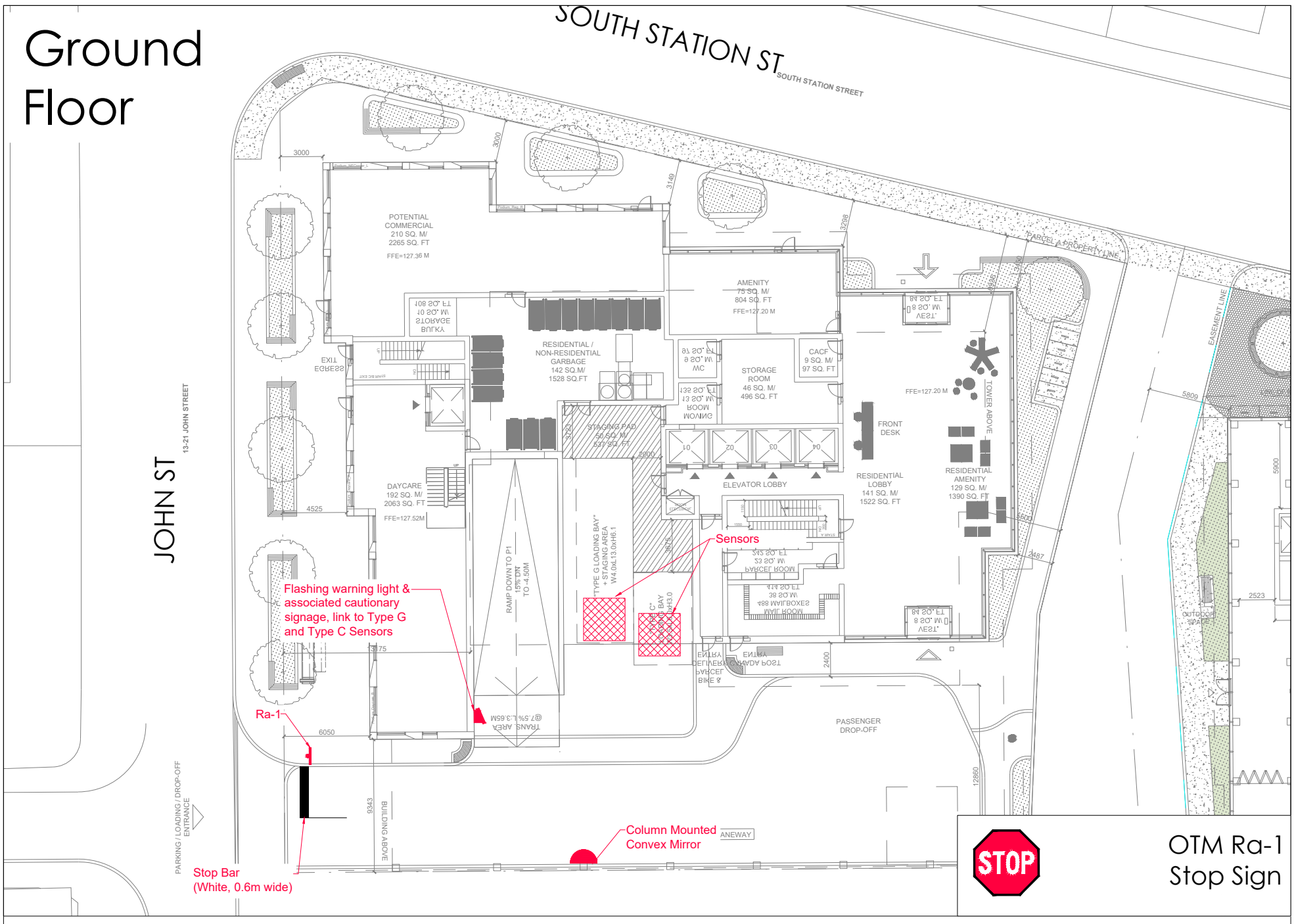
Figure 6-9
Critical Spaces Review, P2
21 John Street

P-TAC

		meters
Width	:	2.00
Track	:	2.00
Lock to Lock Time	:	6.0
Steering Angle	:	35.9

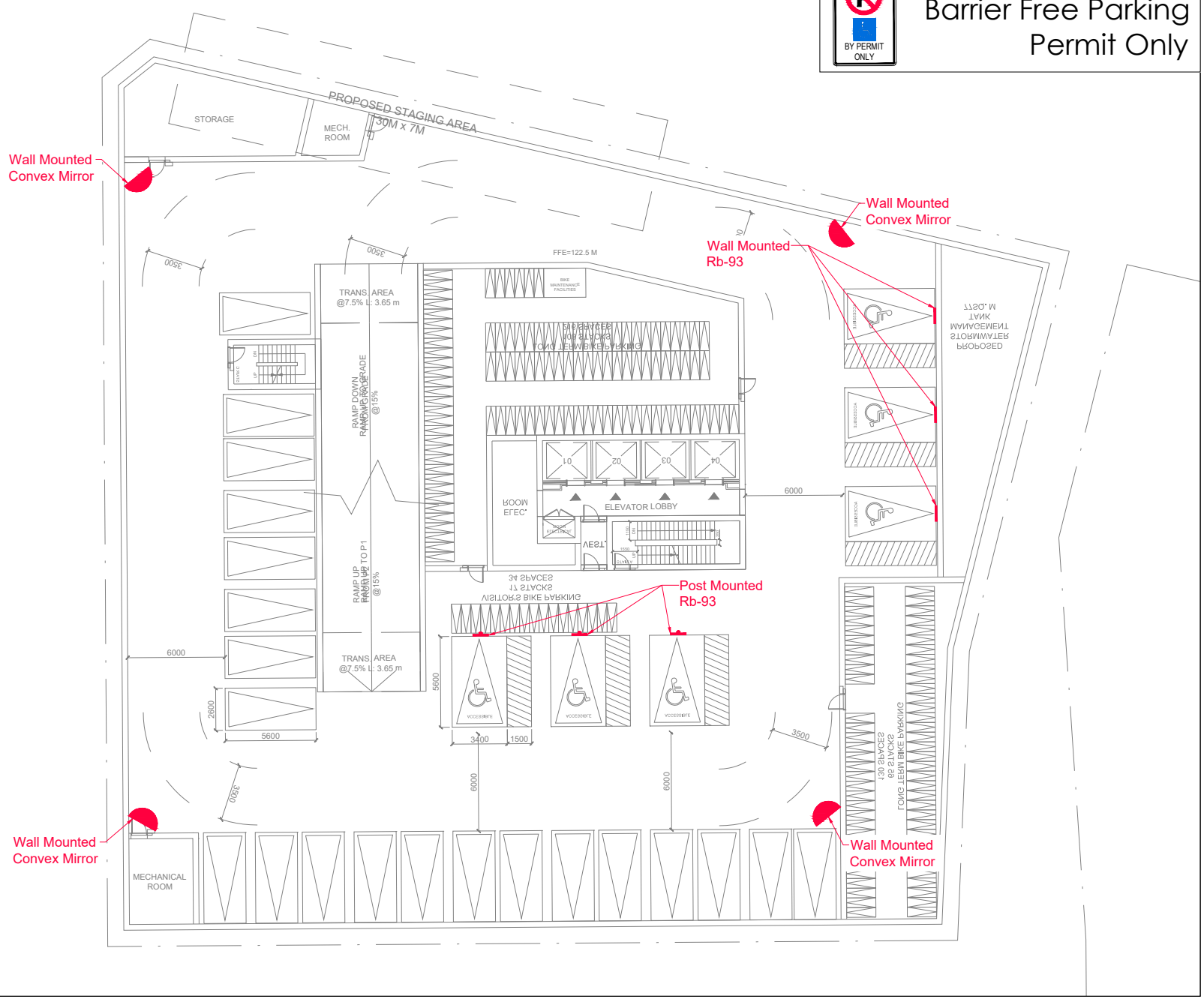


Ground Floor



OTM Ra-1
Stop Sign

P1



OTM Rb-93
Barrier Free Parking
Permit Only

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Source: 230411_SouthStation_Plans_3XN.dwg

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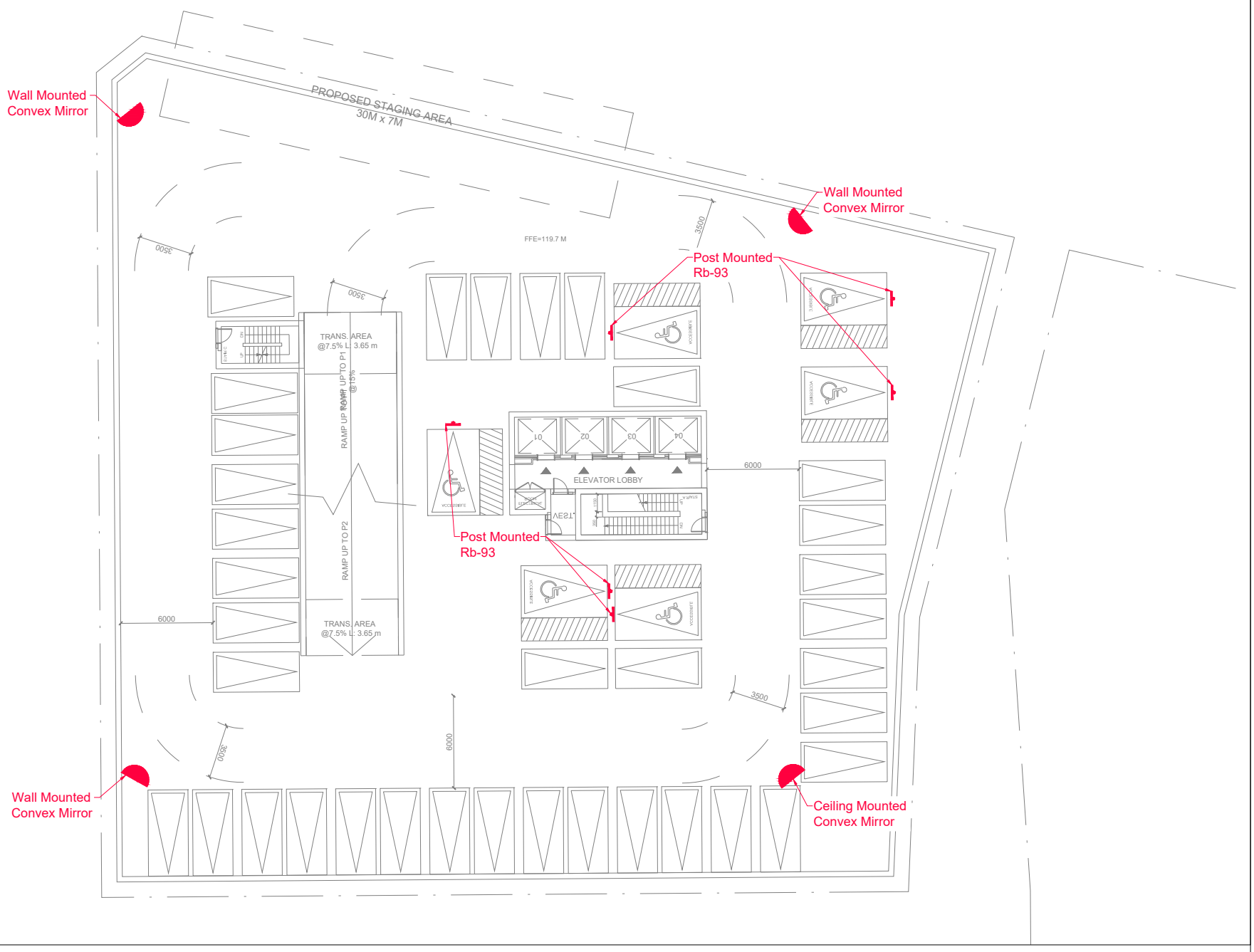
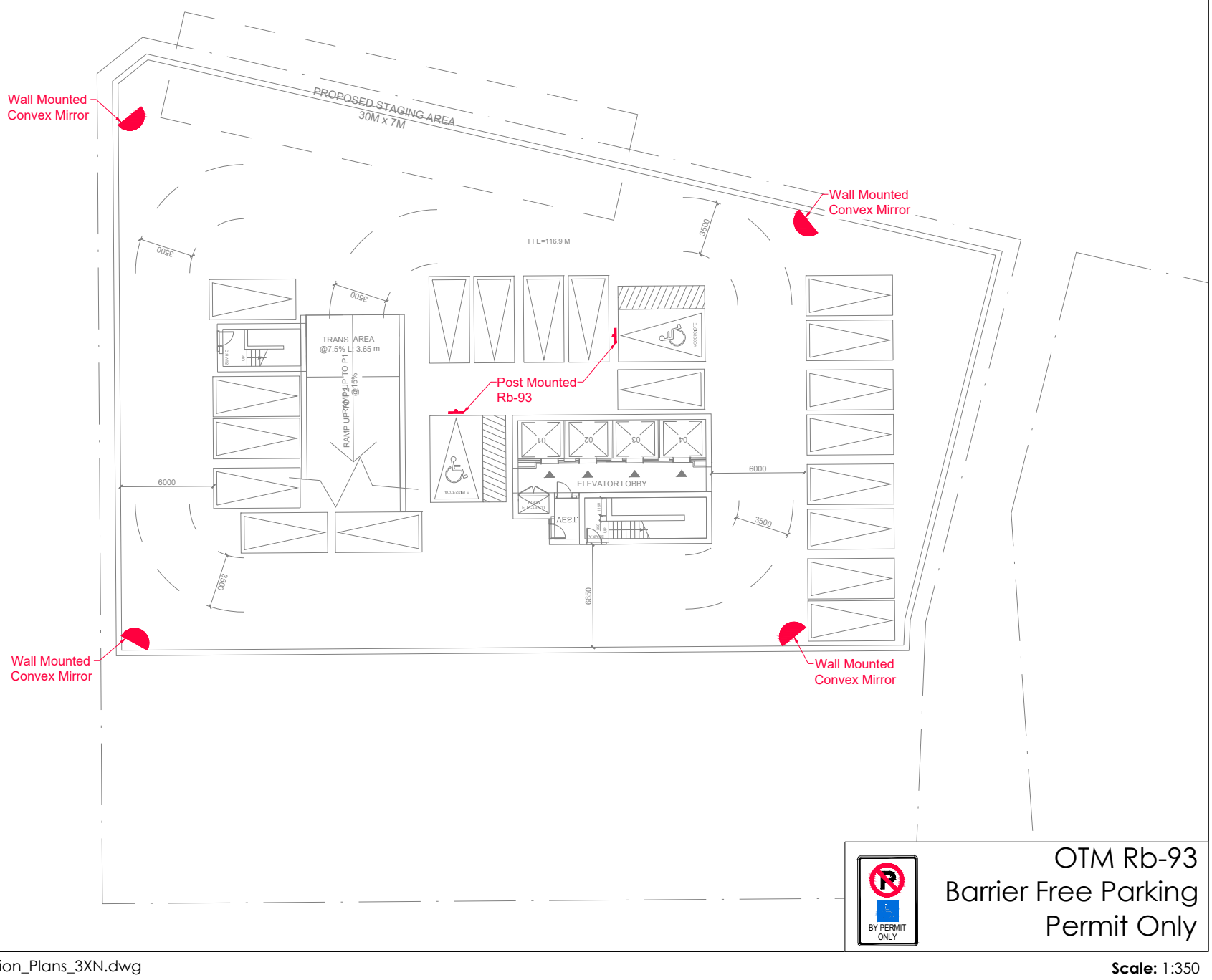
Figure 6-10
Pavement Markings and Signage, Ground Floor, P1
21 John Street

P2



P3



OTM Rb-93
Barrier Free Parking
Permit Only

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Source: 230411_SouthStation_Plans_3XN.dwg

Scale: 1:350

Figure 6-11
Pavement Markings and Signage, P2, P3
21 John Street

7 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a general concept that includes various strategies that increase transportation system efficiency by managing the demand for travel. TDM treats mobility as a means to an end, rather than an end in itself, and emphasizes the movement of people and goods rather than motor vehicles. Generally speaking, TDM initiatives discourage single-occupant vehicle travel and encourage more efficient modes such as walking, cycling, ridesharing, public transit and teleworking, particularly under congested conditions. TDM elements are an essential part of any progressive transportation and traffic plan for a proposed development.

The objective of the proposed TDM strategy is to inform, encourage and facilitate the utilization of non-automobile travel opportunities within the study area. In order to achieve this, it is recommended that the marketing strategy for the proposed development highlight key characteristics based on the below items via knowledgeable sales staff and visually attractive information packages to ensure that residents and tenants are well aware of the various opportunities and incentives available to them, so as maximize the success of these TDM strategies and minimize the need for automobile use.

The following TDM strategies are recommended to be considered to support the Toronto Green Standards (TGS) Version 4 target for reducing single-occupant vehicle (SOV) trips by at least 25 percent. As noted earlier in **Section 3.3.2**, the existing non-auto modal split already ranges from 29 percent to 38 percent for peak hour, peak direction travel. Moreover, the parking assessment in **Section 5** notes that the proposed residential auto parking is significantly lower than the Zoning By-law 569-2013 maximum permitted supply and would be an effective way to reduce site-generated auto traffic.

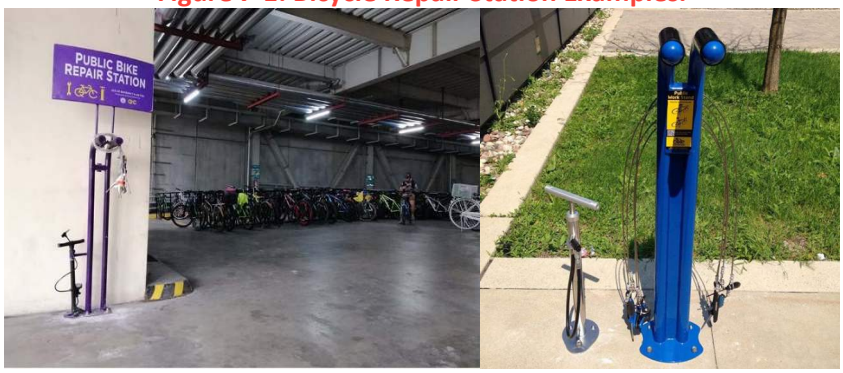
7.1 ACTIVE TRANSPORTATION

There are sidewalks along various roadways in the study road network, including the site accesses which provide convenient connections to the public streets abutting the subject site. This ensures that residents, employees and visitors alike have a suitable walking environment to the surrounding transit facilities and area amenities.

Residents, visitors and employees will have access to short-term and long-term bicycle parking on the subject site. Information about these bicycle parking spaces and nearby cycling infrastructure should be distributed to residents and tenants and displayed at prominent locations to maximize the utilization of these facilities and minimize the use of automobiles.

An on-site bicycle repair station (maintenance facility) is also recommended. Examples of bike repair stations are shown in **Figure 7-1**. The repair station will help residents, employees and visitors who are travelling by bicycle to conduct quick repairs or pump their bicycle tires. As mentioned in **Section 5.2**, the provision of an on-site bicycle repair station will satisfy the By-law requirement of a bicycle maintenance facility, which is proposed on the P1 level.

Figure 7-1: Bicycle Repair Station Examples.



7.2 BIKE-SHARE STATION

The provision of Bike Share stations strategically located at the subject site would help encourage cycling use for the site and general neighbourhood. The City has expressed interest in exploring the provision of bike share along with power supply on the subject site.

A Bike-Share station is proposed at the southwest corner of the site, next to the site driveway and behind a landscape planter.

7.3 REDUCED PARKING AND UNBUNDLING

Unbundling of parking from a residential unit is the practice whereby the cost of the unit is reduced if the prospective buyer chooses not to purchase a parking space. This would act as an incentive for owners who do not drive or own a car and prefer to carpool, take transit or use active transportation which would result in the reduction in the forecasted volumes of vehicular traffic generated by this development.

Parking spaces for the residential units could be available on demand. The residents that are car owners and require parking spaces will have to pay for this parking. Residents who want to take advantage of transit or active transportation facilities will then have the opportunity to save on the high cost of parking spaces and the associated maintenance fees.

This TDM measure can be advertised as part of the marketing strategy to ensure the tenants and prospective unit owners are those who want a non-auto-dependent lifestyle. This supports the **proposed reduced resident parking rate, which is at 0.13 spaces per unit, representing a reduction of 86 percent from the maximum By-law allowance**. This TDM measure when combined with the other measures will be more effective in achieving the target SOV trip reduction of 25 percent for the proposed development.

7.4 TRANSIT PASSES

Preloaded PRESTO cards (i.e., with a value of $50) could be provided to the first group of move-in residents as part of the move-in welcome package as an incentive to use public transit. This initiative provides residents with the opportunity to try the excellent transit services, such as the Weston GO station in proximity to the site, and to adopt a transit-dependent lifestyle. Additional incentives could be provided to units that choose not to buy a parking space. **This supports the growth of the transit mode split for**

the proposed development, which is currently 32 percent in the a.m. outbound direction and 25 percent in the p.m. inbound direction.

7.5 INFORMATION PACKAGES

To help facilitate non-auto trips, it is important to provide transportation information to new residents and employees so that they can view and understand their travel options before establishing new travel habits. This will increase the chance that they will incorporate these alternatives in their travel patterns.

The developer should provide information about transportation options to new residents and tenants in an information package that will include items such as:

- Existing transit services, including a TTC ride guide, a GO system map, route navigators for each area transit route (including GO bus and rail), and seven-day schedules for nearby stops for each of these routes.
- A map of the surrounding area with sidewalks and bicycle facilities, a copy of the City's cycling network map, and cycling and pedestrian safety tips.

The developer will be responsible for coordinating the information packages with information obtained from the City. The information package will be provided prior to the opening of the development, or at a joint information session with the City, possibly at the time when PRESTO Cards may be distributed. Costs associated with the preparation and distribution of the information package would be the responsibility of the developer.

7.6 TRANSPORTATION INTERACTIVE DISPLAYS

In the past, interactive displays were recommended to be provided within the lobby or in elevators of buildings to provide residents, employees and visitors with an array of information including transportation services in the area. These could include the expected arrival time for the next bus on each transit route by using real-time transit data.

However, given the widespread adoption of smartphones, it is expected that many residents and employees will use transit applications on their phones to obtain live information about bus transit arrival times. Therefore, an interactive display is not recommended as a required TDM measure. However, where possible, the developer should include the appropriate electronic connections within the common area (lobby or elevator) where such a display can be installed.

7.7 SUMMARY OF TDM MEASURES

The table below summarizes the list of TDM measures proposed and described earlier in this section.

Table 7-1: Proposed TDM Measures Summary

OBJECTIVE	ACTION / MEASURE	RESPONSIBILITY	TOTAL COST	NOTES
To encourage sustainable modes of travel	Provide bicycle parking on-site	Proponent	Included in construction costs	Long-term and short-term bicycle parking to comply with zoning requirements
	Provide an on-site bicycle repair station	Proponent	Included in construction costs	One for the building
	Provide an on-site Bike Share station	Proponent/Bike Share Toronto	$50,000 per station or $80,000 for e-bikes (subject to further discussion with Bike Share Toronto	Opportunity to provide on-site Bike Share station pending further discussion with Bike Share Toronto
To discourage vehicle ownership	Reduced parking supply ratio for uses on-site from maximum allowance	Proponent	Included in construction costs	Significantly lower parking supply compared to the maximum By-law auto parking allowance
	Unbundle sale of residential units from auto parking spaces	Proponent	--	Cycling and transit incentives can be advertised as part of marketing strategy
To encourage transit and active transportation	PRESTO card distribution	Proponent	$50 x 484 units = $24,200	$50 per unit provided to the first set of move-in residents/purchasers
	Information Session on Active Transportation and Transit when the building is at a meaningful occupancy (i.e. 85%)	Proponent in partnership with local transit agencies	$1,000 per information session	The session can be held at the site complex with handouts of information on non-auto transportation modes.
	Construction of on-site pedestrian infrastructure	Proponent	Included in construction costs	Public sidewalks are enhanced by pedestrian infrastructure and convenient connections on private property.

8 TORONTO GREEN STANDARD

The TGS Version 4 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, among other things, improve air quality, reduce the urban heat island effect, and achieve the City's greenhouse gas emission reduction targets. Tier 1 of the TGS is a mandatory requirement of the planning approval process, while Tier 2 and Tier 3 are a higher, voluntary standard.

Tier 1 of TGS requires developments to be designed to encourage low-emission transportation and encourage non-auto modes of transportation. The following Tier 1 Performance Measures are assessed in this report:

— AQ 1.1 – Single-Occupant Vehicle Trips
— AQ 2.1 – Bicycle Parking Rates
— AQ 2.6 – Publicly Accessible Bicycle Parking
— AQ 3.1 – Pedestrian Infrastructure Connectivity

8.1 SINGLE-OCCUPANT VEHICLE (SOV) TRIP REDUCTION

As per TGS AQ 1.1, a reduction of single-occupant vehicle trips **by 25 percent** through a variety of multi-modal infrastructure strategies and TDM measures is required for proposed mid to high-rise residential development.

In order to achieve this vehicle trip reduction for both peak periods, a variety of measures have been provided and reported, and this report will try to quantify the impact of each one, which is still a relatively new aspect in the industry.

As mentioned in **Section 4.1.2**, there will be multiple improvements to the transit network in the vicinity of the site, as well as new services that might have a smaller effect on trip choices. The introduction of counter-peak direction service at the Kitchener GO Line will open the possibility of rapid transit trips in directions that were previously unavailable, such as reaching the Brampton or Kitchener areas in the morning. Additionally, the improvement of service frequency to 15 minutes is also likely to incentivize transit usage, as there will be less need for well-planned trips and there will be more capacity to accommodate travellers.

It is also important to note that the subject site trip generation rates developed using ITE and TTS mode share data are very similar to the observed trip rates for the 1-3 Hickory Tree Road development. A key difference with this site is that the existing development is approximately 30 years old, which likely implies that a significant portion of the residents of the site are well-established and are more likely to use private vehicles for their trips, while newer development 22 John Street is much less car-focused. This comparison suggests that the 2016 TTS data is probably not reflective of the modal splits that can be achieved in newer multi-modal focused developments.

Additionally, WSP has completed a review to reasonably justify the potential reduction of SOV trip generation by the proposed various TDM measures, with sources including academic research papers and best practices implemented in other municipalities.

Table 8-1: Justification of Anticipated SOV Trip Reduction by Proposed TDM Measures

TDM MEASURE	DETAIL	INFLUENCE ON SOV TRIP GENERATION	ANTICIPATED SOV TRIP REDUCTION
Providing bicycle repair station on site	Providing a bicycle repair station in a designated and secure location with bicycle maintenance tools and supplies that could be used for emergency repair or maintenance. These tools and supplies include a bicycle tire pump, wrenches, chain tools, lubricants, hex keys, Allen wrenches, torx keys, screwdrivers, etc.	The **BA Group TDM Framework report**[1] prepared for CreateTO notes that where a bicycle repair station is provided in a secure bicycle parking room for the use of long-term users (residents or employees), a reduction of 0.5% can be realized.	0.5%
Providing Bike Share station on-site	The City has expressed interest in providing a bike-share station on-site. Accordingly, a bike-share station is proposed on site. The details are pending further discussions with Bike Share Toronto. Participating in City/TPA Bike Share program will greatly incentivize shared mobility and multi-modality, which are great contributors to SOV trip reduction.	According to the **Victoria Transport Policy Institute's Parking Management Report**[2], mobility management strategies including bicycle improvements and shared mobility options reduce parking and traffic demand by 10% to 30%. Hence, a conservative 10% reduction is applied.	10%
Reduced Residential Auto Parking Supply (relative to the By-law maximum allowance)	Per By-law 89-2022, the site is permitted to provide a maximum of 458 residential vehicular parking spaces. The recommended resident parking allocation of 64 spaces represents a reduction of 86% from the By-law maximum allowance. The recommended visitor parking allocation of 26 spaces does not exceed the minimum requirement.	It is important to note that this measure is not being relied on solely and is proposed in tandem with other TDM measures to direct residents, visitors and employees to other modes of transportation. The academic research papers from proxy studies in North America[3, 4] indicate there is a strong correlation between auto parking supply rate and auto trip generation. In more urban locations with transit readily available, the correlation has been shown to be almost a 1:1 relationship in terms of auto parking reduction and trip generation reduction. The **BA Group TDM Framework report**[1] notes that where the proposed auto parking reduction is at least 50% of the	9%

TDM MEASURE	DETAIL	INFLUENCE ON SOV TRIP GENERATION	ANTICIPATED SOV TRIP REDUCTION
		stipulated applicable zoning, there is an anticipated reduction in SOV of 6%. Referencing in conjunction with the above sources and given the reduction of auto parking rate is more than 50% of the stipulated zoning maximum allowance, a conservative SOV reduction of 9% has been applied. This is a very conservative approach. Based on WSP's review of TDM plans prepared by other consultants, a direct correlation has been made in terms of % auto parking reduction = % SOV reduction.	
Unbundling Parking from Unit Sales & Strategic Parking Pricing	Unbundled spaces will be sold separately from a unit sale at market rate. This allows residents who do not need a vehicular parking space to reduce costs and invest the savings in other modes of transportation. Parking pricing must be determined at the start of the sales program so that the price of the parking is reflective of the supply and the fact that there will be a cost to car ownership and driving to and from the site. This way, residents are aware of this aspect from the start. This measure is particularly effective when implemented with a reduced auto parking supply.	The **2017 TDM Policy Guide from the City of Buffalo**[5] indicates the % credit/estimated reduction each strategy will have on the estimated final vehicular travel demand. The City policy is based on a review of published literature, a survey of TDM policies and ordinances, and guidance from professional transportation experts. This well-established guide notes that unbundling parking from unit sales or rental results in a reduction of up to 10%. **The BA Group TDM Framework report**[1] notes that a reduction of 3% is to be expected from unbundling of the sales of auto parking spaces for all unit types. The BA Group TDM Framework report (Appendix I) also notes that research on parking pricing has found that generally the price elasticity of vehicle trips as it relates to parking pricing is typically 0.1 to 0.2, meaning a 10% increase in parking fees can reduce auto trips by 1 to 3%. Based on the combined application of unbundling and strategic pricing of the parking, a reduction of 5% in SOV trips can be expected.	5%
Providing PRESTO card transit incentive to	A pre-loaded PRESTO card with a value of $50 will be provided to the first set of move-in units.	$50 equates to approximately 15 rides – and with the PRESTO card, there is a 2-hour window for free unlimited travel/transfer. Based on the TTS query	1%

TDM MEASURE	DETAIL	INFLUENCE ON SOV TRIP GENERATION	ANTICIPATED SOV TRIP REDUCTION
the first set of move-in residents	This is a direct incentive for residents to try transit services and understand how transit can support their day-to-day needs.	of the study area, 25% to 32% of the peak directional trips during the weekday a.m. and p.m. peak hours are made via local transit. A conservative and reasonable assumption is a 5% increase in the transit mode share as a result of the transit incentive and availability of transit-related information on site. Therefore, the a.m. and p.m. peak hour transit mode splits would increase to 34% and 26%. This represents a net increase of approximately 1% in transit mode split. The **BA Group TDM Framework report**[1] notes that a 1% reduction is to be anticipated for providing a pre-loaded PRESTO card Accordingly, a reduction of 1% has been applied.	
Promotion and Outreach	Promotion and education material tailored to the TDM opportunities and incentives available at the development (i.e., bike repair station, bicycle parking location, schedule, route information for TTC routes). This information will be readily available and distributed to new residents. It is convenient for these to be emailed on a regular basis as part of regular condo newsletters or part of the welcome package.	The **2017 TDM Policy Guide from the City of Buffalo**[5] indicates the % credit/estimated reduction each strategy will have on the estimated final vehicular travel demand. This well-established guide notes that promotion and outreach have an influence of up to 2%. Based on the **BA Group TDM Framework report**[1], a reduction of 1% is anticipated for providing this TDM measure. Accordingly, a conservative reduction of 1% has been applied.	1%
		Total:	***26.5%***

1 "Housing Now Transportation Demand Management Framework – City of Toronto" by BA Group dated November 2021 prepared for Create TO.

2 https://www.vtpi.org/park_man.pdf

3 https://www.sciencedirect.com/science/article/pii/S0169204616302687

4 http://www.montgomeryplanning.org/transportation/documents/TripGenerationAnalysisUsingURBEMIS.pdf

5 https://www.buffalony.gov/DocumentCenter/View/5400/TDM-Policy-Guide---Adopted-2017-03-27

As outlined in **Table 8-1**, the proposed TDM measures can reasonably achieve over 25 percent of SOV trip reduction.

8.2 BICYCLE PARKING RATES

As per TGS AQ 2.1, bicycle parking spaces are to be provided in accordance with Zoning By-law 569-2013. **Section 5.2** of this report provides an evaluation of the proposed bicycle parking supply. The proposed bicycle parking supply of 380 spaces meets the By-law bicycle parking zoning requirements with some surplus for long-term spaces. Secure bicycle parking spaces for short-term and long-term uses will be provided at easily accessible locations on the P1 level.

As mentioned previously, the provision of a Bike Share station on-site is proposed, which will also give residents and non-residents a safe and efficient shared cycling option.

8.3 PEDESTRIAN INFRASTRUCTURE

As per TGS AQ 3.1, safe, direct, universally accessible pedestrian routes, including crosswalks and midblock crossings that connect the buildings on-site to the off-site pedestrian network and priority destinations shall be provided.

Section 2.3.2 outlines connections to the off-site pedestrian network (south side of John Street and west side of South Station Street), with safe crosswalks to connect to the opposite side of John Street and South Station Street, as well as the accessible pedestrian bridge on the north side of Lawrence Avenue West, which directly connects to the Weston GO Station, a major destination for residents and visitors of the proposed development. On-site pedestrian facilities provide a convenient connection from the building entrances to the surrounding sidewalks. There is also an on-site pedestrian connection from the building entrances to the on-site pick-up and drop-off facility.

9 CONCLUSIONS

The revised development proposal includes two parcels, A and B. Parcel A, the main component of the proposed development, consists of a 40-storey with 484 residential units, 210 m^2 (2,265 ft^2) of ancillary commercial/retail use, and a 433-m^2 (4,661 ft^2) daycare. Parcel B features a three-storey flex community space building with a total GFA of 1,382 m^2 (14,873 ft^2).

An assessment was undertaken of the transportation elements of this proposed development and the impacts on the transportation network and systems in the area. The findings and conclusions are summarized below:

- The development is expected to generate 90 and 122 new two-way- auto trips during the weekday a.m. and p.m. peak hours, respectively. Removal of existing site trips will partially offset this new trip generation.
- Under future total conditions, with the recommended signal timing adjustment applied (same as background conditions), all of the intersections within the study area are expected to operate at an acceptable LOS of 'D' or better with all movements operating within capacity. Future total traffic operations at the study intersections are very similar to those under future background conditions. As such, the proposed development is not expected to have an adverse impact on traffic conditions within the study area.
- Under future total conditions, all signalized 95th percentile queues are projected to be within their storage lengths except for the westbound left-turn queue at Weston Road and Lawrence Avenue during the p.m. peak hour (which exceeds available spacing by approximately one vehicle length). However, the associated 50th percentile queue can be accommodated within the available storage length. The 95th percentile queue length is reached only about five percent of the time; therefore, the impact of the queues would be limited as long as the 50th percentile (average) queue lengths are within the available storage length. The future total queuing results are very similar to the background conditions, indicating that the site is anticipated to have minimal queuing impact.
- The multi-modal assessments completed demonstrate that the site-generated walking and transit volumes can both be accommodated within the existing infrastructure.
- The development proposes a total of 87 parking spaces, with 26 spaces for visitors and 51 spaces for residents and and other non-residential uses if required by the tenant. The proposed parking supply satisfies the minimum Zoning By-law requirements and is within the maximum allowance.
- The proposed bicycle parking supply of 380 spaces, including 34 short-term spaces and 346 long-term spaces, satisfies the minimum Zoning By-law and TGS requirements.
- Site access and circulation review confirmed that the site plan can accommodate all anticipated auto and truck movements. Applicable design standards for driveway, parking, loading, and ramps are met. However, it is noted that the proposed driveway onto John Street is located immediately adjacent to an existing laneway serving properties on Weston Road.
- Recommended Transportation Demand Management measures for this site include:
  - Provide facilities that encourage bike usage, including bicycle parking, an on-site Bike Share station, and an on-site bicycle repair station.

- Discourage vehicle ownership; unbundle sales of residential units from auto parking spaces and provide reduced parking supply with respect to the maximum By-law allowance. It is also recommended that the applicant consider providing car-share services on-site.
- Encourage transit and active transportation in general; distribute pre-loaded PRESTO cards, organize an information session on active transportation and transit when the building is at a meaningful occupancy, and construct on-site pedestrian infrastructure.

- The development is expected to comply with Tier 1 of the TGS Version 4 requirements:
  - A variety of TDM measures have been recommended for the proposed development, which is estimated to achieve an SOV trip reduction of 26.5 percent.
  - The proposed bicycle parking supply satisfies the minimum Zoning By-law and TGS requirements. These bicycle parking stations will be secure and located at convenient locations on the first basement level.
  - The site will provide safe pedestrian infrastructure, which will connect building entrances to an on-site pick-up and drop-off space, as well as sidewalks on the boundary roadways which provide safe access to the Lawrence Avenue West pedestrian bridge to the Weston GO station.

APPENDIX

A TERMS OF REFERENCE

To:	Luigi Niccolucci	Date:	July 25, 2022
From:	Josie Li, and Binuji Liyanage, WSP	Job No.:	221-05407-00
Subject:	**Terms of Reference – 21 John Street TIS**	CC:	

WSP Canada is undertaking a Transportation Impact Study (TIS) supporting the Zoning By-law Amendment, Official Plan Amendment, and Site Plan Approval of a proposed residential development with ground floor retail located at 21 John Street and 36-40 South Station Street in the City of Toronto. This development will consist of approximately 461 residential units including 8 townhouses and 4,585 ft^2 of retail space.

The proposed work program of the TIS is outlined below for your review.

1. Traffic Data Collection and Review

We will obtain turning movement counts for vehicles and pedestrians during a typical weekday a.m. and p.m. peak hours (2 hours each) at all of the proposed study intersections and obtain the latest signal timing plans from the City of Toronto.

Based on the study location and magnitude of the proposed development, we have identified the following study intersections for the TIS:

a) Weston Road and Lawrence Avenue (signalized)
b) Lawrence Avenue and S. Station Street (unsignalized)
c) John Street and Pantelis Kalamaris Lane/access to 17 John Street (unsignalized)
d) Weston Road and John Street (signalized)
e) Future site access

2. Existing Traffic Analysis

- Analyze the existing conditions using the Synchro 11 Traffic Software with the input parameters specified in the City's Synchro Guidelines. The existing conditions will be modelled based on the existing road network and the established existing peak hour traffic volumes. This will be the baseline scenario which all subsequent scenarios will be compared with.

3. Future Background Traffic Analysis

- A **five-year horizon period of 2027** will be evaluated.
- No future improvements to the road network have been identified. WSP requests that the City please specify otherwise if there are to be any improvements to the network.
- Include the following background developments:
  - 1821-1831 Weston Road;
  - 1871 & 1885 Weston Road;
  - 1956 Weston Road; and

- 2062 Weston Road.

  WSP does not currently have access to the TIS for the development at 2062 Weston Road and requests that the City please provide it for reference.

- Through traffic growth will be determined based on a review of historical AADT. If specific growth rates should be applied, please specify.
- Develop the future background traffic volumes for the five-year horizon (2027) based on the existing traffic volumes, the background corridor growth, and anticipated future traffic related to other developments in the vicinity of the site.
- The future background traffic operations will be analyzed using Synchro 11 on the future road network on the basis of the forecast future background traffic volumes. This includes identifying whether improvements to the study area road network are required as a result of other background developments in the area.

4. Trip Generation and Assignment

- Generate weekday a.m. and p.m. peak hour site trips associated with the residential and retail portions of the proposed development will be estimated using the applicable rates provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).
- Transportation Tomorrow Survey (TTS) information will be assessed to determine the applicable non-auto traffic adjustments to be applied.
- Local trip generation data may be considered to refine the trip generation.
- The site-generated traffic volume will be assigned to the study road network based on the existing traffic patterns, site access arrangement, and trip distribution information from the TTS.
- Number of trips for each mode will be developed.

5. Future Total Traffic Analysis / Transportation Analysis

- Site-generated traffic volumes from Task 4 will be superimposed onto the future background traffic volumes forecasted in Task 3 to develop the future total traffic volumes.
- The study will assess the impact of the proposed development on the study road network. If necessary, improvements to facilitate the additional site-generated traffic would be recommended.

6. Transportation Demand Management (TDM) Plan

As a component of the Transportation Impact Study, we will prepare a Traffic Demand Management (TDM) Plan which will seek to reduce the use of single-occupant vehicles through alternate modes of transportation. These strategies will reflect the site's context.

Please provide your input on the above noted terms of reference at your earliest convenience. Thank you so much.

Yours Sincerely,

Josie Li, MCIP, RPP, PMP
Project Manager
Transportation Planning and Advisory Services, WSP

Binuji Liyanage
Transportation Planning Intern
Transportation Planning and Advisory Services, WSP

Dong, Xinwei

From: Li, Josie
Sent: March 27, 2023 3:25 PM
To: Dong, Xinwei
Cc: Yihia, Matan
Subject: FW: 21 John Street - TOR

From: Hibba Shahid <Hibba.Shahid@toronto.ca>
Sent: July 28, 2022 3:14 PM
To: Li, Josie <Josie.Li@wsp.com>; Liyanage, Binuji <Binuji.Liyanage@wsp.com>
Cc: Luigi Nicolucci <Luigi.Nicolucci@toronto.ca>; Alan Filipuzzi <Alan.Filipuzzi@toronto.ca>; Samuel Baptiste <Samuel.Baptiste@toronto.ca>; Farhad Razmyar <Farhad.Razmyar@toronto.ca>
Subject: RE: 21 John Street - TOR

Hello Josie and Binuji,

Thank you for submitting your Terms of Reference for our review. I have outlined some high level comments below:

Additional Future Background Traffic Analysis

- 1879 Weston Road
- 1865 Weston Road
- 1966 Weston Road
- 1974 Weston Road
- 1978 Weston Road
- 1980 Weston Road
- 1986 Weston Road

2062 Weston Road is to be excluded as a background development.
Transportation Planning agrees with the remaining proposed background developments.

Additional Intersections to Be Analysed

- John Street and S. Station Street (unsignalized)

Transportation Planning accepts the identified intersections. Transportation Services may provide additional comments regarding this matter.

Loading

- Shall meet Zoning By-law 569-2013 but is to be consolidated and minimized.

Multi-Modal Assessment

- A network of pedestrian connections to support pedestrian desire lines as connections to the surrounding public right of way network is to be established as part of your multi modal study.

Transportation Demand Management (TDM) Measures

- We request that TPA bike share stations be considered to be located on site to help facilitate expansion of the planned network and present opportunities for E-bike share stations to be easily connected to the electric grid on site.

Toronto Green Standards

- A section which discusses how the project complies with all transportation-related requirements of the "in-force" Toronto Green Standard (TGS), which is Version 4.0. More specifically, compliance with AQ1.1-AQ1.3, AQ2.1-AQ2.4, AQ3.1 and AQ3.2 of the TGS will be required.

Please ensure that your study also contains the following:

- A section which provides an estimate of the pick-up/drop-off activity that will be generated by the proposal using an acceptable methodology and how that activity will be accommodated on-site.

The above comments are preliminary and are based on information provided to date. We reserve the right to ask for additional requirements regarding the study once a formal application is received with all supporting materials.

Regards,

Hibba Shahid (she/her)
Assistant Planner, Transportation Planning
City Planning
Tel: 416-338-3629

From: Liyanage, Binuji [mailto:Binuji.Liyanage@wsp.com]
Sent: July 27, 2022 11:21 AM
To: Andrew Au <Andrew.Au@toronto.ca>; Luigi Nicolucci <Luigi.Nicolucci@toronto.ca>
Cc: Li, Josie <Josie.Li@wsp.com>
Subject: 21 John Street - TOR

Good Morning Andrew, Luigi,

WSP is working on a Transportation Study for the proposed mixed use development located at 21 John Street in the City of Toronto.

We have attached the Terms of Reference (TOR) for the City's review. Please provide your comments on our proposed study methodology and include my colleague Josie Li (Josie.Li@wsp.com) in any future correspondence (I've cc'd her in this email as well).

Please feel free to contact us if you have any questions or comments.
Your prompt response is greatly appreciated as we are working under an urgent timeline.

Thanks and Best Regards,

Binuji Liyanage
Transportation Planning Intern
Transportation | Planning and Advisory Services

T+1 289-982-4191

binuji.liyanage@wsp.com

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L3T 0A1 Canada

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APPENDIX

B TRAFFIC DATA

Horizon Data Services Ltd

Email: nhyree@gmail.com
Phone: (416) 840-6619 Fax: (416) 840-5297
"Your Traffic Count Specialist"

File Name : Weston Road at John Street
Site Code : 00000000
Start Date : 06/21/2022
Page No : 1

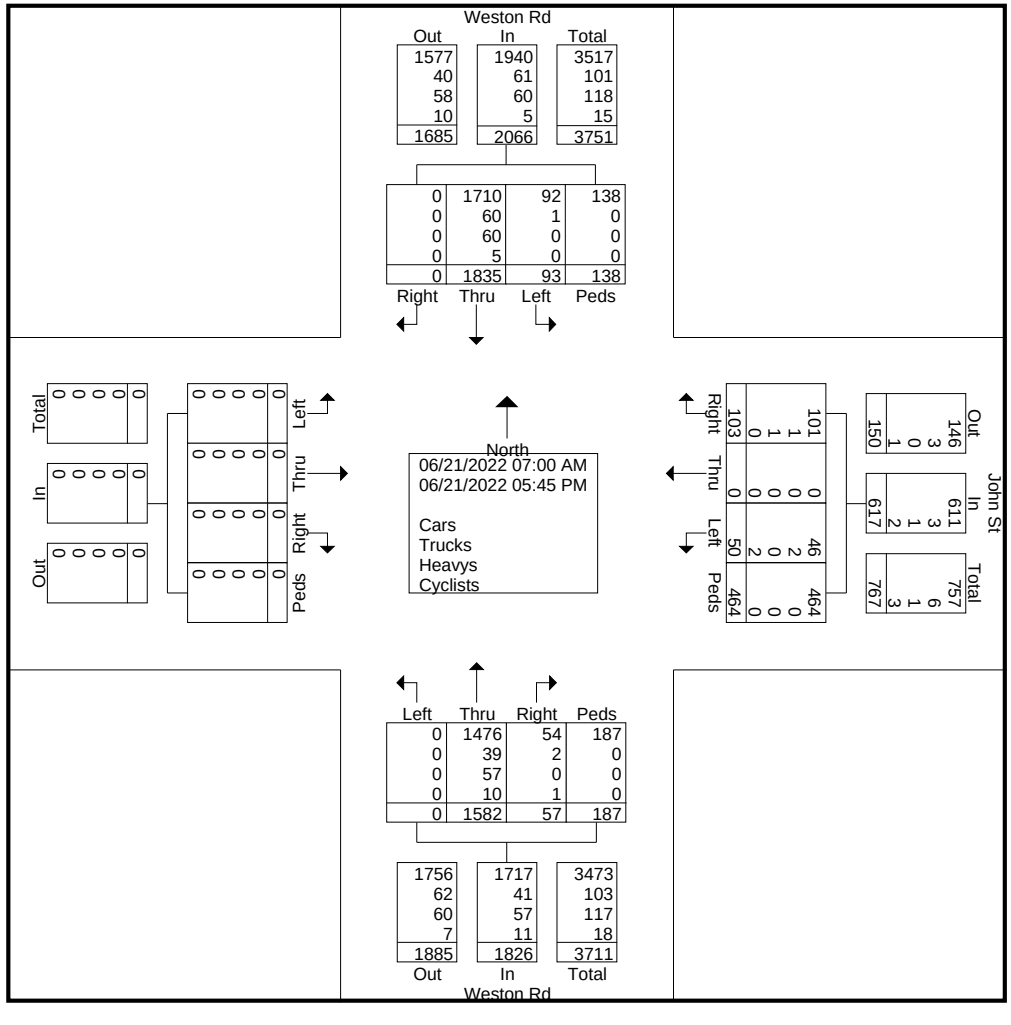
Groups Printed- Cars - Trucks - Heavys - Cyclists

	Weston Rd From North					John St From East					Weston Rd From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	77	1	0	78	5	0	2	4	11	2	61	0	4	67	0	0	0	0	0	156
07:15 AM	0	97	0	1	98	1	0	0	14	15	1	62	0	3	66	0	0	0	0	0	179
07:30 AM	0	106	1	1	108	6	0	1	17	24	0	83	0	6	89	0	0	0	0	0	221
07:45 AM	0	104	1	1	106	4	0	1	14	19	3	67	0	2	72	0	0	0	0	0	197
Total	0	384	3	3	390	16	0	4	49	69	6	273	0	15	294	0	0	0	0	0	753
08:00 AM	0	122	6	5	133	3	0	0	16	19	2	92	0	4	98	0	0	0	0	0	250
08:15 AM	0	129	3	1	133	2	0	3	25	30	4	71	0	7	82	0	0	0	0	0	245
08:30 AM	0	127	3	1	131	6	0	2	40	48	0	89	0	3	92	0	0	0	0	0	271
08:45 AM	0	93	3	5	101	7	0	2	59	68	3	95	0	7	105	0	0	0	0	0	274
Total	0	471	15	12	498	18	0	7	140	165	9	347	0	21	377	0	0	0	0	0	1040
04:00 PM	0	126	12	12	150	7	0	10	31	48	4	142	0	25	171	0	0	0	0	0	369
04:15 PM	0	112	6	21	139	8	0	5	36	49	6	126	0	11	143	0	0	0	0	0	331
04:30 PM	0	121	7	22	150	10	0	3	41	54	4	103	0	11	118	0	0	0	0	0	322
04:45 PM	0	120	8	9	137	14	0	6	34	54	10	114	0	20	144	0	0	0	0	0	335
Total	0	479	33	64	576	39	0	24	142	205	24	485	0	67	576	0	0	0	0	0	1357
05:00 PM	0	122	15	7	144	8	0	3	38	49	2	125	0	24	151	0	0	0	0	0	344
05:15 PM	0	137	8	18	163	10	0	2	31	43	3	121	0	17	141	0	0	0	0	0	347
05:30 PM	0	131	8	13	152	7	0	4	31	42	7	100	0	21	128	0	0	0	0	0	322
05:45 PM	0	111	11	21	143	5	0	6	33	44	6	131	0	22	159	0	0	0	0	0	346
Total	0	501	42	59	602	30	0	15	133	178	18	477	0	84	579	0	0	0	0	0	1359
Grand Total	0	1835	93	138	2066	103	0	50	464	617	57	1582	0	187	1826	0	0	0	0	0	4509
Apprch %	0	88.8	4.5	6.7		16.7	0	8.1	75.2		3.1	86.6	0	10.2		0	0	0	0		
Total %	0	40.7	2.1	3.1	45.8	2.3	0	1.1	10.3	13.7	1.3	35.1	0	4.1	40.5	0	0	0	0	0	
Cars	0	1710	92	138	1940	101	0	46	464	611	54	1476	0	187	1717	0	0	0	0	0	4268
% Cars	0	93.2	98.9	100	93.9	98.1	0	92	100	99	94.7	93.3	0	100	94	0	0	0	0	0	94.7
Trucks	0	60	1	0	61	1	0	2	0	3	2	39	0	0	41	0	0	0	0	0	105
% Trucks	0	3.3	1.1	0	3	1	0	4	0	0.5	3.5	2.5	0	0	2.2	0	0	0	0	0	2.3
Heavys	0	60	0	0	60	1	0	0	0	1	0	57	0	0	57	0	0	0	0	0	118
% Heavys	0	3.3	0	0	2.9	1	0	0	0	0.2	0	3.6	0	0	3.1	0	0	0	0	0	2.6
Cyclists	0	5	0	0	5	0	0	2	0	2	1	10	0	0	11	0	0	0	0	0	18
% Cyclists	0	0.3	0	0	0.2	0	0	4	0	0.3	1.8	0.6	0	0	0.6	0	0	0	0	0	0.4

Horizon Data Services Ltd

Email: nhyree@gmail.com
Phone: (416) 840-6619 Fax: (416) 840-5297
"Your Traffic Count Specialist"

File Name : Weston Road at John Street
Site Code : 00000000
Start Date : 06/21/2022



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	Weston Rd From North					John St From East					Weston Rd From South					From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	122	**6**	**5**	**133**	3	0	0	16	19	2	92	0	4	98	0	0	0	0	0	250
08:15 AM	0	**129**	3	1	133	2	0	**3**	25	30	**4**	71	0	**7**	82	0	0	0	0	0	245
08:30 AM	0	127	3	1	131	6	0	2	40	48	0	89	0	3	92	0	0	0	0	0	271
08:45 AM	0	93	3	5	101	**7**	0	2	**59**	**68**	3	**95**	0	7	**105**	0	0	0	0	0	**274**
Total Volume	0	471	15	12	498	18	0	7	140	165	9	347	0	21	377	0	0	0	0	0	1040
% App. Total	0	94.6	3	2.4		10.9	0	4.2	84.8		2.4	92	0	5.6		0	0	0	0		
PHF	.000	.913	.625	.600	.936	.643	.000	.583	.593	.607	.563	.913	.000	.750	.898	.000	.000	.000	.000	.000	.949
Cars	0	431	15	12	458	18	0	5	140	163	7	316	0	21	344	0	0	0	0	0	965
% Cars	0	91.5	100	100	92.0	100	0	71.4	100	98.8	77.8	91.1	0	100	91.2	0	0	0	0	0	92.8
Trucks	0	24	0	0	24	0	0	2	0	2	1	10	0	0	11	0	0	0	0	0	37
% Trucks	0	5.1	0	0	4.8	0	0	28.6	0	1.2	11.1	2.9	0	0	2.9	0	0	0	0	0	3.6
Heavys	0	16	0	0	16	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	33
% Heavys	0	3.4	0	0	3.2	0	0	0	0	0	0	4.9	0	0	4.5	0	0	0	0	0	3.2
Cyclists	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	5
% Cyclists	0	0	0	0	0	0	0	0	0	0	11.1	1.2	0	0	1.3	0	0	0	0	0	0.5

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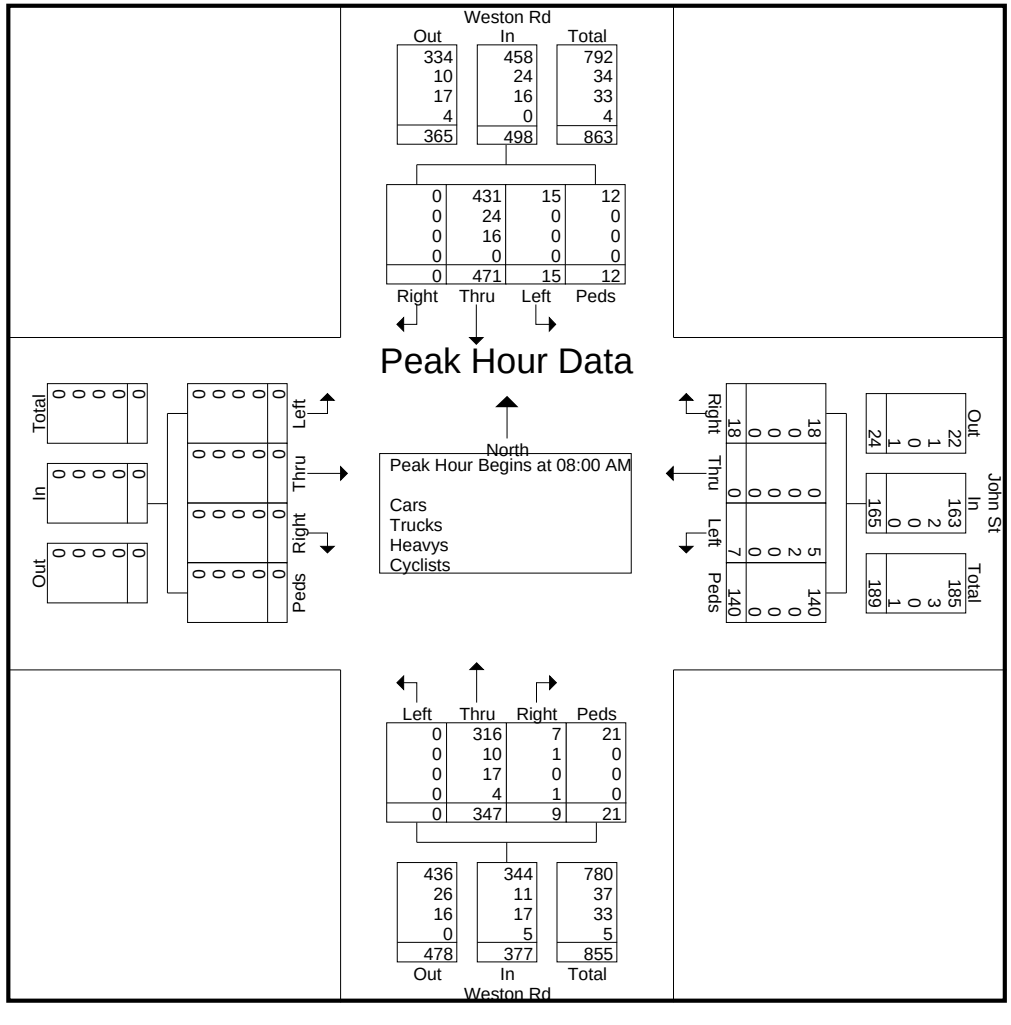
Page No : 4



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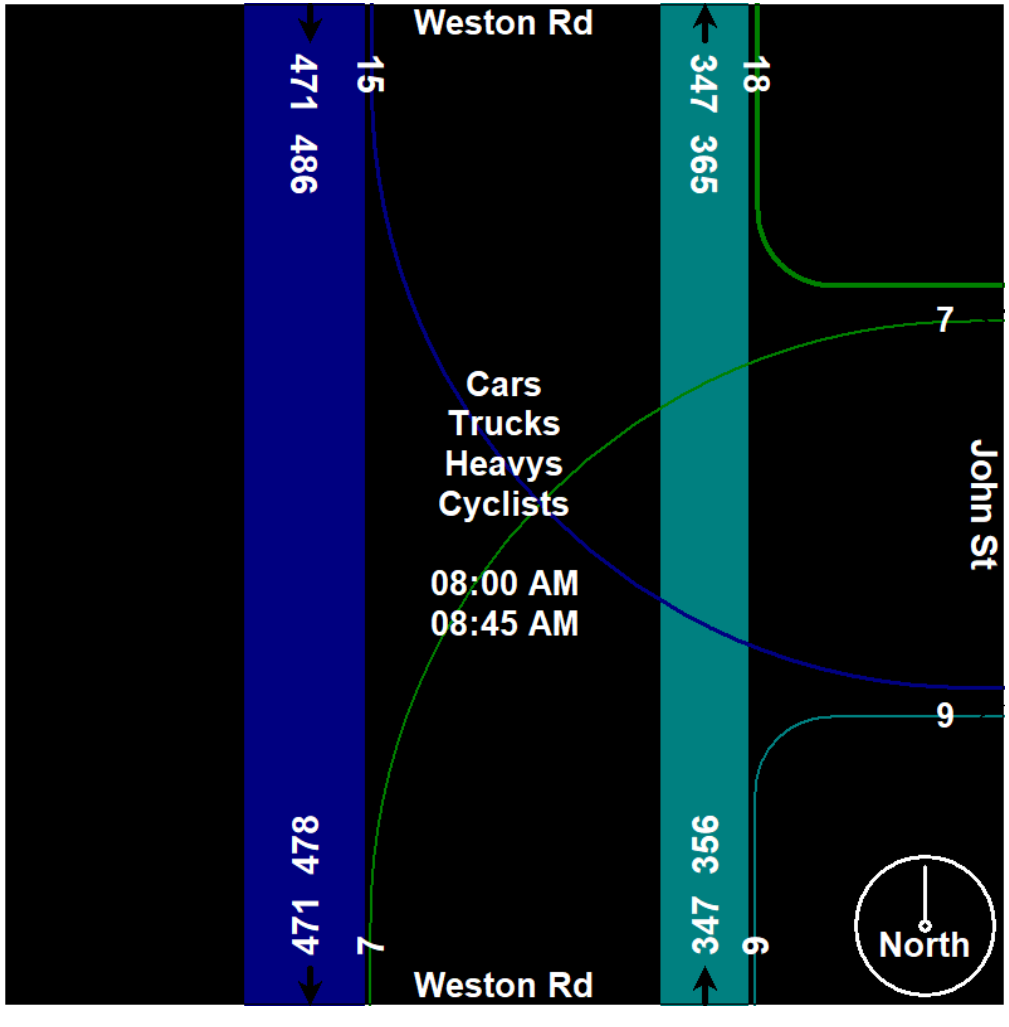

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Site Code : 00000000
Start Date : 06/21/2022

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Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	122	**15**	7	144	8	0	3	**38**	**49**	2	125	0	**24**	151	0	0	0	0	0	344
05:15 PM	0	**137**	8	18	**163**	**10**	0	2	31	43	3	121	0	17	141	0	0	0	0	0	**347**
05:30 PM	0	131	8	13	152	7	0	4	31	42	**7**	100	0	21	128	0	0	0	0	0	322
05:45 PM	0	111	11	**21**	143	5	0	**6**	33	44	6	**131**	0	22	**159**	0	0	0	0	0	346
Total Volume	0	501	42	59	602	30	0	15	133	178	18	477	0	84	579	0	0	0	0	0	1359
% App. Total	0	83.2	7	9.8		16.9	0	8.4	74.7		3.1	82.4	0	14.5		0	0	0	0		
PHF	.000	.914	.700	.702	.923	.750	.000	.625	.875	.908	.643	.910	.000	.875	.910	.000	.000	.000	.000	.000	.979
Cars	0	482	41	59	582	30	0	15	133	178	18	459	0	84	561	0	0	0	0	0	1321
% Cars	0	96.2	97.6	100	96.7	100	0	100	100	100	100	96.2	0	100	96.9	0	0	0	0	0	97.2
Trucks	0	5	1	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
% Trucks	0	1.0	2.4	0	1.0	0	0	0	0	0	0	1.5	0	0	1.2	0	0	0	0	0	1.0
Heavys	0	12	0	0	12	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	23
% Heavys	0	2.4	0	0	2.0	0	0	0	0	0	0	2.3	0	0	1.9	0	0	0	0	0	1.7
Cyclists	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Cyclists	0	0.4	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

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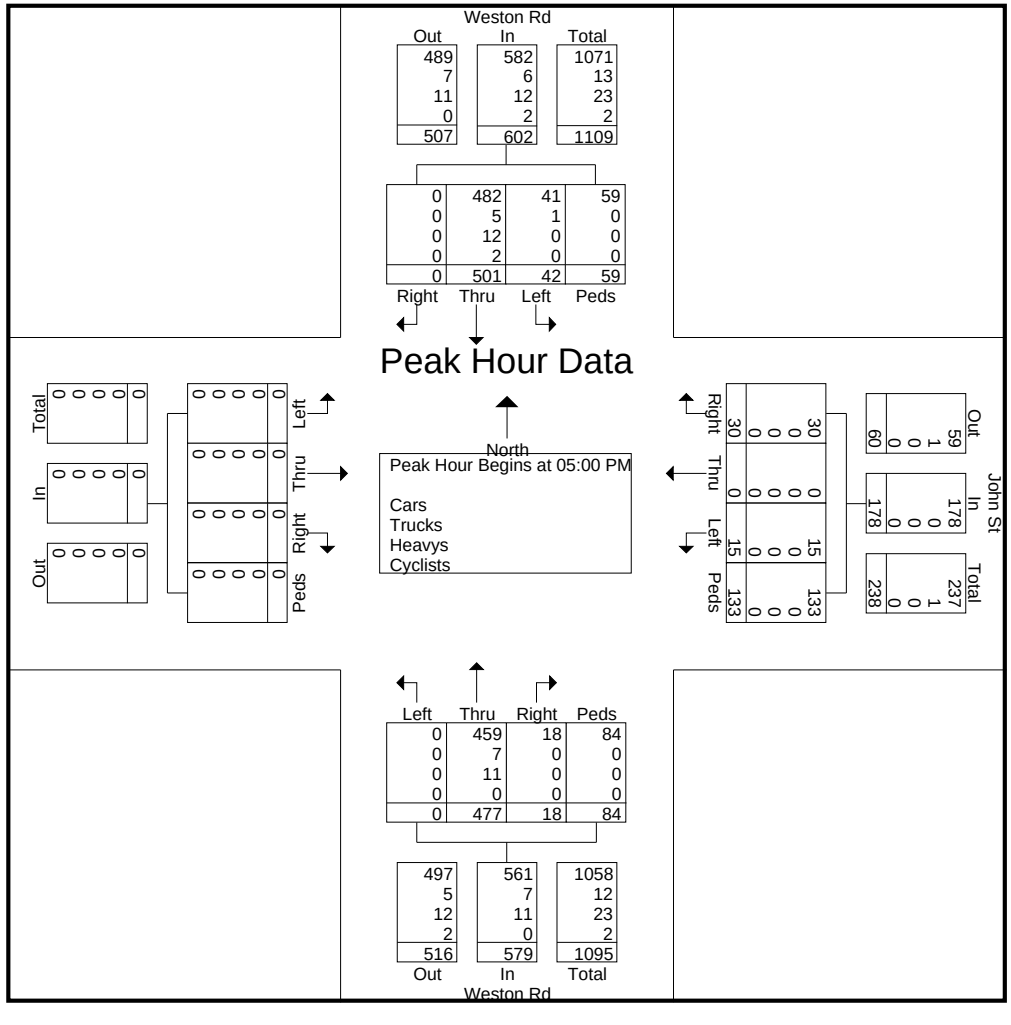
Site Code : 00000000
Start Date : 06/21/2022
Page No : 7



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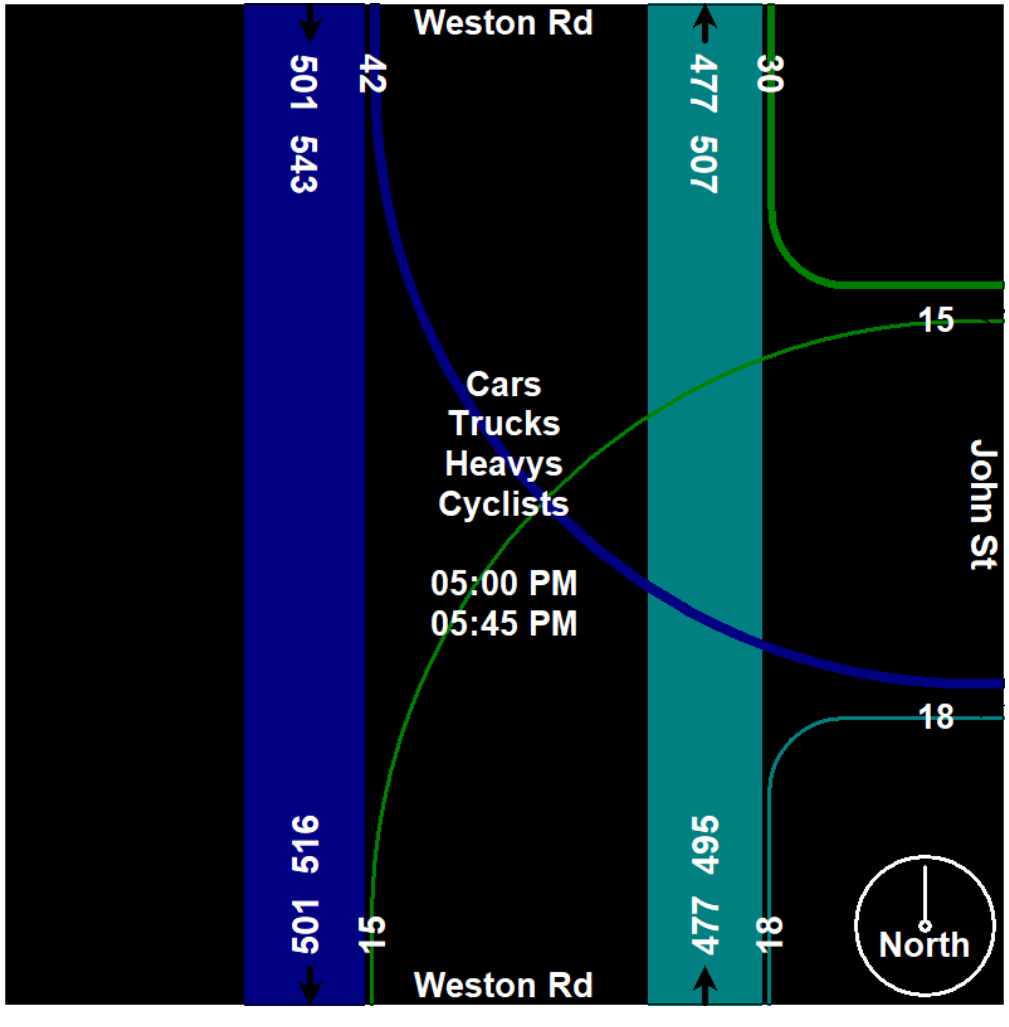
Page No : 8



Horizon Data Services Ltd

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"Your Traffic Count Specialist"

File Name : Lawrence Avenue at Weston Road
Site Code : 00000000
Start Date : 06/21/2022
Page No : 1

Groups Printed- Cars - Trucks - Heavys - Cyclists

	Weston Rd From North					Lawrence Ave From East					Weston Rd From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	4	73	8	24	109	11	65	7	6	89	16	50	16	8	90	21	122	2	28	173	461
07:15 AM	4	70	16	13	103	4	91	12	12	119	21	75	17	10	123	23	137	2	21	183	528
07:30 AM	3	92	14	16	125	11	98	16	10	135	14	69	21	13	117	29	168	2	24	223	600
07:45 AM	8	90	8	13	119	4	97	11	15	127	8	64	20	10	102	41	205	0	19	265	613
Total	19	325	46	66	456	30	351	46	43	470	59	258	74	41	432	114	632	6	92	844	2202
08:00 AM	4	100	14	12	130	5	123	16	11	155	13	90	15	18	136	36	207	0	38	281	702
08:15 AM	10	118	15	16	159	9	119	22	16	166	22	69	21	25	137	50	157	2	53	262	724
08:30 AM	5	110	8	26	149	20	127	6	41	194	22	66	23	11	122	38	193	1	49	281	746
08:45 AM	5	73	8	30	116	19	149	18	32	218	14	73	10	7	104	48	152	1	54	255	693
Total	24	401	45	84	554	53	518	62	100	733	71	298	69	61	499	172	709	4	194	1079	2865
04:00 PM	12	85	23	29	149	19	152	23	31	225	22	122	14	27	185	26	161	0	50	237	796
04:15 PM	18	85	13	23	139	17	138	17	25	197	29	113	17	23	182	34	157	0	54	245	763
04:30 PM	11	105	15	21	152	12	152	26	26	216	21	107	18	30	176	34	145	0	45	224	768
04:45 PM	9	91	21	19	140	15	141	26	19	201	21	98	20	11	150	30	196	0	46	272	763
Total	50	366	72	92	580	63	583	92	101	839	93	440	69	91	693	124	659	0	195	978	3090
05:00 PM	13	90	13	24	140	22	151	19	30	222	26	95	21	26	168	30	181	2	49	262	792
05:15 PM	4	123	19	23	169	13	155	26	35	229	23	110	29	28	190	30	186	0	50	266	854
05:30 PM	8	100	14	18	140	19	117	20	29	185	29	102	23	18	172	39	188	0	43	270	767
05:45 PM	5	96	18	20	139	26	162	24	29	241	19	104	27	16	166	35	184	1	48	268	814
Total	30	409	64	85	588	80	585	89	123	877	97	411	100	88	696	134	739	3	190	1066	3227
Grand Total	123	1501	227	327	2178	226	2037	289	367	2919	320	1407	312	281	2320	544	2739	13	671	3967	11384
Apprch %	5.6	68.9	10.4	15		7.7	69.8	9.9	12.6		13.8	60.6	13.4	12.1		13.7	69	0.3	16.9		
Total %	1.1	13.2	2	2.9	19.1	2	17.9	2.5	3.2	25.6	2.8	12.4	2.7	2.5	20.4	4.8	24.1	0.1	5.9	34.8	
Cars	120	1391	215	327	2053	219	1873	279	367	2738	310	1306	299	281	2196	511	2552	11	671	3745	10732
% Cars	97.6	92.7	94.7	100	94.3	96.9	91.9	96.5	100	93.8	96.9	92.8	95.8	100	94.7	93.9	93.2	84.6	100	94.4	94.3
Trucks	3	48	11	0	62	7	41	10	0	58	9	30	8	0	47	26	54	1	0	81	248
% Trucks	2.4	3.2	4.8	0	2.8	3.1	2	3.5	0	2	2.8	2.1	2.6	0	2	4.8	2	7.7	0	2	2.2
Heavys	0	59	1	0	60	0	121	0	0	121	1	58	3	0	62	7	133	0	0	140	383
% Heavys	0	3.9	0.4	0	2.8	0	5.9	0	0	4.1	0.3	4.1	1	0	2.7	1.3	4.9	0	0	3.5	3.4
Cyclists	0	3	0	0	3	0	2	0	0	2	0	13	2	0	15	0	0	1	0	1	21
% Cyclists	0	0.2	0	0	0.1	0	0.1	0	0	0.1	0	0.9	0.6	0	0.6	0	0	7.7	0	0	0.2

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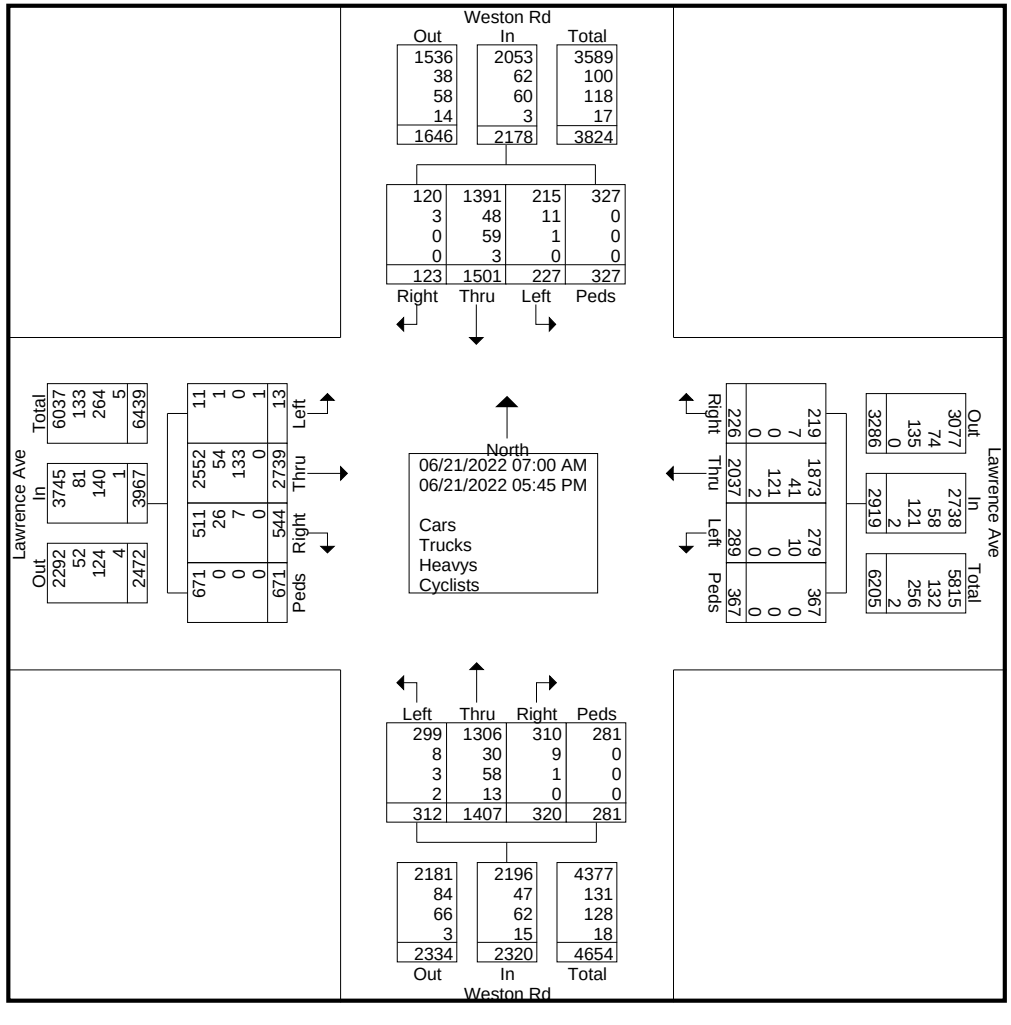
Start Date : 06/21/2022



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	Weston Rd From North					Lawrence Ave From East					Weston Rd From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	100	14	12	130	5	123	16	11	155	13	**90**	15	18	136	36	**207**	0	38	**281**	702
08:15 AM	**10**	**118**	**15**	16	**159**	9	119	**22**	16	166	**22**	69	21	**25**	**137**	**50**	157	**2**	53	262	724
08:30 AM	5	110	8	26	149	**20**	127	6	**41**	194	22	66	**23**	11	122	38	193	1	49	281	**746**
08:45 AM	5	73	8	**30**	116	19	**149**	18	32	**218**	14	73	10	7	104	48	152	1	**54**	255	693
Total Volume	24	401	45	84	554	53	518	62	100	733	71	298	69	61	499	172	709	4	194	1079	2865
% App. Total	4.3	72.4	8.1	15.2		7.2	70.7	8.5	13.6		14.2	59.7	13.8	12.2		15.9	65.7	0.4	18		
PHF	.600	.850	.750	.700	.871	.663	.869	.705	.610	.841	.807	.828	.750	.610	.911	.860	.856	.500	.898	.960	.960
Cars	23	366	41	84	514	49	467	58	100	674	66	269	63	61	459	156	644	4	194	998	2645
% Cars	95.8	91.3	91.1	100	92.8	92.5	90.2	93.5	100	92.0	93.0	90.3	91.3	100	92.0	90.7	90.8	100	100	92.5	92.3
Trucks	1	21	4	0	26	4	16	4	0	24	5	7	4	0	16	14	26	0	0	40	106
% Trucks	4.2	5.2	8.9	0	4.7	7.5	3.1	6.5	0	3.3	7.0	2.3	5.8	0	3.2	8.1	3.7	0	0	3.7	3.7
Heavys	0	14	0	0	14	0	34	0	0	34	0	17	1	0	18	2	39	0	0	41	107
% Heavys	0	3.5	0	0	2.5	0	6.6	0	0	4.6	0	5.7	1.4	0	3.6	1.2	5.5	0	0	3.8	3.7
Cyclists	0	0	0	0	0	0	1	0	0	1	0	5	1	0	6	0	0	0	0	0	7
% Cyclists	0	0	0	0	0	0	0.2	0	0	0.1	0	1.7	1.4	0	1.2	0	0	0	0	0	0.2

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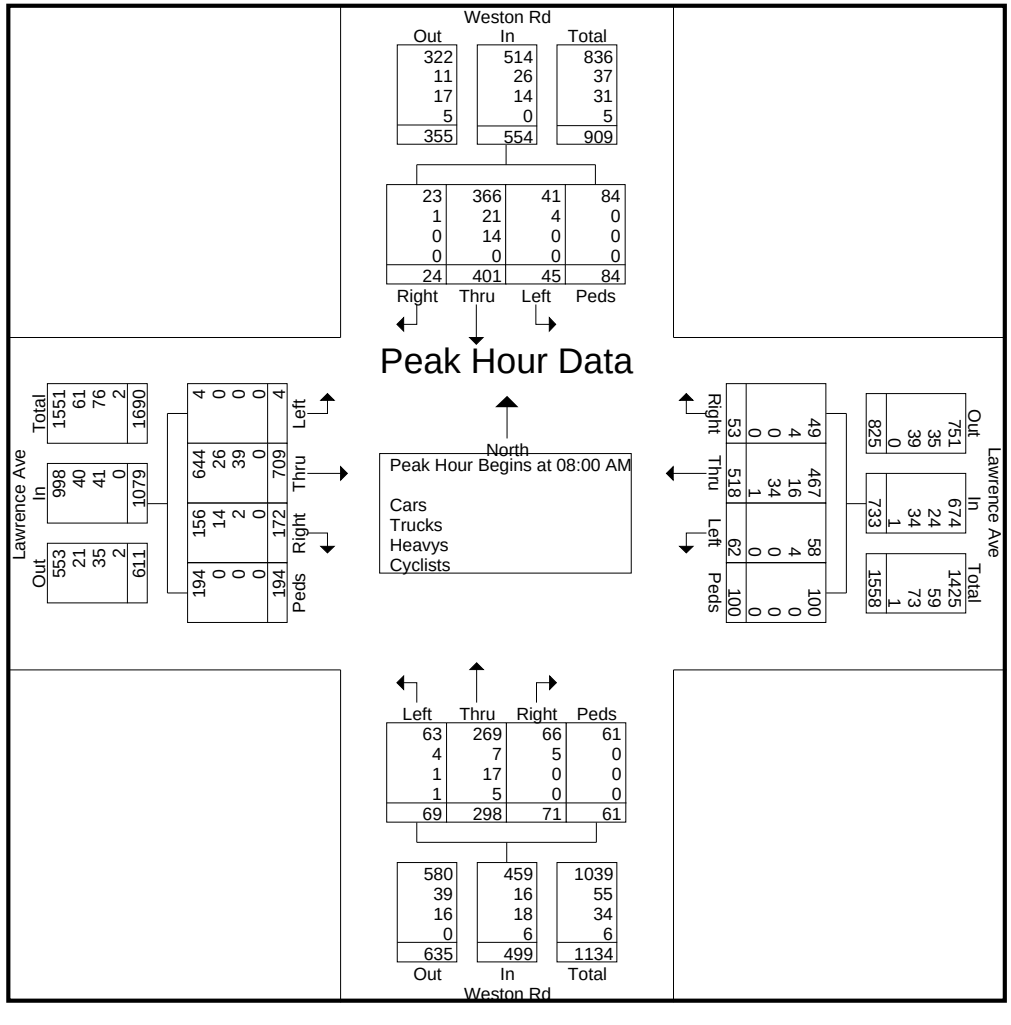
Start Date : 06/21/2022
Page No : 4



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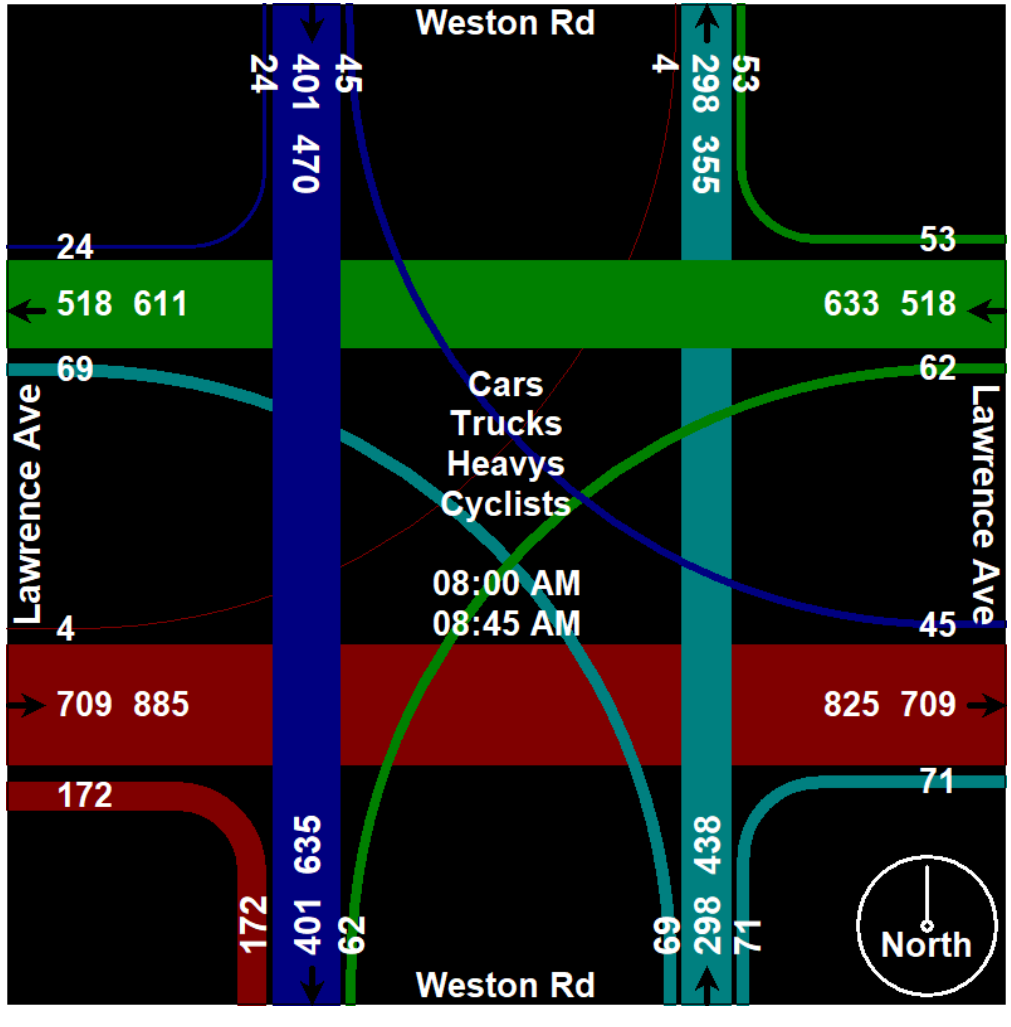

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	Weston Rd From North					Lawrence Ave From East					Weston Rd From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**13**	90	13	**24**	140	22	151	19	30	222	26	95	21	26	168	30	181	**2**	49	262	792
05:15 PM	4	**123**	**19**	23	**169**	13	155	**26**	**35**	229	23	**110**	**29**	**28**	**190**	30	186	0	**50**	266	**854**
05:30 PM	8	100	14	18	140	19	117	20	29	185	**29**	102	23	18	172	**39**	**188**	0	43	**270**	767
05:45 PM	5	96	18	20	139	**26**	**162**	24	29	**241**	19	104	27	16	166	35	184	1	48	268	814
Total Volume	30	409	64	85	588	80	585	89	123	877	97	411	100	88	696	134	739	3	190	1066	3227
% App. Total	5.1	69.6	10.9	14.5		9.1	66.7	10.1	14		13.9	59.1	14.4	12.6		12.6	69.3	0.3	17.8		
PHF	.577	.831	.842	.885	.870	.769	.903	.856	.879	.910	.836	.934	.862	.786	.916	.859	.983	.375	.950	.987	.945
Cars	30	390	64	85	569	80	551	86	123	840	96	393	98	88	675	132	702	3	190	1027	3111
% Cars	100	95.4	100	100	96.8	100	94.2	96.6	100	95.8	99.0	95.6	98.0	100	97.0	98.5	95.0	100	100	96.3	96.4
Trucks	0	6	0	0	6	0	7	3	0	10	1	6	1	0	8	0	8	0	0	8	32
% Trucks	0	1.5	0	0	1.0	0	1.2	3.4	0	1.1	1.0	1.5	1.0	0	1.1	0	1.1	0	0	0.8	1.0
Heavys	0	13	0	0	13	0	27	0	0	27	0	12	1	0	13	2	29	0	0	31	84
% Heavys	0	3.2	0	0	2.2	0	4.6	0	0	3.1	0	2.9	1.0	0	1.9	1.5	3.9	0	0	2.9	2.6
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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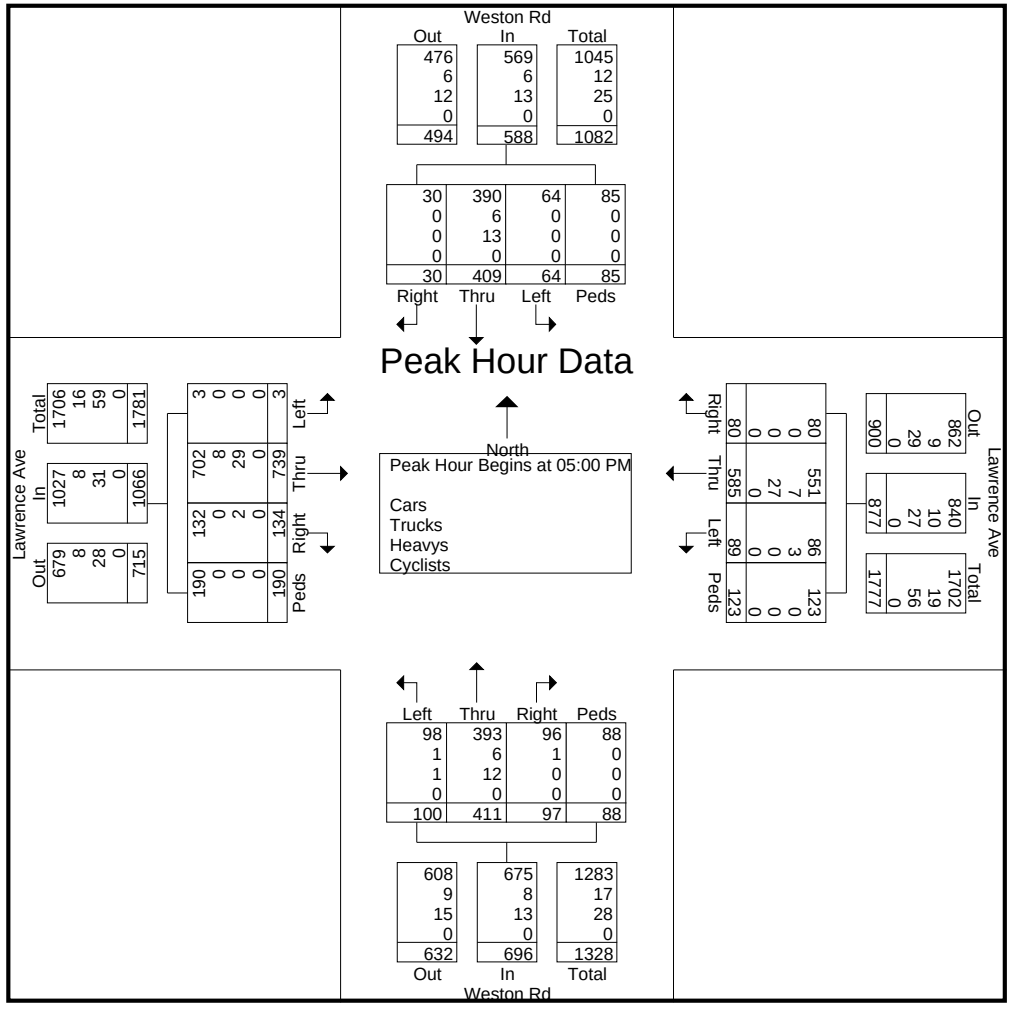

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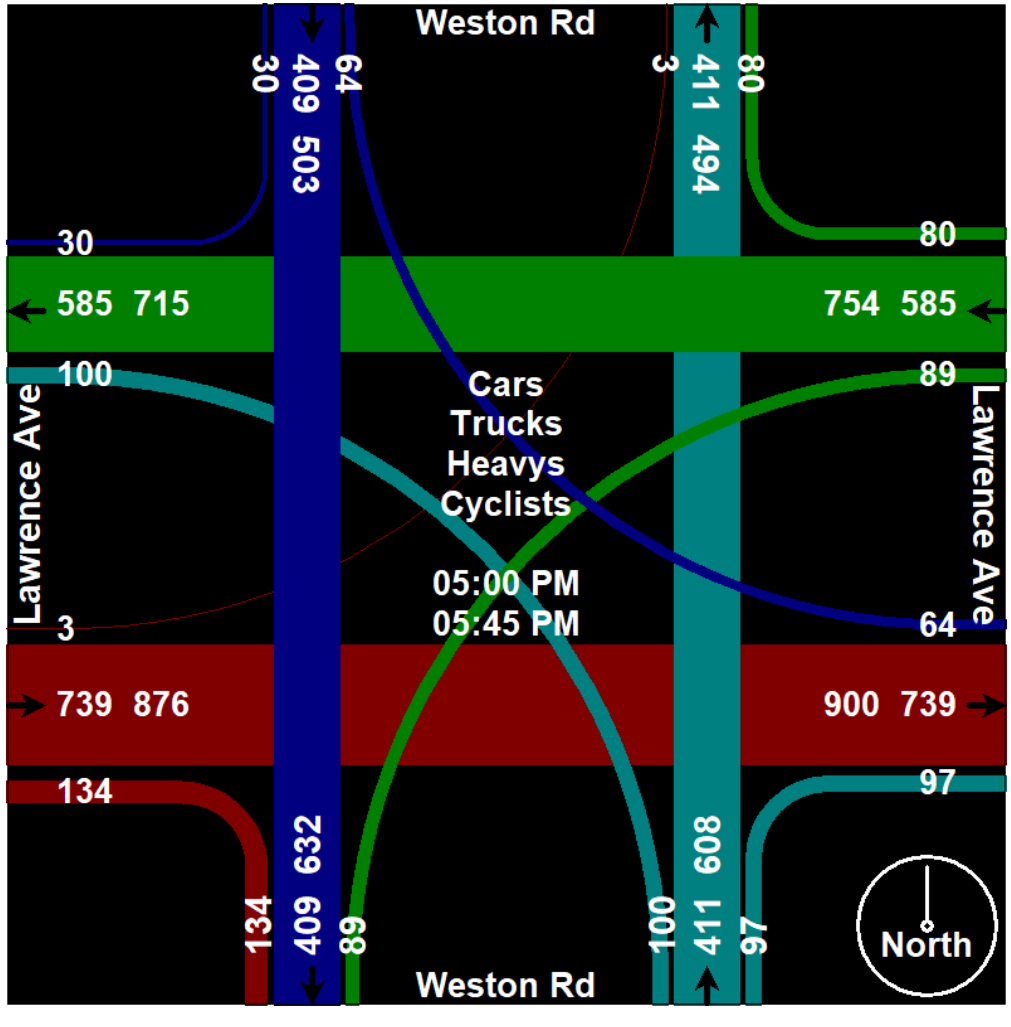

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File Name : John Stret at Pantelis Kalamaris Lane
Site Code : 00000000
Start Date : 06/21/2022
Page No : 1

Groups Printed- Cars - Trucks - Heavys - Cyclists

	Pantelis Kalamaris Ln From North					John St From East					From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	0	0	0	1	2	4	0	3	9	0	0	0	0	0	0	1	3	0	4	14
07:15 AM	0	0	0	6	6	2	2	0	2	6	0	0	0	0	0	0	1	0	2	3	15
07:30 AM	0	0	0	10	10	0	7	0	3	10	0	0	0	0	0	0	1	0	6	7	27
07:45 AM	0	0	0	2	2	2	4	0	1	7	0	0	0	0	0	0	3	0	0	3	12
Total	1	0	0	18	19	6	17	0	9	32	0	0	0	0	0	0	6	3	8	17	68
08:00 AM	0	0	0	1	1	3	5	0	3	11	0	0	0	0	0	0	7	1	0	8	20
08:15 AM	0	0	1	4	5	3	4	0	2	9	0	0	0	0	0	0	3	1	3	7	21
08:30 AM	0	0	0	1	1	3	8	0	5	16	0	0	0	0	0	0	1	1	2	4	21
08:45 AM	1	0	0	5	6	4	9	0	3	16	0	0	0	0	0	0	6	0	6	12	34
Total	1	0	1	11	13	13	26	0	13	52	0	0	0	0	0	0	17	3	11	31	96
04:00 PM	0	0	2	15	17	6	13	0	10	29	0	0	0	0	0	0	9	5	9	23	69
04:15 PM	1	0	0	7	8	10	8	0	4	22	0	0	0	0	0	0	6	6	5	17	47
04:30 PM	1	0	4	23	28	6	13	0	4	23	0	0	0	0	0	0	6	3	10	19	70
04:45 PM	1	0	3	10	14	8	16	0	10	34	0	0	0	0	0	0	12	4	4	20	68
Total	3	0	9	55	67	30	50	0	28	108	0	0	0	0	0	0	33	18	28	79	254
05:00 PM	4	0	0	29	33	6	9	0	4	19	0	0	0	0	0	0	14	2	3	19	71
05:15 PM	2	0	4	26	32	8	11	0	10	29	0	0	0	0	0	0	9	2	5	16	77
05:30 PM	2	0	1	18	21	9	9	0	7	25	0	0	0	0	0	0	11	3	6	20	66
05:45 PM	5	0	5	28	38	10	9	0	7	26	0	0	0	0	0	0	10	10	12	32	96
Total	13	0	10	101	124	33	38	0	28	99	0	0	0	0	0	0	44	17	26	87	310
Grand Total	18	0	20	185	223	82	131	0	78	291	0	0	0	0	0	0	100	41	73	214	728
Apprch %	8.1	0	9	83		28.2	45	0	26.8		0	0	0	0		0	46.7	19.2	34.1		
Total %	2.5	0	2.7	25.4	30.6	11.3	18	0	10.7	40	0	0	0	0	0	0	13.7	5.6	10	29.4	
Cars	15	0	19	185	219	81	126	0	78	285	0	0	0	0	0	0	96	40	73	209	713
% Cars	83.3	0	95	100	98.2	98.8	96.2	0	100	97.9	0	0	0	0	0	0	96	97.6	100	97.7	97.9
Trucks	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	7
% Trucks	0	0	0	0	0	1.2	2.3	0	0	1.4	0	0	0	0	0	0	3	0	0	1.4	1
Heavys	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Heavys	0	0	0	0	0	0	0.8	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.1
Cyclists	3	0	1	0	4	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	7
% Cyclists	16.7	0	5	0	1.8	0	0.8	0	0	0.3	0	0	0	0	0	0	1	2.4	0	0.9	1

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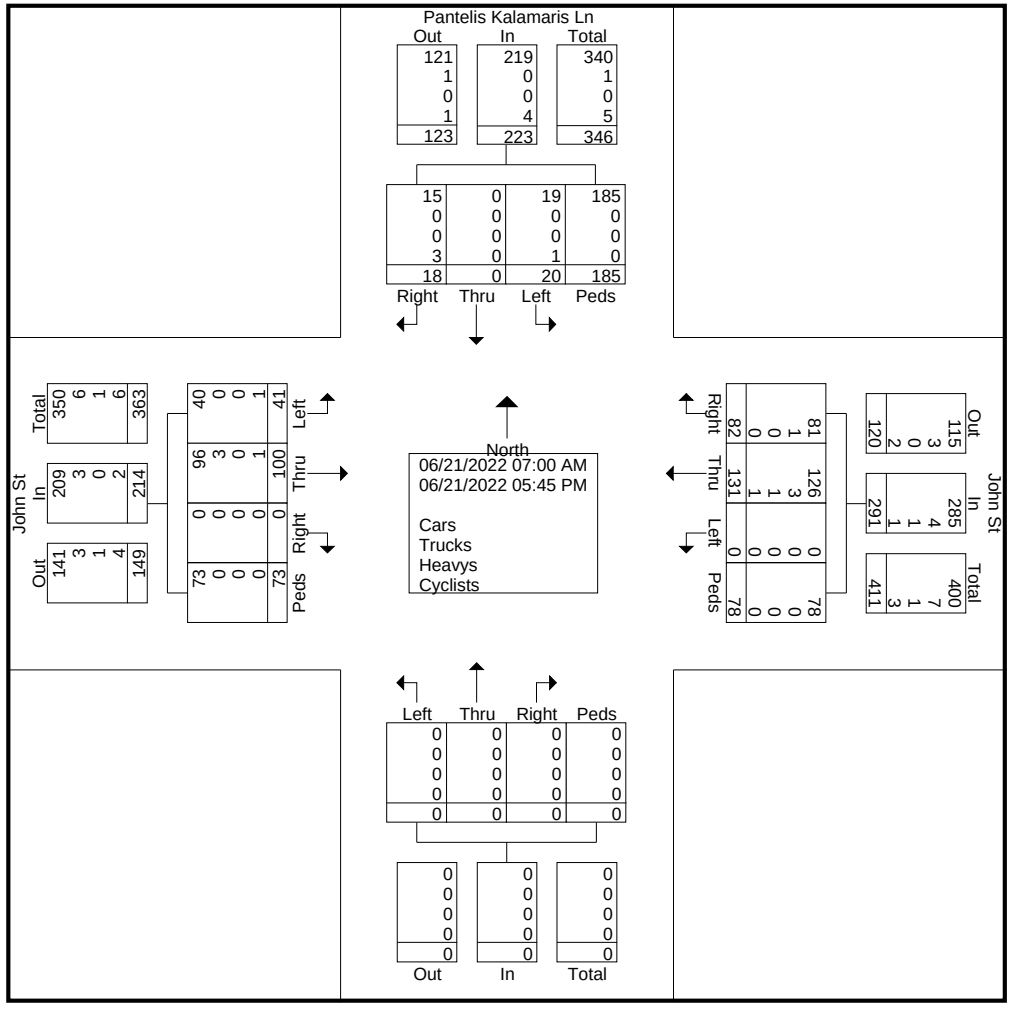

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	Pantelis Kalamaris Ln From North					John St From East					From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	1	1	3	5	0	3	11	0	0	0	0	0	0	**7**	**1**	0	8	20
08:15 AM	0	0	**1**	4	5	3	4	0	2	9	0	0	0	0	0	0	3	1	3	7	21
08:30 AM	0	0	0	1	1	3	8	0	**5**	**16**	0	0	0	0	0	0	1	1	2	4	21
08:45 AM	**1**	0	0	**5**	**6**	**4**	**9**	0	3	16	0	0	0	0	0	0	6	0	**6**	**12**	**34**
Total Volume	1	0	1	11	13	13	26	0	13	52	0	0	0	0	0	0	17	3	11	31	96
% App. Total	7.7	0	7.7	84.6		25	50	0	25		0	0	0	0		0	54.8	9.7	35.5		
PHF	.250	.000	.250	.550	.542	.813	.722	.000	.650	.813	.000	.000	.000	.000	.000	.000	.607	.750	.458	.646	.706
Cars	1	0	1	11	13	12	24	0	13	49	0	0	0	0	0	0	16	2	11	29	91
% Cars	100	0	100	100	100	92.3	92.3	0	100	94.2	0	0	0	0	0	0	94.1	66.7	100	93.5	94.8
Trucks	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	4
% Trucks	0	0	0	0	0	7.7	7.7	0	0	5.8	0	0	0	0	0	0	5.9	0	0	3.2	4.2
Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33.3	0	3.2	1.0

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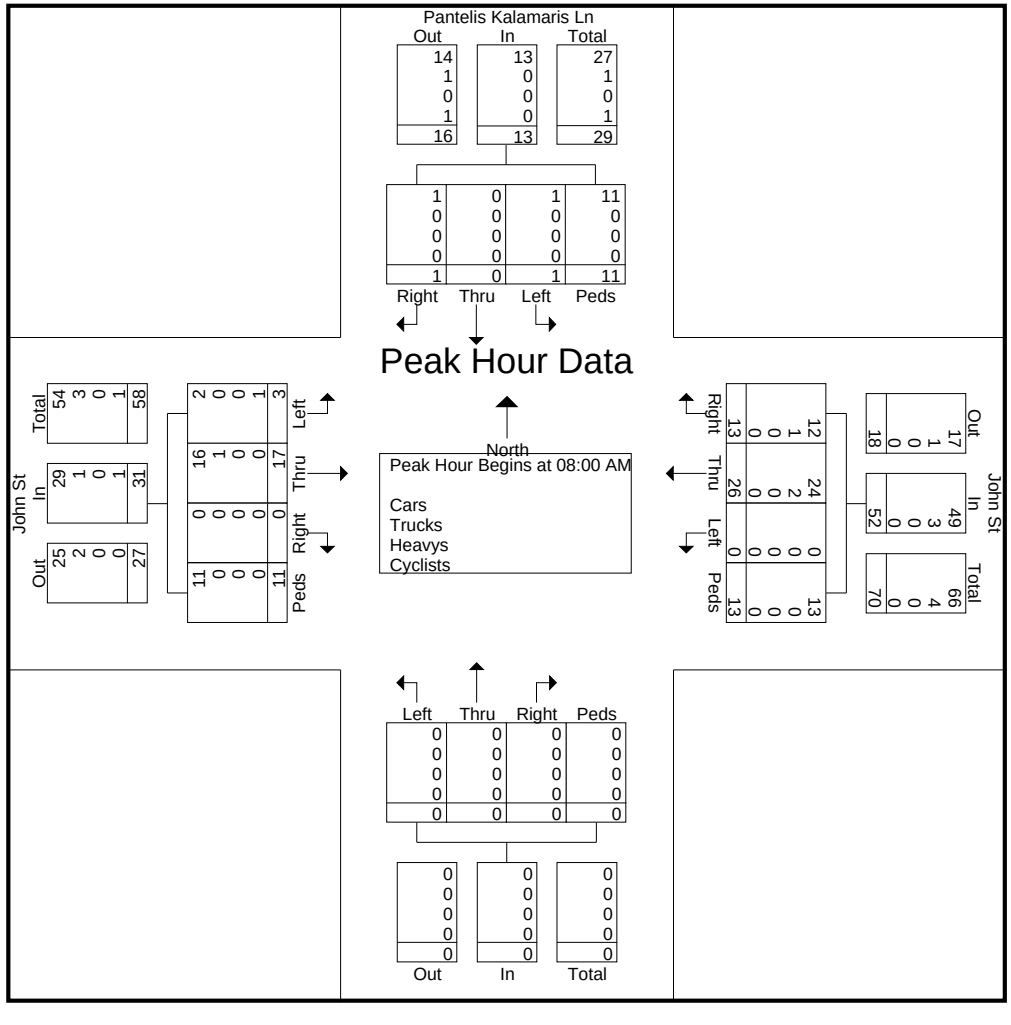
File Name : John Stret at Pantelis Kalamaris Lane
Site Code : 00000000
Start Date : 06/21/2022
Page No : 4



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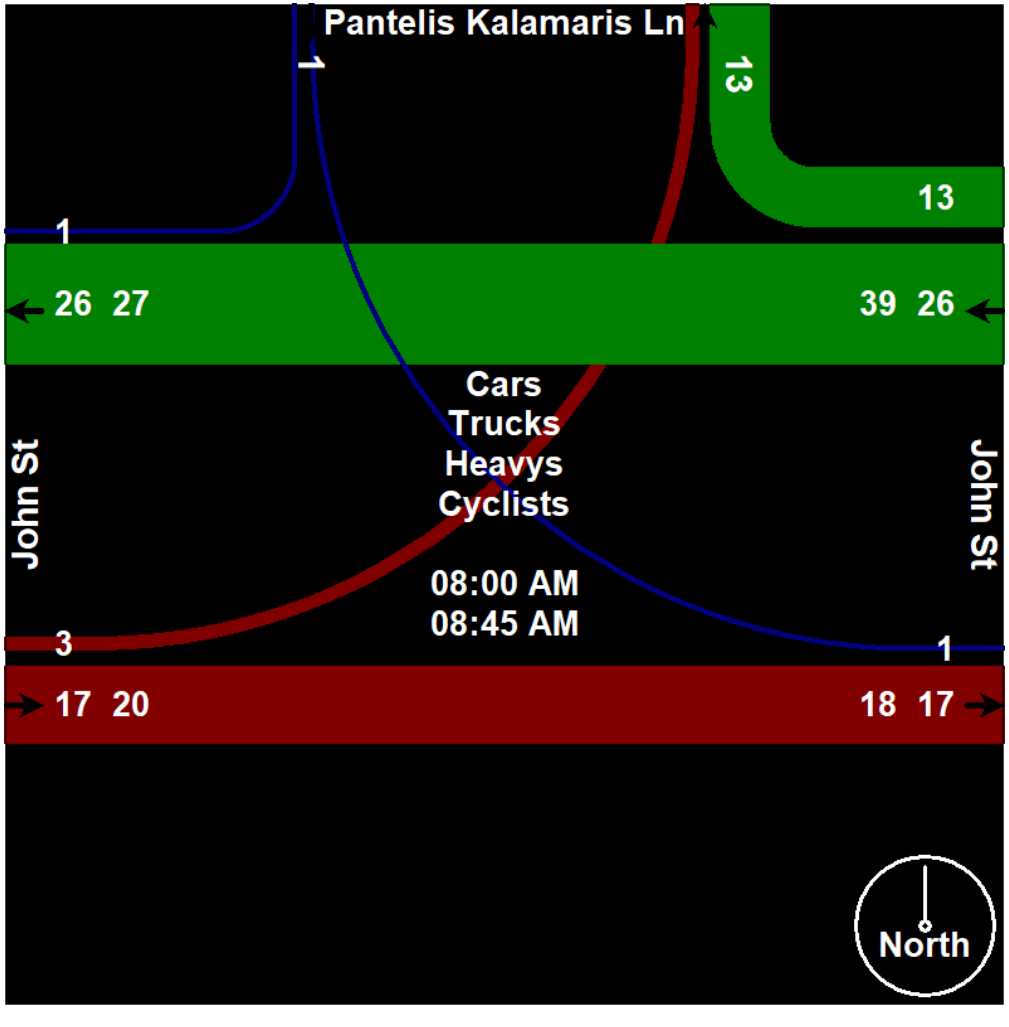
File Name : John Stret at Pantelis Kalamaris Lane
Site Code : 00000000
Start Date : 06/21/2022
Page No : 5



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File Name : John Stret at Pantelis Kalamaris Lane
Site Code : 00000000
Start Date : 06/21/2022
Page No : 6

	Pantelis Kalamaris Ln From North					John St From East					From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	4	0	0	**29**	33	6	9	0	4	19	0	0	0	0	0	0	**14**	2	3	19	71
05:15 PM	2	0	4	26	32	8	**11**	0	**10**	**29**	0	0	0	0	0	0	9	2	5	16	77
05:30 PM	2	0	1	18	21	9	9	0	7	25	0	0	0	0	0	0	11	3	6	20	66
05:45 PM	**5**	0	**5**	28	**38**	**10**	9	0	7	26	0	0	0	0	0	0	10	**10**	**12**	**32**	**96**
Total Volume	13	0	10	101	124	33	38	0	28	99	0	0	0	0	0	0	44	17	26	87	310
% App. Total	10.5	0	8.1	81.5		33.3	38.4	0	28.3		0	0	0	0		0	50.6	19.5	29.9		
PHF	.650	.000	.500	.871	.816	.825	.864	.000	.700	.853	.000	.000	.000	.000	.000	.000	.786	.425	.542	.680	.807
Cars	10	0	10	101	121	33	38	0	28	99	0	0	0	0	0	0	42	17	26	85	305
% Cars	76.9	0	100	100	97.6	100	100	0	100	100	0	0	0	0	0	0	95.5	100	100	97.7	98.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.3	0	0	1.1	0.3
Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclists	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
% Cyclists	23.1	0	0	0	2.4	0	0	0	0	0	0	0	0	0	0	0	2.3	0	0	1.1	1.3

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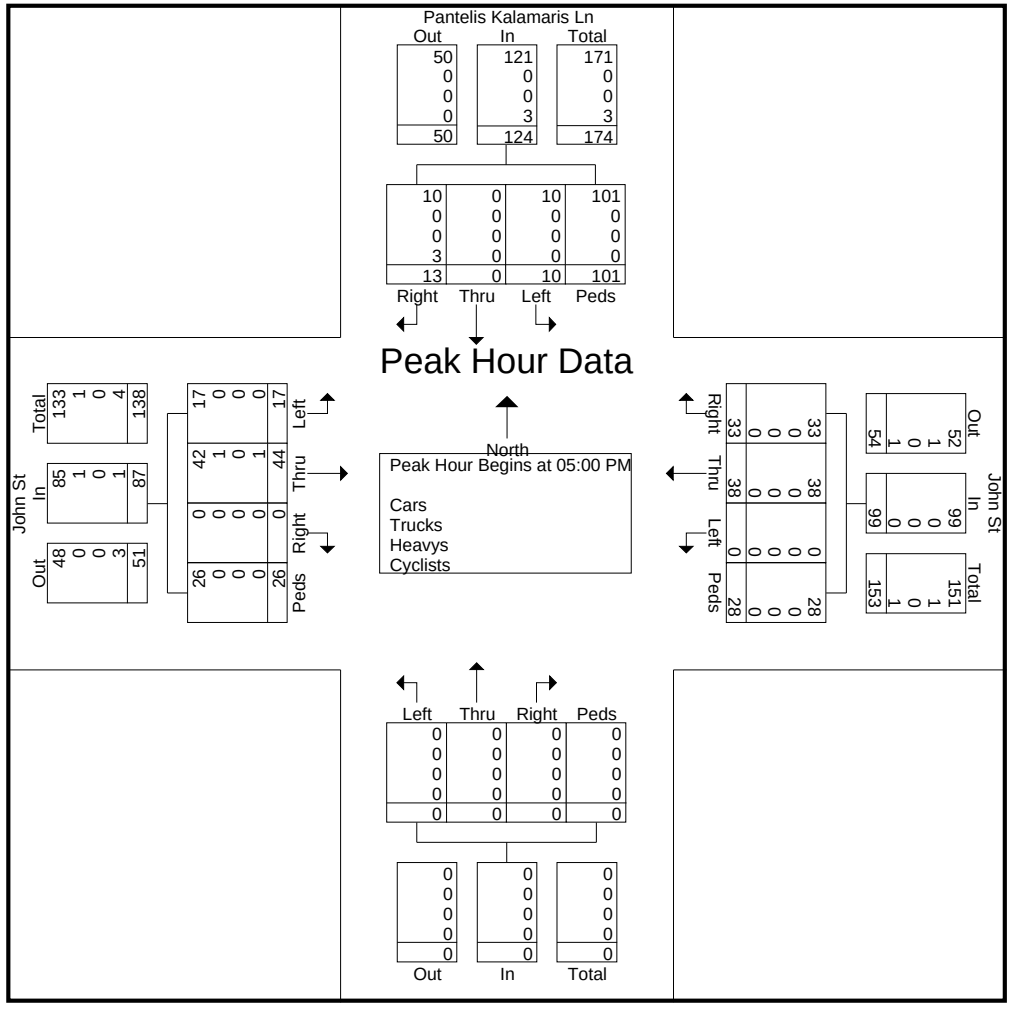
Site Code : 00000000
Start Date : 06/21/2022



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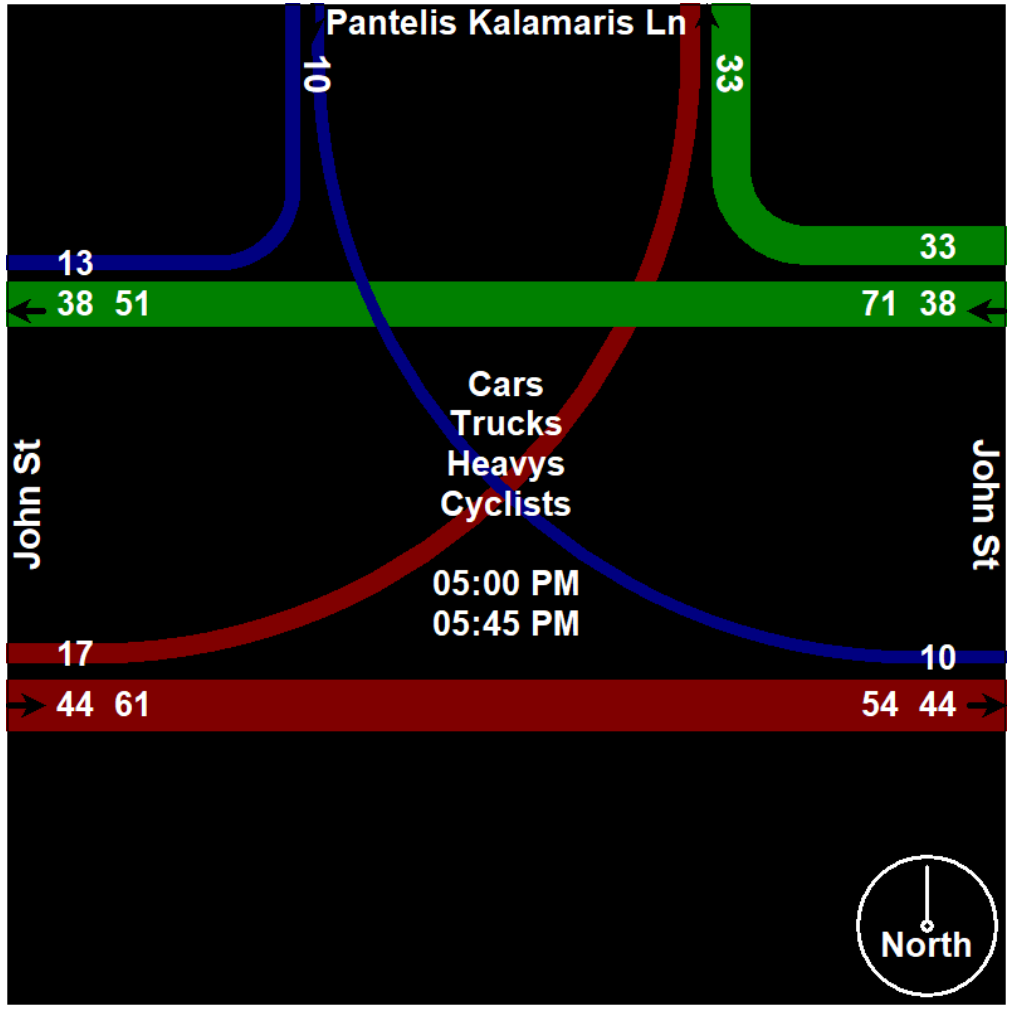

Location:	**Driveway at John St**
Count Date:	**June-21-2022**
Count Times	**0700 to 0900 and 1600 to 1800**
Int Mode:	**Signalized**
Int Type:	**X-intersection**

Cars

	WBL	EBR	NBL	NBR
Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	1	0	0
08:45	3	1	0	2
16:00	1	2	1	2
16:15	1	1	4	0
16:30	0	2	2	3
16:45	0	2	1	0
17:00	1	1	0	1
17:15	2	0	1	1
17:30	1	1	1	1
17:45	0	1	0	0

Trucks

Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

Heavies

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

Cyclists

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

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File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022
Page No : 1

Groups Printed- Cars - Trucks - Heavys - Cyclists

	Access From North					John St From East					S Station St From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	1	0	0	2	0	0	1	4	5	0	1	5	1	7	0	1	0	3	4	18
07:15 AM	1	0	0	0	1	0	0	0	1	1	0	0	3	0	3	0	0	1	2	3	8
07:30 AM	0	0	0	2	2	0	0	0	1	1	0	0	6	0	6	0	0	0	5	5	14
07:45 AM	3	0	0	0	3	0	0	0	6	6	0	0	3	1	4	0	0	2	1	3	16
Total	5	1	0	2	8	0	0	1	12	13	0	1	17	2	20	0	1	3	11	15	56
08:00 AM	0	0	0	1	1	0	0	0	2	2	0	0	7	2	9	5	0	2	5	12	24
08:15 AM	2	0	0	4	6	0	0	0	15	15	0	0	6	7	13	4	0	0	4	8	42
08:30 AM	0	0	0	0	0	0	0	0	19	19	0	1	10	2	13	1	0	0	7	8	40
08:45 AM	1	0	0	5	6	0	0	0	19	19	0	0	15	3	18	7	0	0	8	15	58
Total	3	0	0	10	13	0	0	0	55	55	0	1	38	14	53	17	0	2	24	43	164
04:00 PM	0	0	0	0	0	0	2	1	7	10	0	0	15	1	16	10	2	0	11	23	49
04:15 PM	0	0	0	0	0	0	1	0	9	10	0	1	17	2	20	3	0	0	2	5	35
04:30 PM	0	0	0	2	2	0	2	0	7	9	1	0	15	8	24	11	0	0	10	21	56
04:45 PM	0	0	0	4	4	0	1	1	9	11	1	0	22	2	25	12	3	0	13	28	68
Total	0	0	0	6	6	0	6	2	32	40	2	1	69	13	85	36	5	0	36	77	208
05:00 PM	0	0	0	10	10	0	1	2	19	22	1	0	20	6	27	15	1	0	10	26	85
05:15 PM	0	0	0	11	11	0	1	1	9	11	0	0	16	3	19	11	2	0	11	24	65
05:30 PM	0	0	0	8	8	0	1	1	26	28	0	0	18	2	20	12	2	0	4	18	74
05:45 PM	0	0	0	6	6	0	1	3	23	27	1	0	20	5	26	11	4	0	12	27	86
Total	0	0	0	35	35	0	4	7	77	88	2	0	74	16	92	49	9	0	37	95	310
Grand Total	8	1	0	53	62	0	10	10	176	196	4	3	198	45	250	102	15	5	108	230	738
Apprch %	12.9	1.6	0	85.5		0	5.1	5.1	89.8		1.6	1.2	79.2	18		44.3	6.5	2.2	47		
Total %	1.1	0.1	0	7.2	8.4	0	1.4	1.4	23.8	26.6	0.5	0.4	26.8	6.1	33.9	13.8	2	0.7	14.6	31.2	
Cars	8	0	0	53	61	0	8	10	176	194	4	1	194	45	244	99	14	5	108	226	725
% Cars	100	0	0	100	98.4	0	80	100	100	99	100	33.3	98	100	97.6	97.1	93.3	100	100	98.3	98.2
Trucks	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	2	0	0	0	2	6
% Trucks	0	0	0	0	0	0	10	0	0	0.5	0	0	1.5	0	1.2	2	0	0	0	0.9	0.8
Heavys	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0	0.1
Cyclists	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	6
% Cyclists	0	100	0	0	1.6	0	10	0	0	0.5	0	66.7	0	0	0.8	1	6.7	0	0	0.9	0.8

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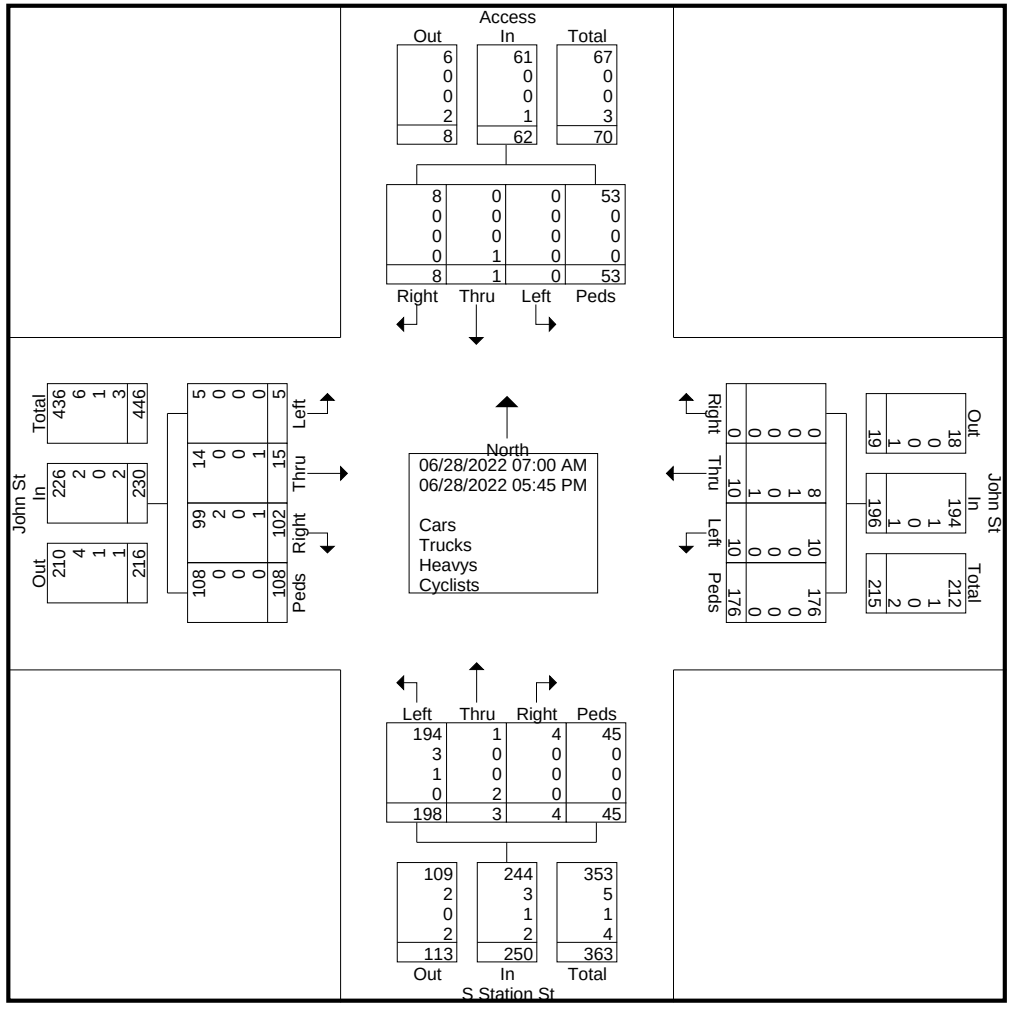
File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022
Page No : 2



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File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022

	Access From North					John St From East					S Station St From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	1	1	0	0	0	2	2	0	0	7	2	9	5	0	**2**	5	12	24
08:15 AM	**2**	0	0	4	**6**	0	0	0	15	15	0	0	6	**7**	13	4	0	0	4	8	42
08:30 AM	0	0	0	0	0	0	0	0	**19**	**19**	0	**1**	10	2	13	1	0	0	7	8	40
08:45 AM	1	0	0	**5**	6	0	0	0	19	19	0	0	**15**	3	**18**	**7**	0	0	**8**	**15**	**58**
Total Volume	3	0	0	10	13	0	0	0	55	55	0	1	38	14	53	17	0	2	24	43	164
% App. Total	23.1	0	0	76.9		0	0	0	100		0	1.9	71.7	26.4		39.5	0	4.7	55.8		
PHF	.375	.000	.000	.500	.542	.000	.000	.000	.724	.724	.000	.250	.633	.500	.736	.607	.000	.250	.750	.717	.707
Cars	3	0	0	10	13	0	0	0	55	55	0	1	35	14	50	16	0	2	24	42	160
% Cars	100	0	0	100	100	0	0	0	100	100	0	100	92.1	100	94.3	94.1	0	100	100	97.7	97.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	0	1	4
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	7.9	0	5.7	5.9	0	0	0	2.3	2.4
Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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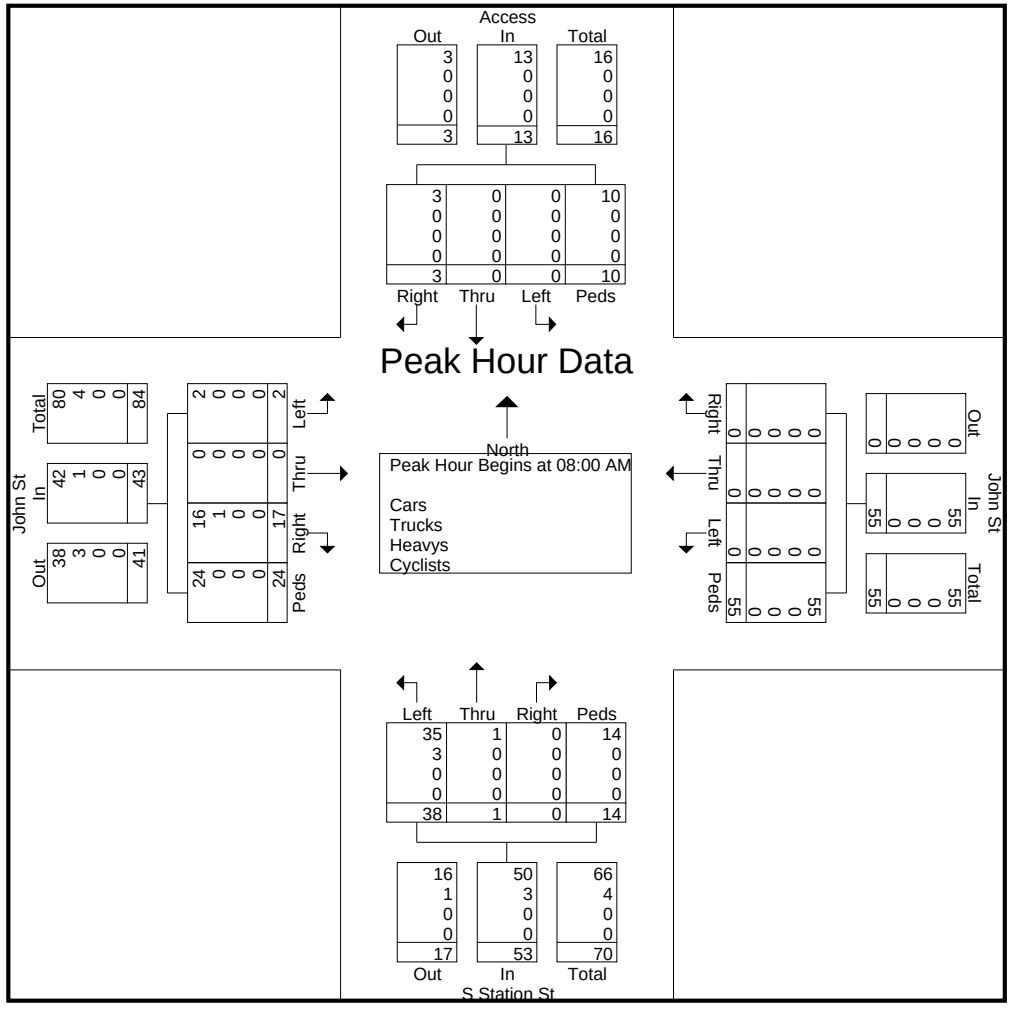
Start Date : 06/28/2022



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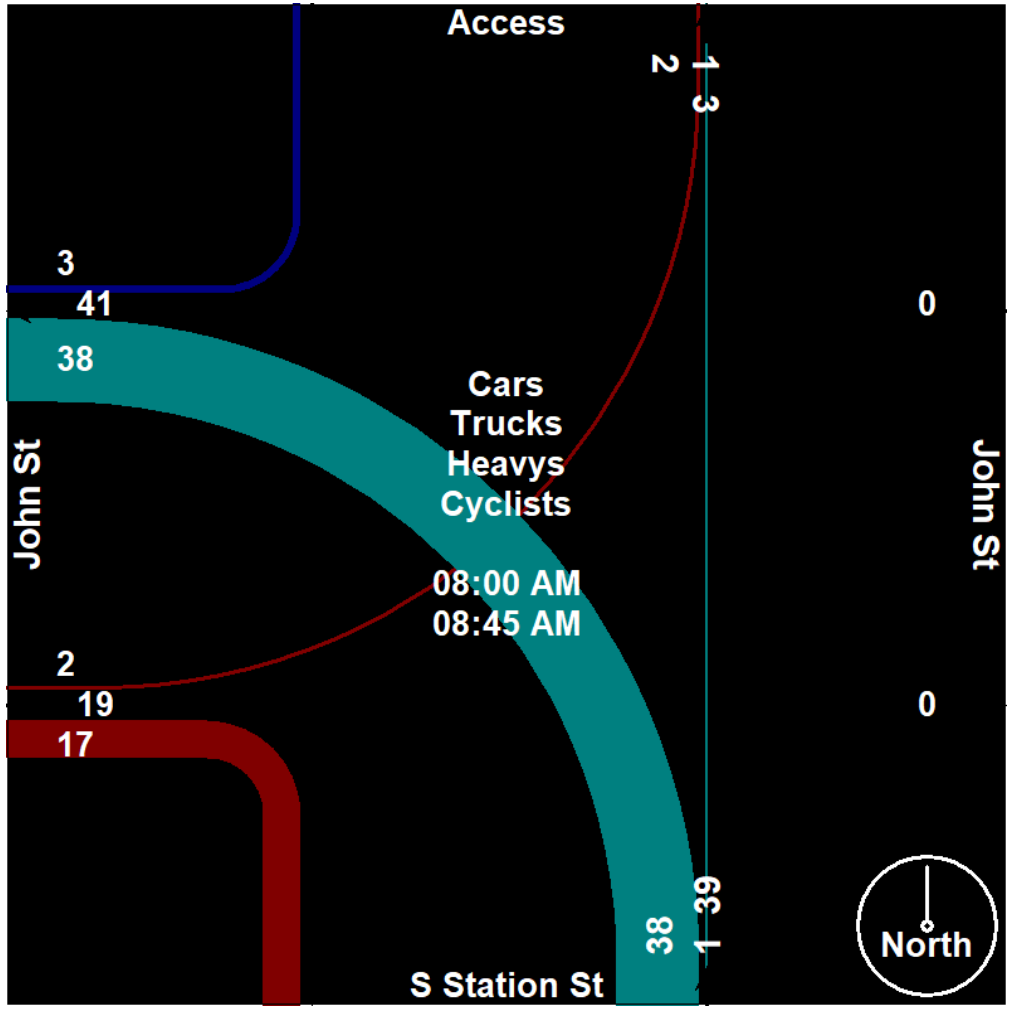

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File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022
Page No : 6

	Access From North					John St From East					S Station St From South					John St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	10	10	0	**1**	2	19	22	**1**	0	**20**	**6**	**27**	**15**	1	0	10	26	85
05:15 PM	0	0	0	**11**	**11**	0	1	1	9	11	0	0	16	3	19	11	2	0	11	24	65
05:30 PM	0	0	0	8	8	0	1	1	**26**	**28**	0	0	18	2	20	12	2	0	4	18	74
05:45 PM	0	0	0	6	6	0	1	**3**	23	27	1	0	20	5	26	11	**4**	0	**12**	**27**	**86**
Total Volume	0	0	0	35	35	0	4	7	77	88	2	0	74	16	92	49	9	0	37	95	310
% App. Total	0	0	0	100		0	4.5	8	87.5		2.2	0	80.4	17.4		51.6	9.5	0	38.9		
PHF	.000	.000	.000	.795	.795	.000	1.00	.583	.740	.786	.500	.000	.925	.667	.852	.817	.563	.000	.771	.880	.901
Cars	0	0	0	35	35	0	4	7	77	88	2	0	74	16	92	48	8	0	37	93	308
% Cars	0	0	0	100	100	0	100	100	100	100	100	0	100	100	100	98.0	88.9	0	100	97.9	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.0	0	0	0	1.1	0.3
Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.1	0	0	1.1	0.3

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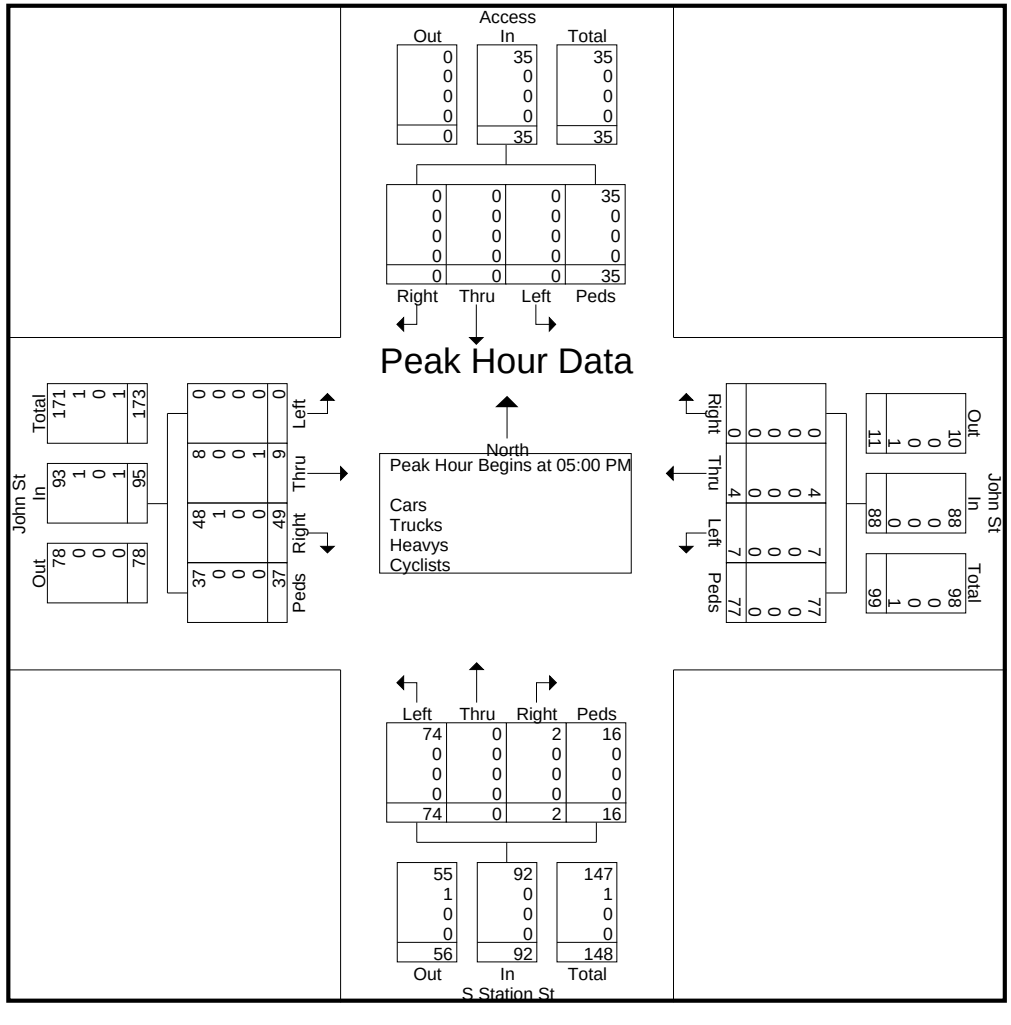
File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022



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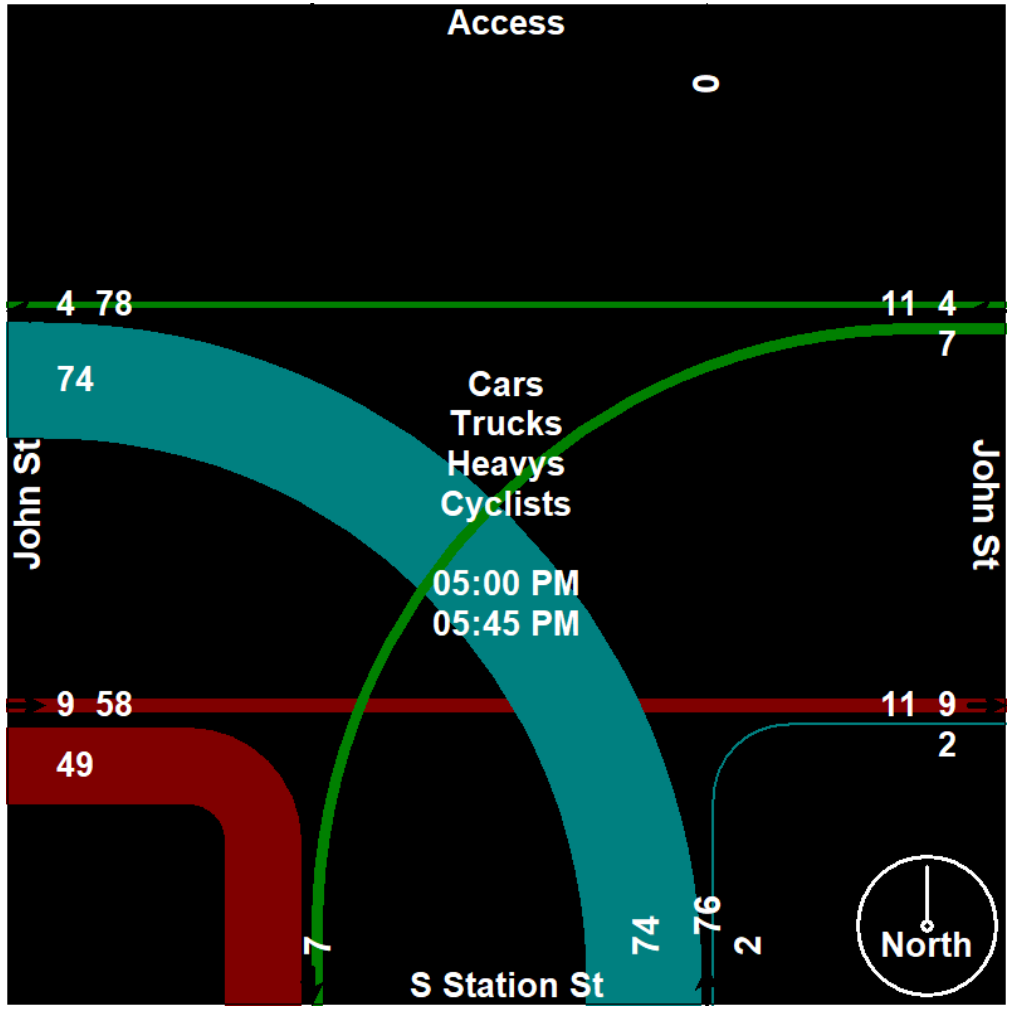
File Name : S Station Rd at John St
Site Code : 00000000
Start Date : 06/28/2022
Page No : 8



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File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022
Page No : 1

Groups Printed- Cars - Trucks - Heavys - Cyclists

	S Station St From North					Lawrence Ave From East					From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	4	0	3	5	12	4	102	0	0	106	0	0	0	0	0	0	173	4	1	178	296
07:15 AM	5	0	4	3	12	5	104	0	0	109	0	0	0	0	0	0	184	1	0	185	306
07:30 AM	8	0	5	1	14	5	104	0	1	110	0	0	0	0	0	0	224	5	0	229	353
07:45 AM	6	0	3	3	12	2	114	0	0	116	0	0	0	0	0	0	193	3	1	197	325
Total	23	0	15	12	50	16	424	0	1	441	0	0	0	0	0	0	774	13	2	789	1280
08:00 AM	2	0	5	9	16	7	122	0	1	130	0	0	0	0	0	0	229	3	2	234	380
08:15 AM	4	0	9	1	14	3	141	0	0	144	0	0	0	0	0	0	239	6	1	246	404
08:30 AM	3	0	6	10	19	9	147	0	0	156	0	0	0	0	0	0	189	6	2	197	372
08:45 AM	4	0	14	7	25	8	123	0	0	131	0	0	0	0	0	0	181	5	1	187	343
Total	13	0	34	27	74	27	533	0	1	561	0	0	0	0	0	0	838	20	6	864	1499
04:00 PM	7	0	10	4	21	10	187	0	0	197	0	0	0	0	0	0	197	8	1	206	424
04:15 PM	2	0	6	6	14	7	173	0	0	180	0	0	0	0	0	0	195	7	0	202	396
04:30 PM	9	0	6	5	20	18	189	0	0	207	0	0	0	0	0	0	231	10	2	243	470
04:45 PM	8	0	6	12	26	23	168	0	0	191	0	0	0	0	0	0	216	4	1	221	438
Total	26	0	28	27	81	58	717	0	0	775	0	0	0	0	0	0	839	29	4	872	1728
05:00 PM	10	0	11	20	41	21	170	0	0	191	0	0	0	0	0	0	233	7	8	248	480
05:15 PM	12	0	12	9	33	14	181	0	0	195	0	0	0	0	0	0	210	16	3	229	457
05:30 PM	6	0	10	2	18	10	181	0	0	191	0	0	0	0	0	0	243	8	3	254	463
05:45 PM	3	0	17	6	26	12	168	0	0	180	0	0	0	0	0	0	194	7	1	202	408
Total	31	0	50	37	118	57	700	0	0	757	0	0	0	0	0	0	880	38	15	933	1808
Grand Total	93	0	127	103	323	158	2374	0	2	2534	0	0	0	0	0	0	3331	100	27	3458	6315
Apprch %	28.8	0	39.3	31.9		6.2	93.7	0	0.1		0	0	0	0		0	96.3	2.9	0.8		
Total %	1.5	0	2	1.6	5.1	2.5	37.6	0	0	40.1	0	0	0	0	0	0	52.7	1.6	0.4	54.8	
Cars	90	0	127	103	320	156	2195	0	2	2353	0	0	0	0	0	0	3101	95	27	3223	5896
% Cars	96.8	0	100	100	99.1	98.7	92.5	0	100	92.9	0	0	0	0	0	0	93.1	95	100	93.2	93.4
Trucks	2	0	0	0	2	1	47	0	0	48	0	0	0	0	0	0	89	5	0	94	144
% Trucks	2.2	0	0	0	0.6	0.6	2	0	0	1.9	0	0	0	0	0	0	2.7	5	0	2.7	2.3
Heavys	1	0	0	0	1	0	132	0	0	132	0	0	0	0	0	0	141	0	0	141	274
% Heavys	1.1	0	0	0	0.3	0	5.6	0	0	5.2	0	0	0	0	0	0	4.2	0	0	4.1	4.3
Cyclists	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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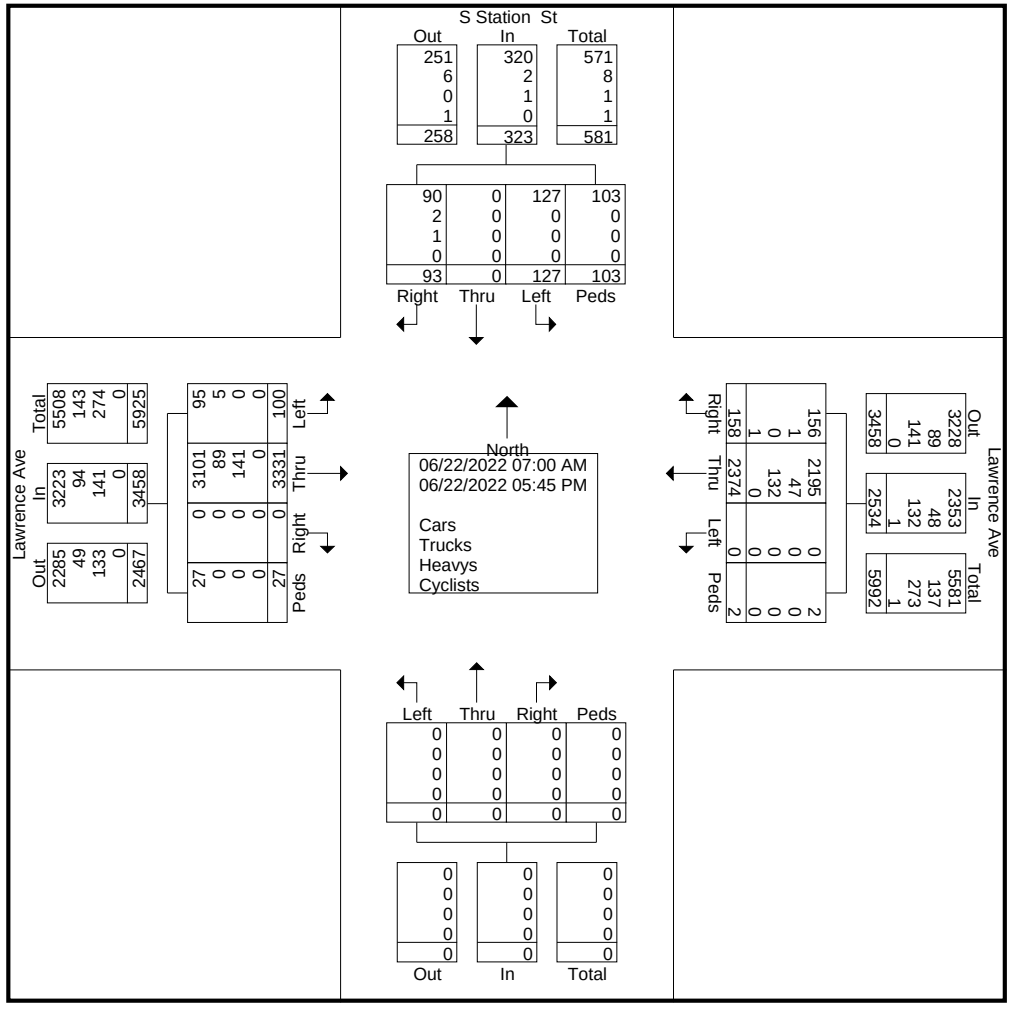
"Your Traffic Count Specialist"

File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022
Page No : 2



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File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022

	S Station St From North					Lawrence Ave From East					From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	5	9	16	7	122	0	**1**	130	0	0	0	0	0	0	229	3	**2**	234	380
08:15 AM	**4**	0	9	1	14	3	141	0	0	144	0	0	0	0	0	0	**239**	**6**	1	**246**	**404**
08:30 AM	3	0	6	**10**	19	**9**	**147**	0	0	**156**	0	0	0	0	0	0	189	6	2	197	372
08:45 AM	4	0	**14**	7	**25**	8	123	0	0	131	0	0	0	0	0	0	181	5	1	187	343
Total Volume	13	0	34	27	74	27	533	0	1	561	0	0	0	0	0	0	838	20	6	864	1499
% App. Total	17.6	0	45.9	36.5		4.8	95	0	0.2		0	0	0	0		0	97	2.3	0.7		
PHF	.813	.000	.607	.675	.740	.750	.906	.000	.250	.899	.000	.000	.000	.000	.000	.000	.877	.833	.750	.878	.928
Cars	12	0	34	27	73	26	470	0	1	497	0	0	0	0	0	0	763	17	6	786	1356
% Cars	92.3	0	100	100	98.6	96.3	88.2	0	100	88.6	0	0	0	0	0	0	91.1	85.0	100	91.0	90.5
Trucks	1	0	0	0	1	0	23	0	0	23	0	0	0	0	0	0	33	3	0	36	60
% Trucks	7.7	0	0	0	1.4	0	4.3	0	0	4.1	0	0	0	0	0	0	3.9	15.0	0	4.2	4.0
Heavys	0	0	0	0	0	0	40	0	0	40	0	0	0	0	0	0	42	0	0	42	82
% Heavys	0	0	0	0	0	0	7.5	0	0	7.1	0	0	0	0	0	0	5.0	0	0	4.9	5.5
Cyclists	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Cyclists	0	0	0	0	0	3.7	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.1

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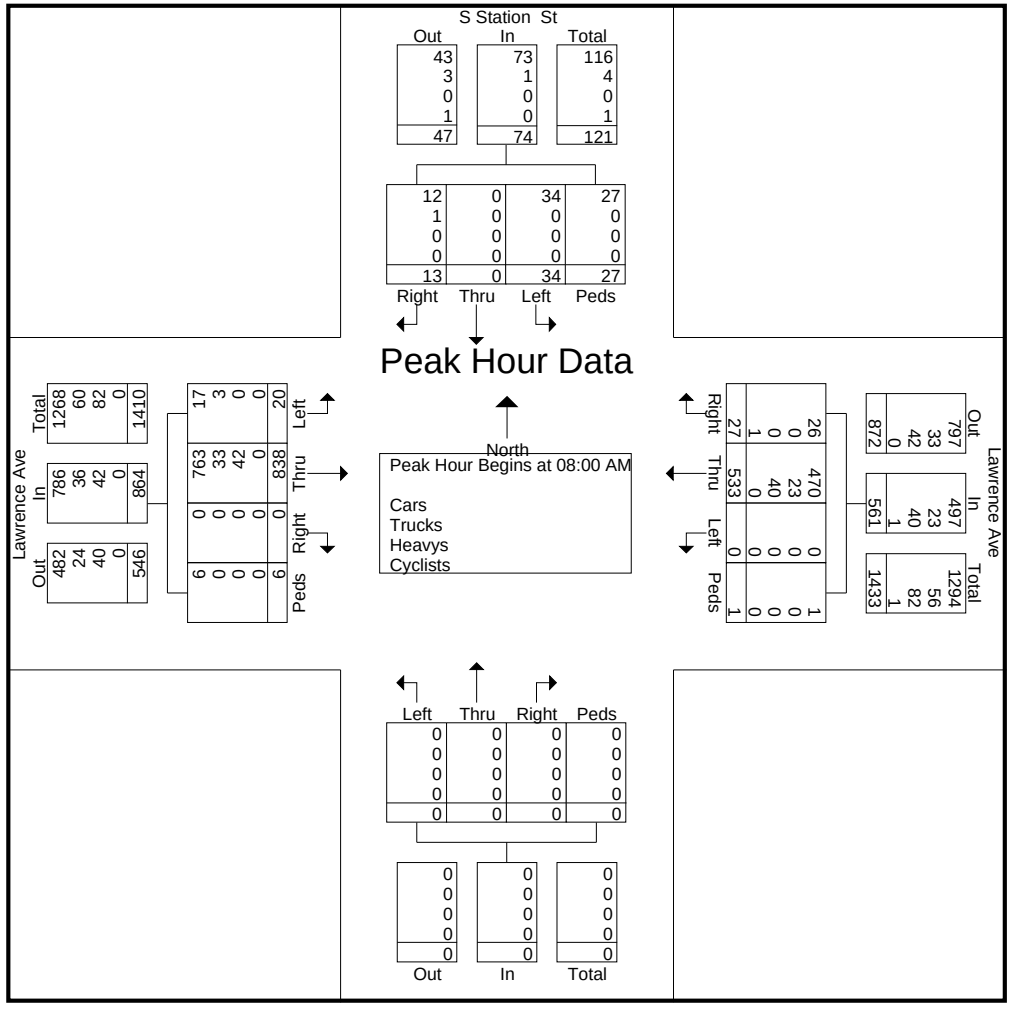
File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022
Page No : 4



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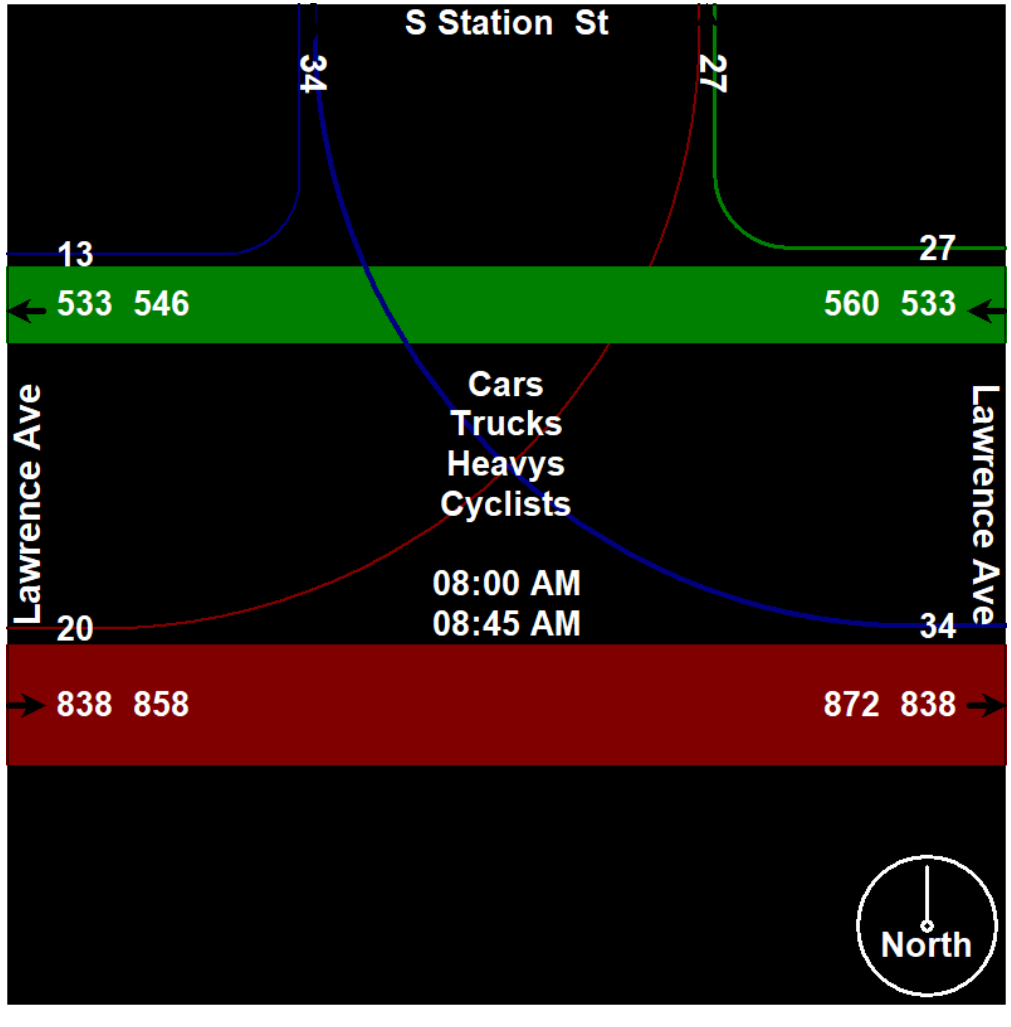
File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022
Page No : 5



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File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022
Page No : 6

	S Station St From North					Lawrence Ave From East					From South					Lawrence Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	9	0	6	5	20	18	**189**	0	0	**207**	0	0	0	0	0	0	231	10	2	243	470
04:45 PM	8	0	6	12	26	**23**	168	0	0	191	0	0	0	0	0	0	216	4	1	221	438
05:00 PM	10	0	11	**20**	**41**	21	170	0	0	191	0	0	0	0	0	0	**233**	7	**8**	**248**	**480**
05:15 PM	**12**	0	**12**	9	33	14	181	0	0	195	0	0	0	0	0	0	210	**16**	3	229	457
Total Volume	39	0	35	46	120	76	708	0	0	784	0	0	0	0	0	0	890	37	14	941	1845
% App. Total	32.5	0	29.2	38.3		9.7	90.3	0	0		0	0	0	0		0	94.6	3.9	1.5		
PHF	.813	.000	.729	.575	.732	.826	.937	.000	.000	.947	.000	.000	.000	.000	.000	.000	.955	.578	.438	.949	.961
Cars	39	0	35	46	120	75	672	0	0	747	0	0	0	0	0	0	844	36	14	894	1761
% Cars	100	0	100	100	100	98.7	94.9	0	0	95.3	0	0	0	0	0	0	94.8	97.3	100	95.0	95.4
Trucks	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	18	1	0	19	24
% Trucks	0	0	0	0	0	1.3	0.6	0	0	0.6	0	0	0	0	0	0	2.0	2.7	0	2.0	1.3
Heavys	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	28	0	0	28	60
% Heavys	0	0	0	0	0	0	4.5	0	0	4.1	0	0	0	0	0	0	3.1	0	0	3.0	3.3
Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cyclists	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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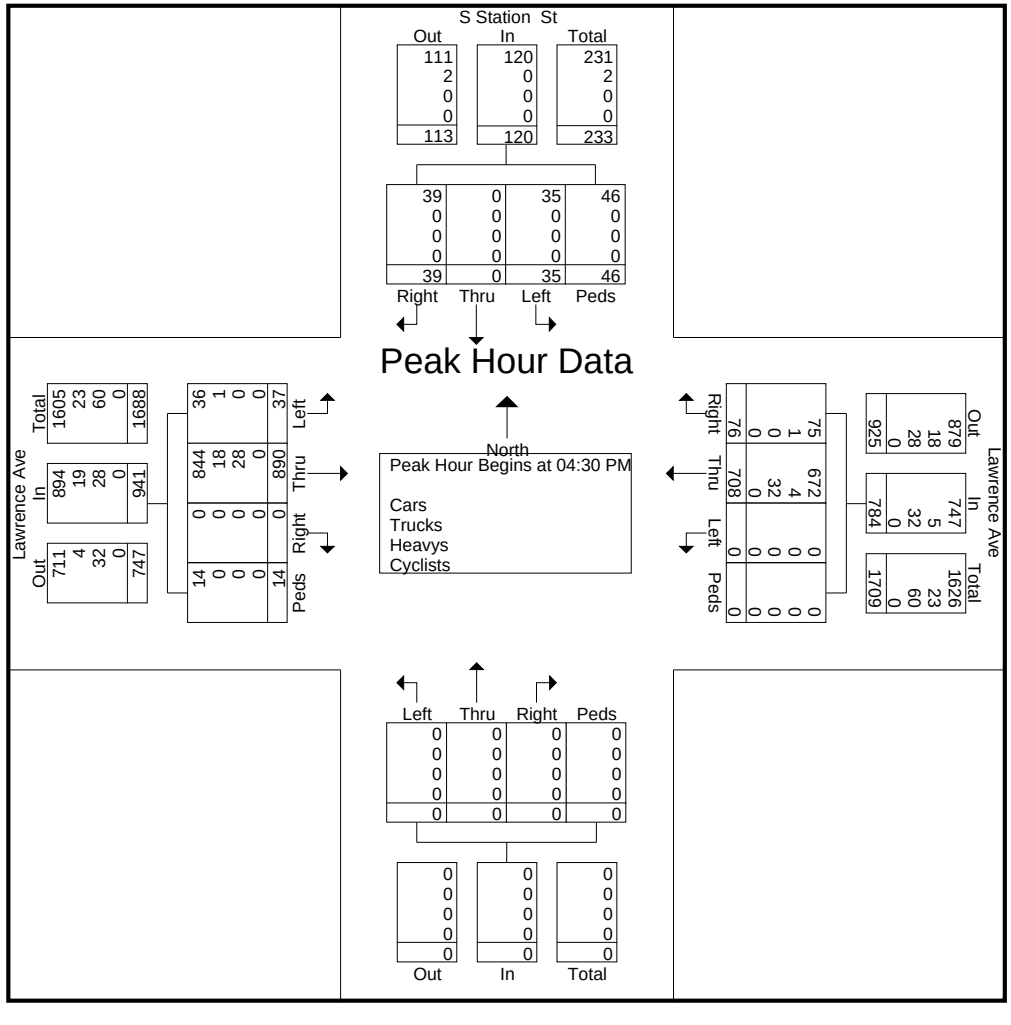
Site Code : 00000000
Start Date : 06/22/2022
Page No : 7



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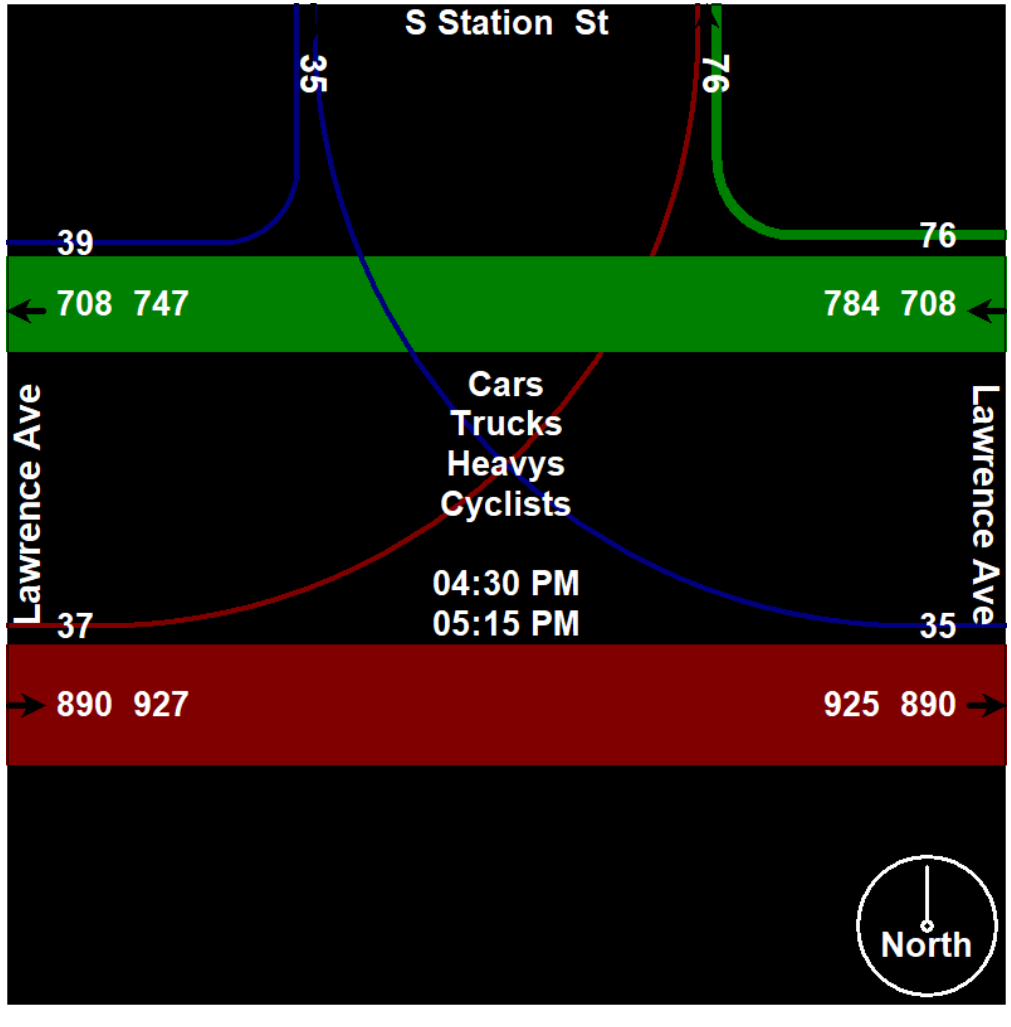
File Name : Lawrence Ave at South Station St
Site Code : 00000000
Start Date : 06/22/2022



Location:	**North Driveway at S Station**
Count Date:	**June-21-2022**
Count Times	**0700 to 0900 and 1600 to 1800**
Int Mode:	**Signalized**
Int Type:	**X-intersection**

Cars

	NBL	SBR	EBL	EBR
Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	6	1	1	1
07:15	3	1	1	0
07:30	6	1	1	0
07:45	3	4	3	0
08:00	7	0	2	5
08:15	3	2	0	3
08:30	10	0	0	1
08:45	15	2	1	7
16:00	15	2	4	10
16:15	18	3	3	4
16:30	14	1	1	10
16:45	22	3	4	10
17:00	22	2	2	15
17:15	15	2	2	14
17:30	18	4	3	12
17:45	20	2	5	10

Trucks

Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	3	0	0	1
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	1	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	1

Heavies

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	1	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

Cyclists

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	1
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	1	0	0
16:45	0	0	0	1
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	2	0

Location:	**South Driveway at S Station Rd**
Count Date:	**June-21-2022**
Count Times	**0700 to 0900 and 1600 to 1800**
Int Mode:	**Signalized**
Int Type:	**X-intersection**

Cars

	NBL	SBR	EBL	EBR
Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	1
07:45	1	0	0	0
08:00	1	2	2	0
08:15	3	0	1	2
08:30	4	0	2	2
08:45	2	3	1	3
16:00	1	0	0	0
16:15	0	0	1	0
16:30	1	2	2	1
16:45	0	0	0	0
17:00	1	3	0	1
17:15	2	0	0	1
17:30	0	1	0	1
17:45	4	0	1	0

Trucks

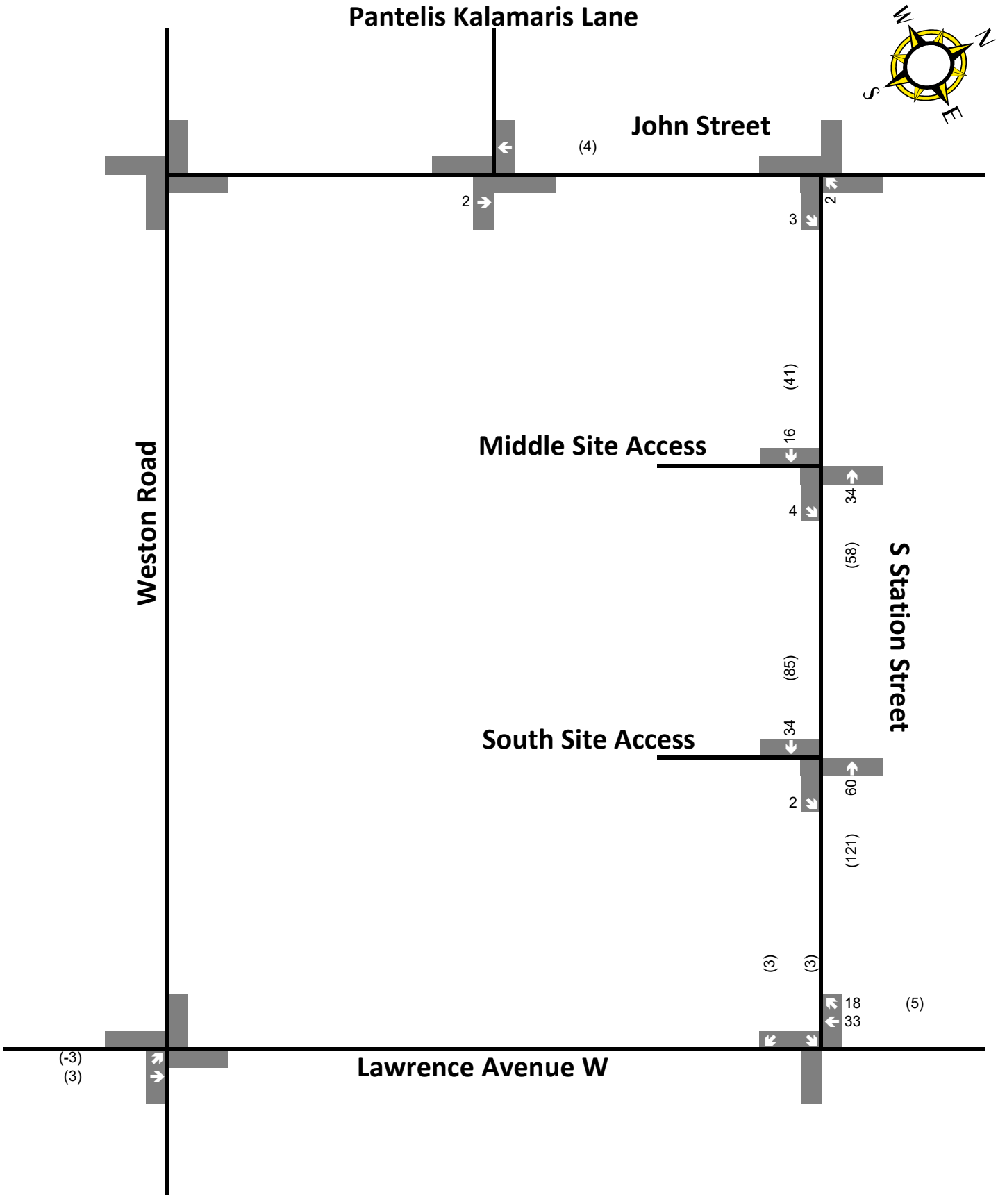
Time	**Left In**	**Right IN**	**Left Out**	**Right Out**
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

Heavies

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0

Cyclists

Time	Left In	Right IN	Left Out	Right Out
07:00	0	0	0	0
07:15	0	0	0	0
07:30	0	0	0	0
07:45	0	0	0	0
08:00	0	0	0	0
08:15	0	0	0	0
08:30	0	0	0	0
08:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure B-1

Balancing Adjustments

LOCATION:	**Weston Rd & John St**			*ATO / DISTRICT / WARD:*	**2 (Etobicoke York) / 5**	
MODE/COMMENT:	**SAP with PR, 2-wire Polara APS & LPI**			*COMPUTER SYSTEM:*	**TransSuite**	
TCS:	**581**			*CONTROLLER/CABINET TYPE:*	**Econolite Cobalt / TS2T1**	
PREPARED BY/DATE:	**IBI / December 3, 2021**			*CONFLICT FLASH:*	**Red & Red**	
CHECKED BY/DATE:	**Ranajamil Iftikhar & Ihtesham Ahmad / December 08, 2021**			*DESIGN WALK SPEED:*	**1.0 m/s (FDW based on full crossing at 1.2 m/s)**	
IMPLEMENTATION DATE:	**January 24, 2022**			*CHANNEL/DROP:*	**5021/19**	
				CONTROLLER FIRMWARE:	**32.63.1**	

NEMA Phase		OFF	AM	PM	NGHT	WKND	Phase Mode	Remarks
		All Other Times	06:30-09:00 M-F	14:00-19:00 M-F	23:00-06:30 Daily	11:00-19:00 Sat & Sun	(Fixed/Demanded/Callable)	
	Local Plan	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5		
	System Plan	Split 1	Split 2	Split 3	Split 4	Split 5		
1	WLK						Fixed	Pedestrian Minimums: NSWK = 7 seconds, NSFD = 8 seconds EWWK = 7 seconds, EWFD = 12 seconds
	FDW							
	MIN 6							
	MAX1 6							EW phase is callable by vehicle or pedestrian actuation. If a vehicle and/or pedestrian call is received, the maximum WBG is served. The EWWK & EWFD are displayed on the pedestrian signal heads if a vehicle and/or pedestrian call is received.
	AMB 3.2							
	ALR 3.2							
	SPLIT	13	13	13		13		
2 Weston Rd	WLK 7						Fixed	Side street passage time = 3 seconds
	FDW 8							APS on during 7 seconds of NSWK & EWWK when activated by pushbutton and no left-turn arrows are displayed
	MIN 15							
	MAX1 56							Extended push activation = 3 seconds
	AMB 3.2							
	ALR 1.8							EW Leading Pedestrian Interval - EWWK comes up 5 seconds before EW vehicle green.
	SPLIT	61	77	77	62	61		
3 NOT USED	WLK							The following grades were used to calculate the AMB intervals: North Leg = 1.6% South Leg = 2.3% East Leg = 1.2%
	FDW							
	MIN							
	MAX1							
	AMB							
	ALR							
	SPLIT							
4 John St	DLY G 5						Split shown includes 5 seconds of EW LPI	
	WLK 7							
	FDW 12							
	MIN 14							
	MAX1 14							
	AMB 3.0							
	ALR 3.6							
	SPLIT	26	26	26	26	26		
5 NOT USED	WLK							
	FDW							
	MIN							
	MAX1							
	AMB							
	ALR							
	SPLIT							
6 Weston Rd	WLK 7						Fixed	
	FDW 8							
	MIN 15							
	MAX1 69							
	AMB 3.2							
	ALR 1.8							
	SPLIT	74	90	90	62	74		
7 NOT USED	WLK							
	FDW							
	MIN							
	MAX1							
	AMB							
	ALR							
	SPLIT							
8 John St	DLY G 5						Callable by stopbar Wavetronix detector and/or pushbutton; Split shown includes 5 seconds of EW LPI	
	WLK 7							
	FDW 12							
	MIN 14							
	MAX1 14							
	AMB 3.0							
	ALR 3.6							
	SPLIT	26	26	26	26	26		
	CL	100	116	116	88	100		
	OF	30	104	5	42	17		

NOTES: T intersection - no west leg.

LOCATION:	**Weston Rd & Lawrence Ave W**						*ATO / DISTRICT / WARD:*	**2 (Etobicoke York) / 5**	N
MODE/COMMENT:	**SA1 with 2-Wire Polara APS & RLC (WB)**						*COMPUTER SYSTEM:*	**TransSuite**	↑
TCS:	**431**						*CONTROLLER/CABINET TYPE:*	**Econolite Cobalt / TS2T1**	
PREPARED BY/DATE:	**IBI / December 3, 2021**						*CONFLICT FLASH:*	**Red & Red**	
CHECKED BY/DATE:	**Ranajamil Iftikhar & Ihtesham Ahmad / December 08, 2021**						*DESIGN WALK SPEED:*	**0.9 m/s (FDW based on full crossing at 1.1 m/s)**	
IMPLEMENTATION DATE:	**January 12, 2022**						*CHANNEL/DROP:*	**5005/28**	
							CONTROLLER FIRMWARE:	**32.63.10**	

NEMA Phase		OFF	AM	PM	NGHT	WKND	401 Closure	Phase Mode	Remarks
		All Other Times	06:30-09:00 M-F	14:00-19:00 M-F	23:00-06:30 Daily	11:00-19:00 Sat & Sun		(Fixed/Demanded/Callable)	
	Local Plan	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 16		
	System Plan	Split 1	Split 2	Split 3	Split 4	Split 5	Plan 16		
1 NOT USED	WLK								Pedestrian Minimums:
	FDW								NSWK = 8 seconds, NSFD = 25 seconds
	MIN								EWWK = 8 seconds, EWFD = 28 seconds
	MAX1								Left-turn passage time = 2 seconds
	AMB								Extended push activation = 3 seconds
	ALR								APS on during full walk of NSWK & EWWK when activated by pushbutton and no left-turn arrows are displayed.
	SPLIT								
2 Weston Rd	WLK 8							Fixed	The following grades were used to calculate the AMB intervals:
	FDW 25								North Leg = -2.5%
	MIN 33								South Leg = 0.8%
	MAX1 49								East Leg = 1.6%
	AMB 3.5								West Leg = 1%
	ALR 3.6								
	SPLIT	57	60	60	45	57	63		
3	WLK							Callable / Extendable by Setback Wavetronix	
	FDW								
	MIN 6								
	MAX1 6								
	AMB 3.2								
	ALR 3.1								
	SPLIT		13	13					
4 Lawrence Ave W	WLK 8							Fixed	
	FDW 28								
	MIN 36								
	MAX1 36								
	AMB 3.3								
	ALR 3.2								
	SPLIT	43	43	43	43	43	57		
5	WLK							Fixed	
	FDW								
	MIN 6								
	MAX1 6								
	AMB 3.3								
	ALR 4.5								
	SPLIT	14	14	14		14	14		
6 Weston Rd	WLK 8							Fixed	
	FDW 25								
	MIN 33								
	MAX1 35								
	AMB 3.5								
	ALR 3.6								
	SPLIT	43	46	46	45	43	49		
7 NOT USED	WLK								
	FDW								
	MIN								
	MAX1								
	AMB								
	ALR								
	SPLIT								
8 Lawrence Ave W	WLK 8							Fixed	
	FDW 28								
	MIN 36								
	MAX1 36								
	AMB 3.3								
	ALR 3.2								
	SPLIT	43	56	56	43	43	57		
	CL	100	116	116	88	100	120		
	OF	43	20	22	56	30	80		

NOTES:

APPENDIX

C LOS DEFINITIONS

LEVEL OF SERVICE DEFINITIONS AT SIGNALIZED INTERSECTIONS[1]

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. The criteria are given in the table below. Delay may be measured in the field or estimated using software such as Highway Capacity Software. Delay is a complex measure and is dependent upon a number of variables, including quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

Level of Service	Features	Control Delay per vehicle (sec)
A	LOS A describes operations with very low delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favourable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10
B	LOS B describes operations with delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10 and ≤ 20
C	LOS C describes operations with delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.	> 20 and ≤ 35
D	LOS D describes operations with delay greater than 35 and up to 55 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavourable progression, long cycle lengths, of high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35 and ≤ 55
E	LOS E describes operations with delay greater than 55 and up to 80 sec per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.	> 55 and ≤ 80
F	LOS F describes operations with delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	> 80

(1) Highway Capacity Manual 2000

LEVEL OF SERVICE DEFINITIONS AT UNSIGNALIZED INTERSECTIONS[1]

The level of service criteria for unsignalized intersections are given in the table below. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

Level of Service	Features	Average Total Delay (sec/veh)
A	Little or no traffic delay occurs. Approaches appear open, turning movements are easily made, and drivers have freedom of operation.	≤ 10
B	Short traffic delays occur. Many drivers begin to feel somewhat restricted in terms of freedom of operation.	> 10 and ≤ 15
C	Average traffic delays occur. Operations are generally stable, but drivers emerging from the minor street may experience difficulty in completing their movement. This may occasionally impact on the stability of flow on the major street.	> 15 and ≤ 25
D	Long traffic delays occur. Motorists emerging from the minor street experience significant restriction and frustration. Drivers on the major street will experience congestion and delay as drivers emerging from the minor street interfere with the major through movements.	> 25 and ≤ 35
E	Very long traffic delays occur. Operations approach the capacity of the intersection.	> 35 and ≤ 50
F	Saturation occurs, with vehicle demand exceeding the available capacity. Very long traffic delays occur.	> 50

(1) Highway Capacity Manual 2000.

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APPENDIX

D

EXISTING TRAFFIC CONDITIONS

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	7	18	343	8	15	471	
Future Volume (vph)	7	18	343	8	15	471	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.96		0.99			0.99	
Frt	0.901		0.997				
Flt Protected	0.987					0.998	
Satd. Flow (prot)	1419	0	3255	0	0	3277	
Flt Permitted	0.987					0.942	
Satd. Flow (perm)	1399	0	3255	0	0	3070	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	19		4				
Link Speed (k/h)	40		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	5.6		9.5			8.2	
Confl. Peds. (#/hr)	21	12		140	140		
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	29%	0%	8%	13%	0%	9%	
Adj. Flow (vph)	7	19	361	8	16	496	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	26	0	369	0	0	512	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	3.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	
Lead/Lag	Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Walk Time (s)	2.0		7.0			7.0	3.0
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	33		0			140	33
Act Effct Green (s)	15.0		73.0			92.5	
Actuated g/C Ratio	0.13		0.63			0.80	
v/c Ratio	0.13		0.18			0.21	
Control Delay	24.6		5.4			3.9	
Queue Delay	0.0		0.0			0.0	
Total Delay	24.6		5.4			3.9	
LOS	C		A			A	
Approach Delay	24.6		5.4			3.9	
Approach LOS	C		A			A	
Queue Length 50th (m)	1.5		9.8			16.7	
Queue Length 95th (m)	10.3		m13.0			22.2	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	202		2049			2476	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.13		0.18			0.21	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 104 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.21		
Intersection Signal Delay: 5.1	Intersection LOS: A	
Intersection Capacity Utilization 43.5%	ICU Level of Service A	
Analysis Period (min) 15		
m Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 1: Weston Rd & John St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	709	172	62	517	53	68	293	71	45	401	24
Future Volume (vph)	4	709	172	62	517	53	68	293	71	45	401	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.971			0.986			0.975			0.992	
Flt Protected				0.950				0.992			0.995	
Satd. Flow (prot)	0	2902	0	1559	2989	0	0	3100	0	0	3171	0
Flt Permitted		0.953		0.128				0.726			0.856	
Satd. Flow (perm)	0	2765	0	208	2989	0	0	2239	0	0	2713	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								26			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		353.9			79.6			230.4			131.7	
Travel Time (s)		25.5			5.7			16.6			9.5	
Confl. Peds. (#/hr)	84		61	61		84	194		100	100		194
Confl. Bikes (#/hr)						1			6			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	10%	7%	10%	8%	8%	9%	8%	9%	9%	5%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	4	723	176	63	528	54	69	299	72	46	409	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	903	0	63	582	0	0	440	0	0	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	36.0	36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)	43.0	43.0		13.0	43.0		14.0	41.0		41.0	41.0	
Total Split (s)	43.0	43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)	37.1%	37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)	36.5	36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)	3.3	3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)	3.2	3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)	8.0	8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)	28.0	28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)	84	84			61			194		100	100	
Act Effct Green (s)		40.2		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.35		0.44	0.44			0.46			0.34	
v/c Ratio		0.94		0.36	0.45			0.40			0.51	
Control Delay		56.5		25.0	24.4			19.5			28.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		56.5		25.0	24.4			19.5			28.8	
LOS		E		C	C			B			C	
Approach Delay		56.5			24.4			19.5			28.8	
Approach LOS		E			C			B			C	
Queue Length 50th (m)		~115.4		8.7	50.3			31.4			47.1	
Queue Length 95th (m)		#160.6		17.5	66.3			43.4			64.5	
Internal Link Dist (m)		329.9			55.6			206.4			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		957		180	1301			1112			936	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.94		0.35	0.45			0.40			0.51	

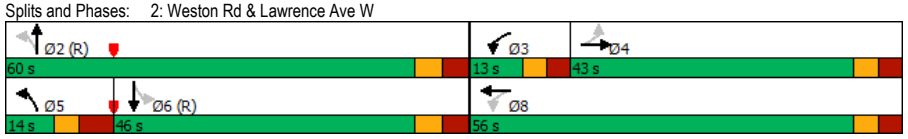
Intersection Summary

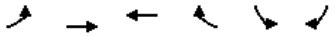
Area Type: Other
Cycle Length: 116
Actuated Cycle Length: 116
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 121.3% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

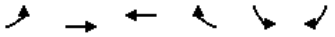
Splits and Phases: 2: Weston Rd & Lawrence Ave W





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	19	26	13	1	1
Future Volume (vph)	2	19	26	13	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.956		0.932	
Flt Protected		0.995			0.976	
Satd. Flow (prot)	0	1869	1816	0	1728	0
Flt Permitted		0.995			0.976	
Satd. Flow (perm)	0	1869	1816	0	1728	0
Link Speed (k/h)		30	30		30	
Link Distance (m)		61.9	64.9		38.5	
Travel Time (s)		7.4	7.8		4.6	
Confl. Peds. (#/hr)	11			11	13	11
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	3	25	35	17	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	52	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

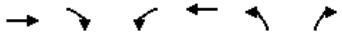
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	19	26	13	1	1
Future Volume (Veh/h)	2	19	26	13	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	3	25	35	17	1	1
Pedestrians		11	13		11	
Lane Width (m)		3.5	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		62				
pX, platoon unblocked						
vC, conflicting volume	63				98	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	63				98	66
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1538				886	986

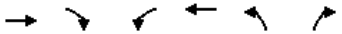
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	28	52	2
Volume Left	3	0	1
Volume Right	0	17	1
cSH	1538	1700	933
Volume to Capacity	0.00	0.03	0.00
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	0.8	0.0	8.9
Approach LOS			A

Intersection Summary					
Average Delay		0.5			
Intersection Capacity Utilization		19.5%	ICU Level of Service		A
Analysis Period (min)		15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	20	0	0	40	0
Future Volume (vph)	0	20	0	0	40	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1625	0	0	1842	1785	0
Flt Permitted					0.950	
Satd. Flow (perm)	1625	0	0	1842	1785	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		14	14		24	55
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	2%	0%	2%	2%	0%	2%
Adj. Flow (vph)	0	30	0	0	61	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

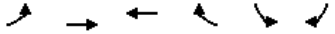
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	20	0	0	40	0
Future Volume (vph)	0	20	0	0	40	0
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	0	30	0	0	61	0

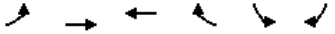
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	30	0	61
Volume Left (vph)	0	0	61
Volume Right (vph)	30	0	0
Hadj (s)	-0.60	0.00	0.20
Departure Headway (s)	3.4	4.1	4.2
Degree Utilization, x	0.03	0.00	0.07
Capacity (veh/h)	1023	879	849
Control Delay (s)	6.5	7.1	7.5
Approach Delay (s)	6.5	0.0	7.5
Approach LOS	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	838	566	44	34	13
Future Volume (vph)	20	838	566	44	34	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.989		0.963	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	3268	3177	0	1709	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	3268	3177	0	1709	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	319.8		54.9	
Travel Time (s)		5.7	23.0		4.0	
Confl. Peds. (#/hr)	10			10	55	24
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	15%	9%	12%	0%	0%	8%
Adj. Flow (vph)	22	921	622	48	37	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	943	670	0	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		



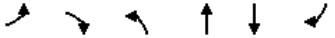
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	838	566	44	34	13
Future Volume (Veh/h)	20	838	566	44	34	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	921	622	48	37	14
Pedestrians		24	55		10	
Lane Width (m)		3.5	3.5		3.5	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		2	4		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.73	
vC, conflicting volume	680				1216	369
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	680				569	369
tC, single (s)	4.4				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.4
p0 queue free %	97				88	98
cM capacity (veh/h)	820				310	594

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	329	614	415	255	51
Volume Left	22	0	0	0	37
Volume Right	0	0	0	48	14
cSH	820	1700	1700	1700	357
Volume to Capacity	0.03	0.36	0.24	0.15	0.14
Queue Length 95th (m)	0.7	0.0	0.0	0.0	4.0
Control Delay (s)	0.9	0.0	0.0	0.0	16.8
Lane LOS	A				C
Approach Delay (s)	0.3		0.0		16.8
Approach LOS					C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	9	10	60	34	5
Future Volume (vph)	6	9	10	60	34	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919				0.984	
Flt Protected	0.980			0.993		
Satd. Flow (prot)	1552	0	0	1759	1817	0
Flt Permitted	0.980			0.993		
Satd. Flow (perm)	1552	0	0	1759	1817	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	41.2			87.2	20.6	
Travel Time (s)	4.9			6.3	1.5	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	15%	30%	2%	2%	0%
Adj. Flow (vph)	8	12	13	77	44	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	90	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		



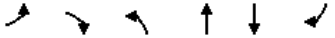
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	9	10	60	34	5
Future Volume (Veh/h)	6	9	10	60	34	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	8	12	13	77	44	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	150	47	50			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150	47	50			
tC, single (s)	6.4	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.5			
p0 queue free %	99	99	99			
cM capacity (veh/h)	839	986	1395			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	20	90	50
Volume Left	8	13	0
Volume Right	12	0	6
cSH	922	1395	1700
Volume to Capacity	0.02	0.01	0.03
Queue Length 95th (m)	0.5	0.2	0.0
Control Delay (s)	9.0	1.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	1.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	21	38	34	16	4
Future Volume (vph)	3	21	38	34	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.882				0.975	
Flt Protected	0.994			0.974		
Satd. Flow (prot)	1565	0	0	1740	1803	0
Flt Permitted	0.994			0.974		
Satd. Flow (perm)	1565	0	0	1740	1803	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	33.2			20.6	55.0	
Travel Time (s)	4.0			1.9	5.0	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles (%)	0%	6%	8%	2%	2%	0%
Adj. Flow (vph)	5	34	61	55	26	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	116	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	21	38	34	16	4
Future Volume (Veh/h)	3	21	38	34	16	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Hourly flow rate (vph)	5	34	61	55	26	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	206	29	32			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	206	29	32			
tC, single (s)	6.4	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	99	97	96			
cM capacity (veh/h)	756	1034	1542			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	39	116	32
Volume Left	5	61	0
Volume Right	34	0	6
cSH	988	1542	1700
Volume to Capacity	0.04	0.04	0.02
Queue Length 95th (m)	1.0	1.0	0.0
Control Delay (s)	8.8	4.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	4.1	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		4.3		
Intersection Capacity Utilization		20.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	15	39	460	22	39	507	
Future Volume (vph)	15	39	460	22	39	507	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.86		0.98			0.99	
Frt	0.902		0.993				
Flt Protected	0.987					0.996	
Satd. Flow (prot)	1434	0	3333	0	0	3398	
Flt Permitted	0.987					0.890	
Satd. Flow (perm)	1354	0	3333	0	0	2998	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	40		8				
Link Speed (k/h)	30		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	7.4		9.5			8.2	
Confl. Peds. (#/hr)	82	47		134	134		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	0%	4%	0%	0%	5%	
Adj. Flow (vph)	15	40	474	23	40	523	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	55	0	497	0	0	563	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	1.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	
Lead/Lag	Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None
Walk Time (s)	2.0		7.0			7.0	3.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	129		0			134	129
Act Effct Green (s)	15.0		73.0			86.4	
Actuated g/C Ratio	0.13		0.63			0.74	
v/c Ratio	0.26		0.24			0.25	
Control Delay	23.0		4.8			4.8	
Queue Delay	0.0		0.0			0.0	
Total Delay	23.0		4.8			4.8	
LOS	C		A			A	
Approach Delay	23.0		4.8			4.8	
Approach LOS	C		A			A	
Queue Length 50th (m)	3.2		10.1			18.6	
Queue Length 95th (m)	15.8		12.9			24.5	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	214		2100			2265	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.26		0.24			0.25	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 5 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.26		
Intersection Signal Delay: 5.7		Intersection LOS: A
Intersection Capacity Utilization 51.9%		ICU Level of Service A
Analysis Period (min) 15		

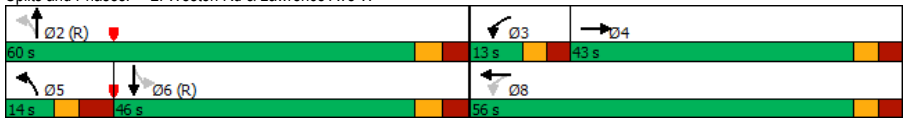
Splits and Phases: 1: Weston Rd & John St

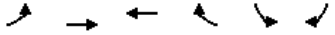
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	742	134	89	585	80	100	411	97	64	409	30
Future Volume (vph)	0	742	134	89	585	80	100	411	97	64	409	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.977			0.982			0.976			0.991	
Flt Protected				0.950				0.992			0.994	
Satd. Flow (prot)	0	3044	0	1604	3092	0	0	3233	0	0	3303	0
Flt Permitted				0.102				0.643			0.770	
Satd. Flow (perm)	0	3044	0	170	3092	0	0	2070	0	0	2541	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								25			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		248.8			79.6			134.7			131.7	
Travel Time (s)		17.9			5.7			9.7			9.5	
Confl. Peds. (#/hr)	85		88	88		85	190		123	123		190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	2%	4%	6%	0%	2%	5%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	0	781	141	94	616	84	105	433	102	67	431	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	922	0	94	700	0	0	640	0	0	530	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type		NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases				8			2			6		
Detector Phase		4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)		36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)		43.0		13.0	43.0		13.8	41.0		41.0	41.0	
Total Split (s)		43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)		37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)		36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)		3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)		3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag		Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode		Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)		8.0			7.0			8.0		8.0	8.0	
Flash Dont Walk (s)		28.0			24.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)		85			88			190		123	123	
Act Effct Green (s)		37.6		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.32		0.44	0.44			0.46			0.34	
v/c Ratio		0.93		0.56	0.52			0.61			0.60	
Control Delay		55.0		32.8	25.6			23.5			30.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		55.0		32.8	25.6			23.5			30.4	
LOS		E		C	C			C			C	
Approach Delay		55.0			26.5			23.5			30.4	
Approach LOS		E			C			C			C	
Queue Length 50th (m)		112.2		13.2	63.0			50.1			54.3	
Queue Length 95th (m)		#154.1		24.2	81.3			65.6			73.8	
Internal Link Dist (m)		224.8			55.6			110.7			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		988		169	1346			1054			877	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.93		0.56	0.52			0.61			0.60	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 22 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.93		
Intersection Signal Delay: 35.7	Intersection LOS: D	
Intersection Capacity Utilization 109.2%	ICU Level of Service H	
Analysis Period (min) 15		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

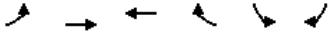
Splits and Phases: 2: Weston Rd & Lawrence Ave W





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	43	42	33	10	10
Future Volume (vph)	17	43	42	33	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.940		0.932	
Flt Protected		0.986			0.976	
Satd. Flow (prot)	0	1814	1786	0	1728	0
Flt Permitted		0.986			0.976	
Satd. Flow (perm)	0	1814	1786	0	1728	0
Link Speed (k/h)		30	30		30	
Link Distance (m)		61.9	64.9		38.5	
Travel Time (s)		7.4	7.8		4.6	
Confl. Peds. (#/hr)	101			101	28	26
Confl. Bikes (#/hr)						3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	22	54	53	42	13	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	95	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

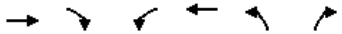
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	43	42	33	10	10
Future Volume (Veh/h)	17	43	42	33	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	22	54	53	42	13	13
Pedestrians		26	28		101	
Lane Width (m)		3.5	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		2	2		8	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		62				
pX, platoon unblocked						
vC, conflicting volume	196				301	201
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196				301	201
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	98
cM capacity (veh/h)	1272				611	758

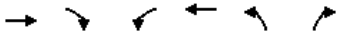
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	95	26
Volume Left	22	0	13
Volume Right	0	42	13
cSH	1272	1700	676
Volume to Capacity	0.02	0.06	0.04
Queue Length 95th (m)	0.4	0.0	1.0
Control Delay (s)	2.4	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	49	7	4	74	2
Future Volume (vph)	8	49	7	4	74	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.884				0.996	
Flt Protected				0.969	0.954	
Satd. Flow (prot)	1619	0	0	1821	1785	0
Flt Permitted				0.969	0.954	
Satd. Flow (perm)	1619	0	0	1821	1785	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		16	16		37	77
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	12	74	11	6	112	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	0	17	115	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

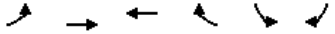
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	8	49	7	4	74	2
Future Volume (vph)	8	49	7	4	74	2
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	12	74	11	6	112	3

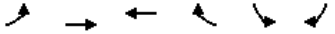
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	86	17	115
Volume Left (vph)	0	11	112
Volume Right (vph)	74	0	3
Hadj (s)	-0.47	0.13	0.18
Departure Headway (s)	3.7	4.4	4.3
Degree Utilization, x	0.09	0.02	0.14
Capacity (veh/h)	937	795	813
Control Delay (s)	7.1	7.5	8.0
Approach Delay (s)	7.1	7.5	8.0
Approach LOS	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	890	708	81	38	42
Future Volume (vph)	37	890	708	81	38	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.985		0.929	
Flt Protected		0.998			0.977	
Satd. Flow (prot)	0	3365	3330	0	1705	0
Flt Permitted		0.998			0.977	
Satd. Flow (perm)	0	3365	3330	0	1705	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	160.0		54.9	
Travel Time (s)		5.7	11.5		4.0	
Confl. Peds. (#/hr)	35			35	77	37
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	6%	2%	0%	0%
Adj. Flow (vph)	39	927	738	84	40	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	966	822	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		



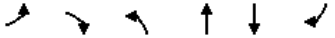
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	890	708	81	38	42
Future Volume (Veh/h)	37	890	708	81	38	42
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	39	927	738	84	40	44
Pedestrians		37	77		35	
Lane Width (m)		3.5	3.5		3.5	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		3	6		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.72	
vC, conflicting volume	857				1434	483
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	857				839	483
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				79	91
cM capacity (veh/h)	751				193	504

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	348	618	492	330	84
Volume Left	39	0	0	0	40
Volume Right	0	0	0	84	44
cSH	751	1700	1700	1700	285
Volume to Capacity	0.05	0.36	0.29	0.19	0.29
Queue Length 95th (m)	1.3	0.0	0.0	0.0	9.6
Control Delay (s)	1.7	0.0	0.0	0.0	22.8
Lane LOS	A				C
Approach Delay (s)	0.6		0.0		22.8
Approach LOS					C

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	3	7	121	85	4
Future Volume (vph)	1	3	7	121	85	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892				0.994	
Flt Protected	0.990			0.997		
Satd. Flow (prot)	1659	0	0	1838	1833	0
Flt Permitted	0.990			0.997		
Satd. Flow (perm)	1659	0	0	1838	1833	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	41.2			87.2	20.6	
Travel Time (s)	4.9			6.3	1.5	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	1	4	9	161	113	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	170	118	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		



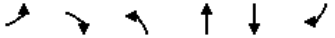
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	3	7	121	85	4
Future Volume (Veh/h)	1	3	7	121	85	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1	4	9	161	113	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	294	116	118			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	116	118			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	696	942	1483			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	170	118
Volume Left	1	9	0
Volume Right	4	0	5
cSH	880	1483	1700
Volume to Capacity	0.01	0.01	0.07
Queue Length 95th (m)	0.1	0.1	0.0
Control Delay (s)	9.1	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.1	0.4	0.0
Approach LOS	A		

Intersection Summary					
Average Delay		0.4			
Intersection Capacity Utilization		22.1%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	52	75	58	41	10
Future Volume (vph)	12	52	75	58	41	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.890				0.973	
Flt Protected	0.991			0.973		
Satd. Flow (prot)	1631	0	0	1812	1799	0
Flt Permitted	0.991			0.973		
Satd. Flow (perm)	1631	0	0	1812	1799	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	33.2			20.6	55.0	
Travel Time (s)	4.0			1.5	4.0	
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	2%	0%	2%	2%	0%
Adj. Flow (vph)	13	57	82	64	45	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	146	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	52	75	58	41	10
Future Volume (Veh/h)	12	52	75	58	41	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	57	82	64	45	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	278	50	56			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	278	50	56			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	94	95			
cM capacity (veh/h)	678	1018	1562			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	70	146	56
Volume Left	13	82	0
Volume Right	57	0	11
cSH	931	1562	1700
Volume to Capacity	0.08	0.05	0.03
Queue Length 95th (m)	1.9	1.3	0.0
Control Delay (s)	9.2	4.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	4.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX

E

FUTURE BACKGROUND TRAFFIC CONDITIONS

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	7	18	362	8	15	514	
Future Volume (vph)	7	18	362	8	15	514	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.96		0.99			0.99	
Frt	0.901		0.997				
Flt Protected	0.987					0.999	
Satd. Flow (prot)	1419	0	3257	0	0	3280	
Flt Permitted	0.987					0.943	
Satd. Flow (perm)	1399	0	3257	0	0	3076	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	19		3				
Link Speed (k/h)	40		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	5.6		9.5			8.2	
Confl. Peds. (#/hr)	21	12		140	140		
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	29%	0%	8%	13%	0%	9%	
Adj. Flow (vph)	7	19	381	8	16	541	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	26	0	389	0	0	557	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	3.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lead/Lag	Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None
Walk Time (s)	2.0		7.0			7.0	3.0
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	33		0			140	33
Act Effct Green (s)	15.0		73.0			92.5	
Actuated g/C Ratio	0.13		0.63			0.80	
v/c Ratio	0.13		0.19			0.22	
Control Delay	24.6		5.3			4.0	
Queue Delay	0.0		0.0			0.0	
Total Delay	24.6		5.3			4.0	
LOS	C		A			A	
Approach Delay	24.6		5.3			4.0	
Approach LOS	C		A			A	
Queue Length 50th (m)	1.5		10.1			18.5	
Queue Length 95th (m)	10.3		m13.3			24.3	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	202		2050			2480	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.13		0.19			0.22	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 104 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.22		
Intersection Signal Delay: 5.1	Intersection LOS: A	
Intersection Capacity Utilization 44.7%	ICU Level of Service A	
Analysis Period (min) 15		
m Volume for 95th percentile queue is metered by upstream signal.		

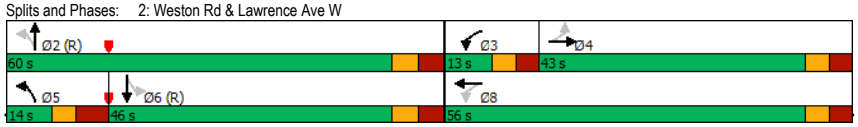
Splits and Phases: 1: Weston Rd & John St

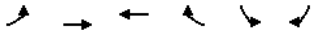
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	766	185	74	533	53	95	311	78	60	419	34
Future Volume (vph)	4	766	185	74	533	53	95	311	78	60	419	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.971			0.986			0.976			0.990	
Flt Protected				0.950				0.990			0.994	
Satd. Flow (prot)	0	2902	0	1559	2989	0	0	3099	0	0	3152	0
Flt Permitted		0.953		0.099				0.635			0.817	
Satd. Flow (perm)	0	2766	0	161	2989	0	0	1958	0	0	2575	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								26			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		353.9			79.6			230.4			131.7	
Travel Time (s)		25.5			5.7			16.6			9.5	
Confl. Peds. (#/hr)	84		61	61		84	194		100	100		194
Confl. Bikes (#/hr)						1			6			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	10%	7%	10%	8%	8%	9%	8%	9%	9%	5%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	4	782	189	76	544	54	97	317	80	61	428	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	975	0	76	598	0	0	494	0	0	524	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	36.0	36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)	43.0	43.0		13.0	43.0		14.0	41.0		41.0	41.0	
Total Split (s)	43.0	43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)	37.1%	37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)	36.5	36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)	3.3	3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)	3.2	3.2		3.1	3.2		4.5	3.6		3.6	3.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)	8.0	8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)	28.0	28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)	84	84			61			194		100	100	
Act Effct Green (s)		40.1		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.35		0.44	0.44			0.46			0.34	
v/c Ratio		1.02		0.47	0.46			0.49			0.59	
Control Delay		72.9		29.2	24.6			20.9			30.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		72.9		29.2	24.6			20.9			30.5	
LOS		E		C	C			C			C	
Approach Delay		72.9			25.1			20.9			30.5	
Approach LOS		E			C			C			C	
Queue Length 50th (m)		~138.3		10.5	52.0			36.3			53.3	
Queue Length 95th (m)		#180.3		20.3	68.4			49.3			72.4	
Internal Link Dist (m)		329.9			55.6			206.4			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		956		163	1301			1001			890	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		1.02		0.47	0.46			0.49			0.59	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.02		
Intersection Signal Delay: 42.8	Intersection LOS: D	
Intersection Capacity Utilization 131.2%	ICU Level of Service H	
Analysis Period (min) 15		
~ Volume exceeds capacity, queue is theoretically infinite.		
Queue shown is maximum after two cycles.		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

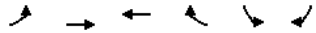
Splits and Phases: 2: Weston Rd & Lawrence Ave W





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	19	26	13	1	1
Future Volume (vph)	2	19	26	13	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.956		0.932	
Flt Protected		0.995			0.976	
Satd. Flow (prot)	0	1869	1816	0	1728	0
Flt Permitted		0.995			0.976	
Satd. Flow (perm)	0	1869	1816	0	1728	0
Link Speed (k/h)		30	30		30	
Link Distance (m)		61.9	64.9		38.5	
Travel Time (s)		7.4	7.8		4.6	
Confl. Peds. (#/hr)	11			11	13	11
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	3	25	35	17	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	52	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	19	26	13	1	1
Future Volume (Veh/h)	2	19	26	13	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	3	25	35	17	1	1
Pedestrians		11	13		11	
Lane Width (m)		3.5	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		62				
pX, platoon unblocked						
vC, conflicting volume	63				98	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	63				98	66
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1538				886	986

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	28	52	2
Volume Left	3	0	1
Volume Right	0	17	1
cSH	1538	1700	933
Volume to Capacity	0.00	0.03	0.00
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s)	0.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	0.8	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

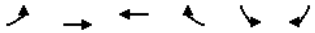
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	20	0	0	40	0
Future Volume (vph)	0	20	0	0	40	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1625	0	0	1842	1785	0
Flt Permitted					0.950	
Satd. Flow (perm)	1625	0	0	1842	1785	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		14	14		24	55
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	2%	0%	2%	2%	0%	2%
Adj. Flow (vph)	0	30	0	0	61	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	20	0	0	40	0
Future Volume (vph)	0	20	0	0	40	0
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	0	30	0	0	61	0

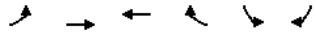
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	30	0	61
Volume Left (vph)	0	0	61
Volume Right (vph)	30	0	0
Hadj (s)	-0.60	0.00	0.20
Departure Headway (s)	3.4	4.1	4.2
Degree Utilization, x	0.03	0.00	0.07
Capacity (veh/h)	1023	879	849
Control Delay (s)	6.5	7.1	7.5
Approach Delay (s)	6.5	0.0	7.5
Approach LOS	A	A	A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	923	594	44	34	13
Future Volume (vph)	20	923	594	44	34	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.990		0.963	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	3268	3179	0	1709	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	3268	3179	0	1709	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	319.8		54.9	
Travel Time (s)		5.7	23.0		4.0	
Confl. Peds. (#/hr)	10			10		
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	15%	9%	12%	0%	0%	8%
Adj. Flow (vph)	22	1014	653	48	37	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1036	701	0	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		



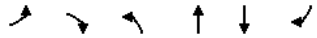
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	923	594	44	34	13
Future Volume (Veh/h)	20	923	594	44	34	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	1014	653	48	37	14
Pedestrians					10	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.70	
vC, conflicting volume	711				1238	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	711				474	360
tC, single (s)	4.4				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.4
p0 queue free %	97				90	98
cM capacity (veh/h)	797				353	614

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	360	676	435	266	51
Volume Left	22	0	0	0	37
Volume Right	0	0	0	48	14
cSH	797	1700	1700	1700	399
Volume to Capacity	0.03	0.40	0.26	0.16	0.13
Queue Length 95th (m)	0.7	0.0	0.0	0.0	3.5
Control Delay (s)	0.9	0.0	0.0	0.0	15.3
Lane LOS	A				C
Approach Delay (s)	0.3		0.0		15.3
Approach LOS					C

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	49.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	9	10	60	34	5
Future Volume (vph)	6	9	10	60	34	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919				0.984	
Flt Protected	0.980			0.993		
Satd. Flow (prot)	1552	0	0	1759	1817	0
Flt Permitted	0.980			0.993		
Satd. Flow (perm)	1552	0	0	1759	1817	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	41.2			87.2	20.6	
Travel Time (s)	4.9			6.3	1.5	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	15%	30%	2%	2%	0%
Adj. Flow (vph)	8	12	13	77	44	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	90	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	9	10	60	34	5
Future Volume (Veh/h)	6	9	10	60	34	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	8	12	13	77	44	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	150	47	50			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150	47	50			
tC, single (s)	6.4	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.5			
p0 queue free %	99	99	99			
cM capacity (veh/h)	839	986	1395			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	20	90	50
Volume Left	8	13	0
Volume Right	12	0	6
cSH	922	1395	1700
Volume to Capacity	0.02	0.01	0.03
Queue Length 95th (m)	0.5	0.2	0.0
Control Delay (s)	9.0	1.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	1.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	21	38	34	16	4
Future Volume (vph)	3	21	38	34	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.882				0.975	
Flt Protected	0.994			0.974		
Satd. Flow (prot)	1565	0	0	1740	1803	0
Flt Permitted	0.994			0.974		
Satd. Flow (perm)	1565	0	0	1740	1803	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	33.2			20.6	55.0	
Travel Time (s)	4.0			1.9	5.0	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles (%)	0%	6%	8%	2%	2%	0%
Adj. Flow (vph)	5	34	61	55	26	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	116	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	21	38	34	16	4
Future Volume (Veh/h)	3	21	38	34	16	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Hourly flow rate (vph)	5	34	61	55	26	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	206	29	32			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	206	29	32			
tC, single (s)	6.4	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	99	97	96			
cM capacity (veh/h)	756	1034	1542			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	39	116	32
Volume Left	5	61	0
Volume Right	34	0	6
cSH	988	1542	1700
Volume to Capacity	0.04	0.04	0.02
Queue Length 95th (m)	1.0	1.0	0.0
Control Delay (s)	8.8	4.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	4.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	15	39	462	22	39	566	
Future Volume (vph)	15	39	462	22	39	566	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.86		0.98			0.99	
Frt	0.902		0.993				
Flt Protected	0.987					0.997	
Satd. Flow (prot)	1434	0	3334	0	0	3400	
Flt Permitted	0.987					0.895	
Satd. Flow (perm)	1354	0	3334	0	0	3017	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	40		8				
Link Speed (k/h)	30		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	7.4		9.5			8.2	
Confl. Peds. (#/hr)	82	47		134	134		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	0%	4%	0%	0%	5%	
Adj. Flow (vph)	15	40	476	23	40	584	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	55	0	499	0	0	624	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	1.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	
Lead/Lag	Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None
Walk Time (s)	2.0		7.0			7.0	3.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	129		0			134	129
Act Effct Green (s)	15.0		73.0			86.4	
Actuated g/C Ratio	0.13		0.63			0.74	
v/c Ratio	0.26		0.24			0.27	
Control Delay	23.0		4.7			5.0	
Queue Delay	0.0		0.0			0.0	
Total Delay	23.0		4.7			5.0	
LOS	C		A			A	
Approach Delay	23.0		4.7			5.0	
Approach LOS	C		A			A	
Queue Length 50th (m)	3.2		10.1			21.1	
Queue Length 95th (m)	15.8		12.8			27.4	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	214		2101			2278	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.26		0.24			0.27	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 5 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.27		
Intersection Signal Delay: 5.7		Intersection LOS: A
Intersection Capacity Utilization 53.6%		ICU Level of Service A
Analysis Period (min) 15		

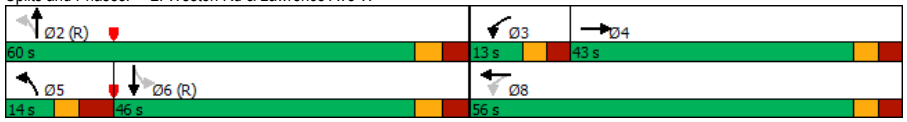
Splits and Phases: 1: Weston Rd & John St

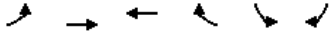
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	790	139	109	621	80	136	413	102	84	412	65
Future Volume (vph)	0	790	139	109	621	80	136	413	102	84	412	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.96			0.97	
Frt		0.978			0.983			0.977			0.983	
Flt Protected				0.950				0.990			0.993	
Satd. Flow (prot)	0	3047	0	1604	3096	0	0	3235	0	0	3247	0
Flt Permitted				0.093				0.595			0.721	
Satd. Flow (perm)	0	3047	0	155	3096	0	0	1917	0	0	2340	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								24			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		248.8			79.6			134.7			131.7	
Travel Time (s)		17.9			5.7			9.7			9.5	
Confl. Peds. (#/hr)	85		88	88		85	190		123	123		190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	2%	4%	6%	0%	2%	5%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	0	832	146	115	654	84	143	435	107	88	434	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	978	0	115	738	0	0	685	0	0	590	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type		NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases				8			2			6		
Detector Phase		4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)		36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)		43.0		13.0	43.0		13.8	41.0		41.0	41.0	
Total Split (s)		43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)		37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)		36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)		3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)		3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag		Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode		Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)		8.0			7.0			8.0		8.0	8.0	
Flash Dont Walk (s)		28.0			24.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)		85			88			190		123	123	
Act Effct Green (s)		37.5		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.32		0.44	0.44			0.46			0.34	
v/c Ratio		0.99		0.71	0.55			0.69			0.73	
Control Delay		66.6		45.1	26.2			25.9			34.2	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		66.6		45.1	26.2			25.9			34.2	
LOS		E		D	C			C			C	
Approach Delay		66.6			28.7			25.9			34.2	
Approach LOS		E			C			C			C	
Queue Length 50th (m)		122.2		16.3	67.4			54.7			63.3	
Queue Length 95th (m)		#169.4		#40.2	86.6			71.2			86.1	
Internal Link Dist (m)		224.8			55.6			110.7			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		985		163	1347			993			813	
Starvation Cap Reductn		0		0	0			0			1	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.99		0.71	0.55			0.69			0.73	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 22 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.99		
Intersection Signal Delay: 41.1	Intersection LOS: D	
Intersection Capacity Utilization 110.2%	ICU Level of Service H	
Analysis Period (min) 15		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

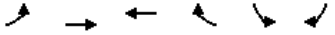
Splits and Phases: 2: Weston Rd & Lawrence Ave W





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	43	42	33	10	10
Future Volume (vph)	17	43	42	33	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.940		0.932	
Flt Protected		0.986			0.976	
Satd. Flow (prot)	0	1814	1786	0	1728	0
Flt Permitted		0.986			0.976	
Satd. Flow (perm)	0	1814	1786	0	1728	0
Link Speed (k/h)		30	30		30	
Link Distance (m)		61.9	64.9		38.5	
Travel Time (s)		7.4	7.8		4.6	
Confl. Peds. (#/hr)	101			101	28	26
Confl. Bikes (#/hr)						3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	22	54	53	42	13	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	95	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

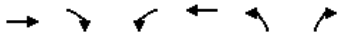
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	43	42	33	10	10
Future Volume (Veh/h)	17	43	42	33	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	22	54	53	42	13	13
Pedestrians		26	28		101	
Lane Width (m)		3.5	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		2	2		8	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		62				
pX, platoon unblocked						
vC, conflicting volume	196				301	201
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196				301	201
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	98
cM capacity (veh/h)	1272				611	758

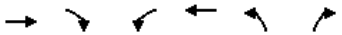
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	95	26
Volume Left	22	0	13
Volume Right	0	42	13
cSH	1272	1700	676
Volume to Capacity	0.02	0.06	0.04
Queue Length 95th (m)	0.4	0.0	1.0
Control Delay (s)	2.4	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	49	7	4	74	2
Future Volume (vph)	8	49	7	4	74	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.884				0.996	
Flt Protected				0.969	0.954	
Satd. Flow (prot)	1619	0	0	1821	1785	0
Flt Permitted				0.969	0.954	
Satd. Flow (perm)	1619	0	0	1821	1785	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		16	16		37	77
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	12	74	11	6	112	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	0	17	115	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

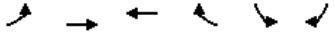
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	8	49	7	4	74	2
Future Volume (vph)	8	49	7	4	74	2
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	12	74	11	6	112	3

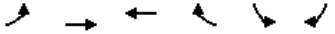
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	86	17	115
Volume Left (vph)	0	11	112
Volume Right (vph)	74	0	3
Hadj (s)	-0.47	0.13	0.18
Departure Headway (s)	3.7	4.4	4.3
Degree Utilization, x	0.09	0.02	0.14
Capacity (veh/h)	937	795	813
Control Delay (s)	7.1	7.5	8.0
Approach Delay (s)	7.1	7.5	8.0
Approach LOS	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	971	766	81	38	42
Future Volume (vph)	37	971	766	81	38	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.986		0.929	
Flt Protected		0.998			0.977	
Satd. Flow (prot)	0	3365	3333	0	1705	0
Flt Permitted		0.998			0.977	
Satd. Flow (perm)	0	3365	3333	0	1705	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	160.0		54.9	
Travel Time (s)		5.7	11.5		4.0	
Confl. Peds. (#/hr)	35			35	77	37
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	6%	2%	0%	0%
Adj. Flow (vph)	39	1011	798	84	40	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1050	882	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		



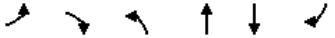
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	971	766	81	38	42
Future Volume (Veh/h)	37	971	766	81	38	42
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	39	1011	798	84	40	44
Pedestrians		37	77		35	
Lane Width (m)		3.5	3.5		3.5	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		3	6		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.70	
vC, conflicting volume	917				1536	513
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	917				906	513
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				76	91
cM capacity (veh/h)	713				168	482

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	376	674	532	350	84
Volume Left	39	0	0	0	40
Volume Right	0	0	0	84	44
cSH	713	1700	1700	1700	255
Volume to Capacity	0.05	0.40	0.31	0.21	0.33
Queue Length 95th (m)	1.4	0.0	0.0	0.0	11.0
Control Delay (s)	1.7	0.0	0.0	0.0	25.8
Lane LOS	A				D
Approach Delay (s)	0.6		0.0		25.8
Approach LOS					D

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	3	7	121	85	4
Future Volume (vph)	1	3	7	121	85	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892				0.994	
Flt Protected	0.990			0.997		
Satd. Flow (prot)	1659	0	0	1838	1833	0
Flt Permitted	0.990			0.997		
Satd. Flow (perm)	1659	0	0	1838	1833	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	41.2			87.2	20.6	
Travel Time (s)	4.9			6.3	1.5	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	1	4	9	161	113	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	170	118	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		



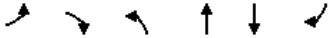
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	3	7	121	85	4
Future Volume (Veh/h)	1	3	7	121	85	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1	4	9	161	113	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	294	116	118			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	116	118			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	696	942	1483			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	170	118
Volume Left	1	9	0
Volume Right	4	0	5
cSH	880	1483	1700
Volume to Capacity	0.01	0.01	0.07
Queue Length 95th (m)	0.1	0.1	0.0
Control Delay (s)	9.1	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.1	0.4	0.0
Approach LOS	A		

Intersection Summary					
Average Delay		0.4			
Intersection Capacity Utilization		22.1%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	52	75	58	41	10
Future Volume (vph)	12	52	75	58	41	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.890				0.973	
Flt Protected	0.991			0.973		
Satd. Flow (prot)	1631	0	0	1812	1799	0
Flt Permitted	0.991			0.973		
Satd. Flow (perm)	1631	0	0	1812	1799	0
Link Speed (k/h)	30			50	50	
Link Distance (m)	33.2			20.6	55.0	
Travel Time (s)	4.0			1.5	4.0	
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	2%	0%	2%	2%	0%
Adj. Flow (vph)	13	57	82	64	45	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	146	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	52	75	58	41	10
Future Volume (Veh/h)	12	52	75	58	41	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	57	82	64	45	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	278	50	56			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	278	50	56			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	94	95			
cM capacity (veh/h)	678	1018	1562			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	70	146	56
Volume Left	13	82	0
Volume Right	57	0	11
cSH	931	1562	1700
Volume to Capacity	0.08	0.05	0.03
Queue Length 95th (m)	1.9	1.3	0.0
Control Delay (s)	9.2	4.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	4.4	0.0
Approach LOS	A		

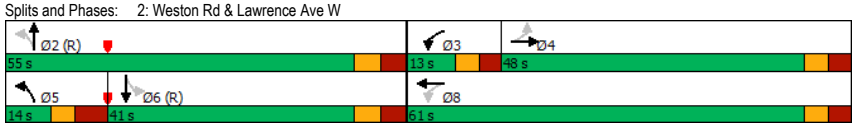
Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	766	185	74	533	53	95	311	78	60	419	34
Future Volume (vph)	4	766	185	74	533	53	95	311	78	60	419	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.971			0.986			0.976			0.990	
Flt Protected				0.950				0.990			0.994	
Satd. Flow (prot)	0	2902	0	1559	2989	0	0	3099	0	0	3152	0
Flt Permitted		0.953		0.130				0.609			0.813	
Satd. Flow (perm)	0	2766	0	211	2989	0	0	1878	0	0	2563	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								24			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		353.9			79.6			230.4			131.7	
Travel Time (s)		25.5			5.7			16.6			9.5	
Confl. Peds. (#/hr)	84		61	61		84	194		100	100		194
Confl. Bikes (#/hr)						1			6			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	10%	7%	10%	8%	8%	9%	8%	9%	9%	5%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	4	782	189	76	544	54	97	317	80	61	428	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	975	0	76	598	0	0	494	0	0	524	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	36.0	36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)	43.0	43.0		13.0	43.0		14.0	41.0		41.0	41.0	
Total Split (s)	48.0	48.0		13.0	61.0		14.0	55.0		41.0	41.0	
Total Split (%)	41.4%	41.4%		11.2%	52.6%		12.1%	47.4%		35.3%	35.3%	
Maximum Green (s)	41.5	41.5		6.7	54.5		6.2	47.9		33.9	33.9	
Yellow Time (s)	3.3	3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)	3.2	3.2		3.1	3.2		4.5	3.6		3.6	3.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)	8.0	8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)	28.0	28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)	84	84			61			194		100	100	
Act Effct Green (s)		45.1		55.7	55.5			48.9			34.9	
Actuated g/C Ratio		0.39		0.48	0.48			0.42			0.30	
v/c Ratio		0.91		0.40	0.42			0.56			0.68	
Control Delay		47.4		23.1	20.9			25.2			36.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		47.4		23.1	20.9			25.2			36.7	
LOS		D		C	C			C			D	
Approach Delay		47.4			21.1			25.2			36.7	
Approach LOS		D			C			C			D	
Queue Length 50th (m)		118.8		9.6	47.6			39.7			57.3	
Queue Length 95th (m)		#164.6		18.6	62.6			54.0			77.7	
Internal Link Dist (m)		329.9			55.6			206.4			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		1075		190	1430			888			775	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.91		0.40	0.42			0.56			0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 34.5		Intersection LOS: C	
Intersection Capacity Utilization 131.2%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Weston Rd & Lawrence Ave W

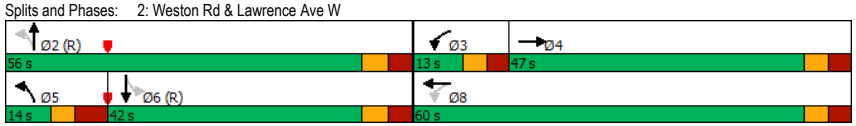


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	790	139	109	621	80	136	413	102	84	412	65
Future Volume (vph)	0	790	139	109	621	80	136	413	102	84	412	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.96			0.97	
Frt		0.978			0.983			0.977			0.983	
Flt Protected				0.950				0.990			0.993	
Satd. Flow (prot)	0	3047	0	1604	3096	0	0	3235	0	0	3247	0
Flt Permitted				0.108				0.581			0.723	
Satd. Flow (perm)	0	3047	0	180	3096	0	0	1873	0	0	2346	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								23			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		248.8			79.6			134.7			131.7	
Travel Time (s)		17.9			5.7			9.7			9.5	
Confl. Peds. (#/hr)	85		88	88		85	190		123	123		190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	2%	4%	6%	0%	2%	5%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	0	832	146	115	654	84	143	435	107	88	434	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	978	0	115	738	0	0	685	0	0	590	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type		NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases				8			2			6		
Detector Phase		4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)		36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)		42.5		12.3	42.5		13.8	40.1		40.1	40.1	
Total Split (s)		47.0		13.0	60.0		14.0	56.0		42.0	42.0	
Total Split (%)		40.5%		11.2%	51.7%		12.1%	48.3%		36.2%	36.2%	
Maximum Green (s)		40.5		6.7	53.5		6.2	48.9		34.9	34.9	
Yellow Time (s)		3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)		3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag		Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)		8.0			7.0			8.0		8.0	8.0	
Flash Dont Walk (s)		28.0			24.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)		85			88			190		123	123	
Act Effct Green (s)		41.6		54.7	54.5			49.9			35.9	
Actuated g/C Ratio		0.36		0.47	0.47			0.43			0.31	
v/c Ratio		0.90		0.65	0.51			0.75			0.80	
Control Delay		47.1		35.3	22.9			31.0			41.1	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		47.1		35.3	22.9			31.0			41.1	
LOS		D		D	C			C			D	
Approach Delay		47.1			24.6			31.0			41.1	
Approach LOS		D			C			C			D	
Queue Length 50th (m)		115.4		15.2	62.8			58.8			66.8	
Queue Length 95th (m)		#155.6		#32.3	80.8			76.5			90.7	
Internal Link Dist (m)		224.8			55.6			110.7			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		1092		179	1454			911			735	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.90		0.64	0.51			0.75			0.80	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 22 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 36.2		Intersection LOS: D	
Intersection Capacity Utilization 110.2%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Weston Rd & Lawrence Ave W



APPENDIX

F TTS DATA

Fri Aug 05 2022 13:21:03 GMT-0400 (Chile Standard Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of destination - gta06_dest In 132 133 134
and
Trip purpose of destination - purp_dest In h
and
Start time of trip - start_time In 0630-0930

Table: Trip 2016

Row:	Count:	Expanded:	Mode %	Non-Auto
Transit excluding GO rail	1	23	4.6%	14.2%
Auto driver	23	414	82.6%	
GO rail only	1	8	1.6%	
Auto passenger	2	16	3.2%	
Walk	3	40	8.0%	
Total:	30	501	100.0%	

Fri Aug 05 2022 13:20:28 GMT-0400 (Chile Standard Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of origin - gta06_orig In 132 133 134
and
Trip purpose of origin - purp_orig In h
and
Start time of trip - start_time In 0630-0930

Table: Trip 2016

Row:	Count:	Expanded:	MODE	Non-Auto
Transit excluding GO rail	90	2343	29.7%	38.2%
Cycle	1	19	0.2%	
Auto driver	186	3982	50.4%	
GO rail only	16	97	1.2%	
Joint GO rail and local transit	1	11	0.1%	
Motorcycle	1	17	0.2%	
Other	1	21	0.3%	
Auto passenger	35	818	10.4%	
School bus	4	85	1.1%	
Taxi passenger	2	65	0.8%	
Walk	15	439	5.6%	
Total:	352	7899	100.0%	

Fri Aug 05 2022 13:21:28 GMT-0400 (Chile Standard Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of destination - gta06_dest In 132 133 134
and
Trip purpose of destination - purp_dest In h
and
Start time of trip - start_time In 1630-1930

Table: Trip 2016

Row:	Count:	Expanded:	MODE	Non-Auto
Transit excluding GO rail	49	1230	22.7%	28.1%
Cycle	2	27	0.5%	
Auto driver	146	3313	61.2%	
GO rail only	16	101	1.9%	
Joint GO rail and local transit	1	4	0.1%	
Motorcycle	1	17	0.3%	
Auto passenger	23	555	10.2%	
Taxi passenger	1	10	0.2%	
Walk	5	158	2.9%	
Total:	244	5416	100.0%	

Fri Aug 05 2022 13:19:52 GMT-0400 (Chile Standard Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

All dwelling unit types

Field: Primary travel mode of trip - mode_prime

Filters:

2006 GTA zone of origin - gta06_orig In 132 133 134

and

Trip purpose of origin - purp_orig In h

and

Start time of trip - start_time In 1630-1930

Table: Trip 2016

Row:	Count:	Expanded:	MODE	Non-Auto
Transit excluding GO rail	7	142	11.8%	12.7%
Auto driver	37	655	54.3%	
GO rail only	2	11	0.9%	
Motorcycle	1	16	1.3%	
Auto passenger	18	382	31.7%	
Total:	65	1207	100.1%	

TTS Trip Distribution Summary

In order to inform the trip assignment stage of the analysis, informaton about the general trip distribution is required to inform the analysis. The distribution represents the proportion of trips to and away from the site in any given direction. The following pages summarizes the general trip distribution results, which were calculated using Transportation Tomorrow Survey (TTS) 2016 trip origin and destination data. Trips were grouped under cardinal directions based on the relative angle between trip origin and destination, and appropriate adjustments were made to the calculation to conform to local geography and street grid.

The "TTS Directional Distribution Summary" on the next page presents a summary of the calculations described above, along with notes on any details specific to the analysis in this report. The table shows the total number of trips to and from the subject site categorized into general directions (North, Northeast, East etc.) and the percentage share of trips in each general direction in all directions.

The pages after show graphical illustrations of the categorizations for all Traffic Analysis Zones (TAZ) in the TTS survey area. Note that the latest survey zones were last updated in 2006.

These results are used as reference information for the trip assignment. They do not directly determine the trip assignment on the study network. The final trip assignments are completed based on a combination of local context, engineering experience, and engineering judgement, with the trip distribution information presented here to illustrate general travel behaviour.

TTS Directional Distribution Summary: 21 John St

Notes:

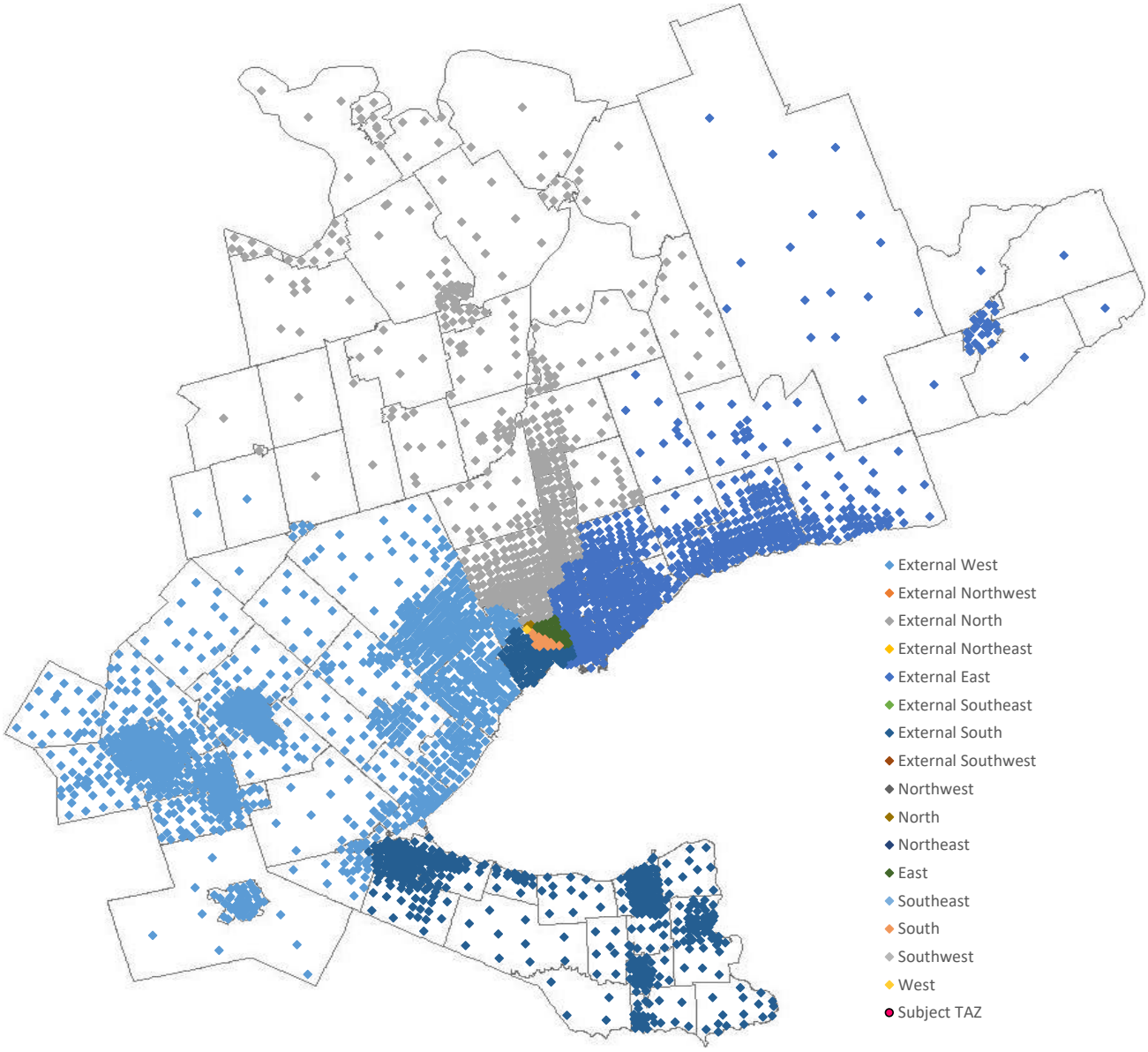
1. Directions determined based on centroid coordinates of destination/origin planning districts.

2. 'Internal' refers to local trips made within the home planning district(s), while 'External' refers to trips made to areas outside of the home planning district(s).

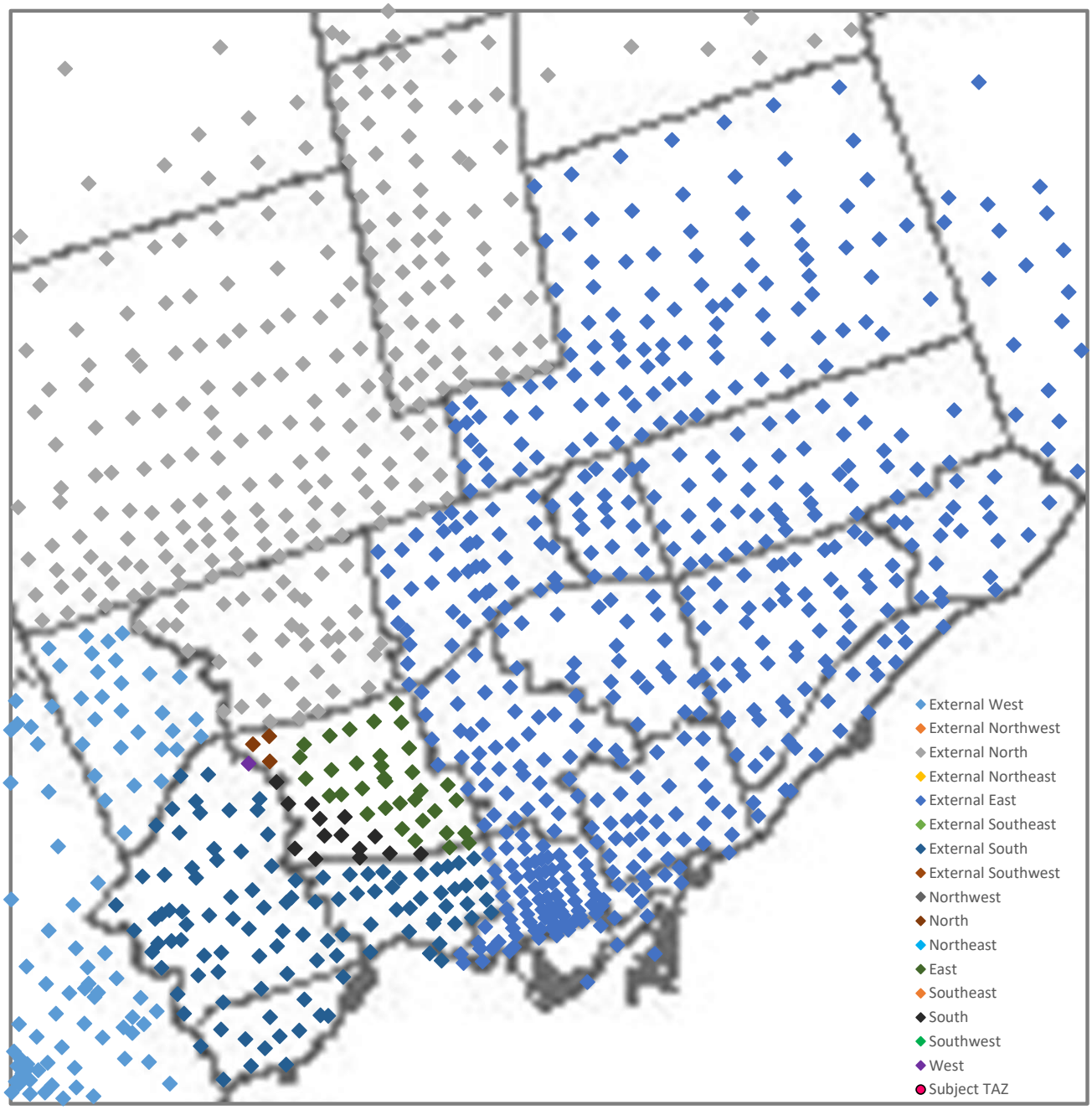
3. 'I' refers to local trips made within the subject TAZ that do not have a cardinal direction assigned to them. These trips are excluded from the analysis.

			Internal										External								
	Time Period	Direction	I	NW	N	NE	E	SE	S	SW	W	Total	NW	N	NE	E	SE	S	SW	W	Total
Trips	A.M.	Inbound	0	0	92	0	22	0	45	0	6	165	0	142	0	50	0	91	0	35	318
		Outbound	0	0	464	0	911	0	229	0	329	1933	0	1115	0	2474	0	910	0	1426	5925
	P.M.	Inbound	0	0	171	0	729	0	160	0	129	1189	0	1018	0	1560	0	648	0	1001	4227
		Outbound	0	0	36	0	329	0	39	0	55	459	0	258	0	151	0	249	0	88	746
Percentage	A.M.	Inbound	0%	0%	19%	0%	5%	0%	9%	0%	1%	34%	0%	29%	0%	10%	0%	19%	0%	7%	66%
		Outbound	0%	0%	6%	0%	12%	0%	3%	0%	4%	25%	0%	14%	0%	31%	0%	12%	0%	18%	75%
	P.M.	Inbound	0%	0%	3%	0%	13%	0%	3%	0%	2%	22%	0%	19%	0%	29%	0%	12%	0%	18%	78%
		Outbound	0%	0%	3%	0%	27%	0%	3%	0%	5%	38%	0%	21%	0%	13%	0%	21%	0%	7%	62%

TAZ Directional Categorisation Visualisation (Complete TTS Survey Area)



TAZ Directional Categorisation Visualisation (City of Toronto)



APPENDIX

G

FUTURE TOTAL TRAFFIC CONDITIONS

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	30	38	362	15	23	514	
Future Volume (vph)	30	38	362	15	23	514	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.95		0.98			0.99	
Frt	0.925		0.994				
Flt Protected	0.978					0.998	
Satd. Flow (prot)	1389	0	3211	0	0	3280	
Flt Permitted	0.978					0.931	
Satd. Flow (perm)	1356	0	3211	0	0	3031	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	40		7				
Link Speed (k/h)	30		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	7.4		9.5			8.2	
Confl. Peds. (#/hr)	21	12		140	140		
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	29%	0%	8%	13%	0%	9%	
Adj. Flow (vph)	32	40	381	16	24	541	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	72	0	397	0	0	565	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	3.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lead/Lag	Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None
Walk Time (s)	2.0		7.0			7.0	3.0
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	33		0			140	33
Act Effct Green (s)	15.0		73.0			92.5	
Actuated g/C Ratio	0.13		0.63			0.80	
v/c Ratio	0.34		0.20			0.23	
Control Delay	28.8		5.2			4.0	
Queue Delay	0.0		0.0			0.0	
Total Delay	28.8		5.2			4.0	
LOS	C		A			A	
Approach Delay	28.8		5.2			4.0	
Approach LOS	C		A			A	
Queue Length 50th (m)	6.9		10.1			18.8	
Queue Length 95th (m)	21.7		m13.3			24.8	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	214		2023			2450	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.34		0.20			0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 104 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

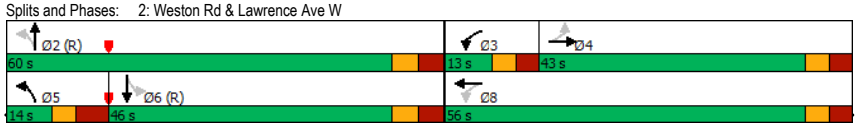
Splits and Phases: 1: Weston Rd & John St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	753	185	73	529	53	95	315	77	60	432	44
Future Volume (vph)	7	753	185	73	529	53	95	315	77	60	432	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.971			0.986			0.976			0.988	
Flt Protected				0.950				0.990			0.994	
Satd. Flow (prot)	0	2903	0	1559	2989	0	0	3100	0	0	3137	0
Flt Permitted		0.950		0.103				0.626			0.820	
Satd. Flow (perm)	0	2757	0	167	2989	0	0	1932	0	0	2573	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								25			9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		248.8			79.6			134.7			131.7	
Travel Time (s)		17.9			5.7			9.7			9.5	
Confl. Peds. (#/hr)	84		61	61		84	194		100	100		194
Confl. Bikes (#/hr)						1			6			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	10%	7%	10%	8%	8%	9%	8%	9%	9%	5%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	7	768	189	74	540	54	97	321	79	61	441	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	964	0	74	594	0	0	497	0	0	547	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	36.0	36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)	43.0	43.0		12.3	43.0		13.8	41.0		41.0	41.0	
Total Split (s)	43.0	43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)	37.1%	37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)	36.5	36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)	3.3	3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)	3.2	3.2		3.1	3.2		4.5	3.6		3.6	3.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)	8.0	8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)	28.0	28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)	84	84			61			194		100	100	
Act Effct Green (s)		40.1		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.35		0.44	0.44			0.46			0.34	
v/c Ratio		1.01		0.45	0.46			0.50			0.61	
Control Delay		70.9		28.4	24.5			21.1			31.9	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		70.9		28.4	24.5			21.1			31.9	
LOS		E		C	C			C			C	
Approach Delay		70.9			24.9			21.1			31.9	
Approach LOS		E			C			C			C	
Queue Length 50th (m)		~135.8		10.2	51.5			36.6			56.5	
Queue Length 95th (m)		#177.7		20.0	67.8			49.7			76.5	
Internal Link Dist (m)		224.8			55.6			110.7			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		953		165	1301			990			890	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		1.01		0.45	0.46			0.50			0.61	

Intersection Summary		
Area Type:	Other	
Cycle Length: 116		
Actuated Cycle Length: 116		
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.01		
Intersection Signal Delay: 42.2	Intersection LOS: D	
Intersection Capacity Utilization 130.4%	ICU Level of Service H	
Analysis Period (min) 15		
~ Volume exceeds capacity, queue is theoretically infinite.		
Queue shown is maximum after two cycles.		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 2: Weston Rd & Lawrence Ave W



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	15	19	10	23	13	46	0	15	1	0	1
Future Volume (vph)	2	15	19	10	23	13	46	0	15	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.934			0.961			0.967			0.932	
Flt Protected		0.998			0.991			0.964			0.976	
Satd. Flow (prot)	0	1734	0	0	1803	0	0	1736	0	0	1728	0
Flt Permitted		0.998			0.991			0.964			0.976	
Satd. Flow (perm)	0	1734	0	0	1803	0	0	1736	0	0	1728	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		61.9			64.9			34.9			38.5	
Travel Time (s)		7.4			7.8			4.2			4.6	
Confl. Peds. (#/hr)	11					11	11		13	13		11
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.75	0.75	0.92	0.92	0.75	0.75	0.92	0.92	0.92	0.75	0.92	0.75
Growth Factor	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Adj. Flow (vph)	2	20	21	11	31	17	50	0	16	1	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	59	0	0	66	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	15	19	10	23	13	46	0	15	1	0	1
Future Volume (Veh/h)	2	15	19	10	23	13	46	0	15	1	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.75	0.75	0.92	0.92	0.92	0.75	0.92	0.75
Hourly flow rate (vph)	2	20	21	11	31	17	50	0	16	1	0	1
Pedestrians		11			13						11	
Lane Width (m)		3.5			3.6						3.6	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		1			1						1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		62										
pX, platoon unblocked												
vC, conflicting volume	59			41			108	116	44	136	118	62
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59			41			108	116	44	136	118	62
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			94	100	98	100	100	100
cM capacity (veh/h)	1543			1568			851	761	1016	799	759	991

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	43	59	66	2
Volume Left	2	11	50	1
Volume Right	21	17	16	1
cSH	1543	1568	886	885
Volume to Capacity	0.00	0.01	0.07	0.00
Queue Length 95th (m)	0.0	0.2	1.9	0.1
Control Delay (s)	0.4	1.4	9.4	9.1
Lane LOS	A	A	A	A
Approach Delay (s)	0.4	1.4	9.4	9.1
Approach LOS			A	A

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	23.7%	ICU Level of Service		A
Analysis Period (min)	15			

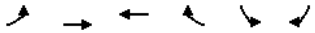
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	31	0	0	47	0
Future Volume (vph)	0	31	0	0	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1625	0	0	1842	1785	0
Flt Permitted					0.950	
Satd. Flow (perm)	1625	0	0	1842	1785	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		14	14		24	55
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Heavy Vehicles (%)	2%	0%	2%	2%	0%	2%
Adj. Flow (vph)	0	47	0	0	71	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	0	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	31	0	0	47	0
Future Volume (vph)	0	31	0	0	47	0
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	0	47	0	0	71	0

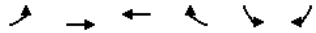
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	47	0	71
Volume Left (vph)	0	0	71
Volume Right (vph)	47	0	0
Hadj (s)	-0.60	0.00	0.20
Departure Headway (s)	3.5	4.1	4.2
Degree Utilization, x	0.05	0.00	0.08
Capacity (veh/h)	1014	870	840
Control Delay (s)	6.6	7.1	7.6
Approach Delay (s)	6.6	0.0	7.6
Approach LOS	A	A	A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	923	594	30	37	8
Future Volume (vph)	6	923	594	30	37	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.993		0.976	
Flt Protected					0.961	
Satd. Flow (prot)	0	3274	3181	0	1737	0
Flt Permitted					0.961	
Satd. Flow (perm)	0	3274	3181	0	1737	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	160.0		54.9	
Travel Time (s)		5.7	11.5		4.0	
Confl. Peds. (#/hr)	10			10		
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	15%	9%	12%	0%	0%	8%
Adj. Flow (vph)	7	1014	653	33	41	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1021	686	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	923	594	30	37	8
Future Volume (Veh/h)	6	923	594	30	37	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	7	1014	653	33	41	9
Pedestrians					10	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.70	
vC, conflicting volume	696				1200	353
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696				445	353
tC, single (s)	4.4				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.4
p0 queue free %	99				89	99
cM capacity (veh/h)	808				379	621

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	345	676	435	251	50
Volume Left	7	0	0	0	41
Volume Right	0	0	0	33	9
cSH	808	1700	1700	1700	407
Volume to Capacity	0.01	0.40	0.26	0.15	0.12
Queue Length 95th (m)	0.2	0.0	0.0	0.0	3.3
Control Delay (s)	0.3	0.0	0.0	0.0	15.1
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		15.1
Approach LOS					C

Intersection Summary				
Average Delay		0.5		
Intersection Capacity Utilization		39.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lane Configurations							
Traffic Volume (vph)	37	42	462	31	56	566	
Future Volume (vph)	37	42	462	31	56	566	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.0	3.5	3.5	3.5	3.5	3.5	
Storage Length (m)	20.0	0.0		0.0	0.0		
Storage Lanes	0	0		0	0		
Taper Length (m)	13.0				7.5		
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95	
Ped Bike Factor	0.84		0.97			0.98	
Frt	0.928		0.991				
Flt Protected	0.977					0.996	
Satd. Flow (prot)	1500	0	3300	0	0	3401	
Flt Permitted	0.977					0.858	
Satd. Flow (perm)	1356	0	3300	0	0	2883	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	40		11				
Link Speed (k/h)	30		50			50	
Link Distance (m)	61.9		131.7			114.1	
Travel Time (s)	7.4		9.5			8.2	
Confl. Peds. (#/hr)	82	47		134	134		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	0%	0%	4%	0%	0%	5%	
Adj. Flow (vph)	38	43	476	32	58	584	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	81	0	508	0	0	642	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.0		0.0			0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8	
Two way Left Turn Lane							
Headway Factor	1.09	1.01	1.01	1.01	1.01	1.01	
Turning Speed (k/h)	25	15		15	25		
Turn Type	Perm		NA		pm+pt	NA	
Protected Phases			2		1	6	7
Permitted Phases	8				6		
Detector Phase	8		2		1	6	
Switch Phase							
Minimum Initial (s)	14.0		15.0		6.0	15.0	3.0
Minimum Split (s)	21.0		20.0		13.0	20.0	5.0
Total Split (s)	21.0		77.0		13.0	90.0	5.0
Total Split (%)	18.1%		66.4%		11.2%	77.6%	4%
Maximum Green (s)	14.4		72.0		6.6	85.0	3.0
Yellow Time (s)	3.0		3.2		3.2	3.2	2.0
All-Red Time (s)	3.6		1.8		3.2	1.8	0.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0	
Total Lost Time (s)	5.6		4.0			4.0	
Lead/Lag	Lag		Lag		Lead		Lead

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø7
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0
Recall Mode	None		C-Max		Max	C-Max	None
Walk Time (s)	2.0		7.0			7.0	3.0
Flash Dont Walk (s)	12.0		8.0			8.0	0.0
Pedestrian Calls (#/hr)	129		0			134	129
Act Effct Green (s)	15.1		73.0			86.3	
Actuated g/C Ratio	0.13		0.63			0.74	
v/c Ratio	0.38		0.24			0.29	
Control Delay	31.4		4.6			5.1	
Queue Delay	0.0		0.0			0.0	
Total Delay	31.4		4.6			5.1	
LOS	C		A			A	
Approach Delay	31.4		4.6			5.1	
Approach LOS	C		A			A	
Queue Length 50th (m)	8.9		9.9			21.8	
Queue Length 95th (m)	24.7		12.7			28.7	
Internal Link Dist (m)	37.9		107.7			90.1	
Turn Bay Length (m)	20.0						
Base Capacity (vph)	214		2080			2187	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.38		0.24			0.29	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 5 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 54.5%		ICU Level of Service A	
Analysis Period (min) 15			

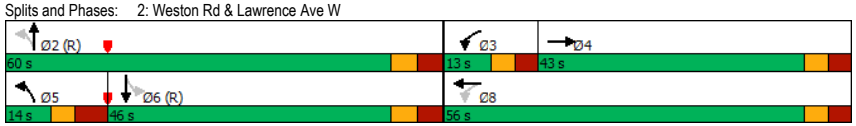
Splits and Phases: 1: Weston Rd & John St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	781	139	105	598	80	136	422	102	84	424	75
Future Volume (vph)	0	781	139	105	598	80	136	422	102	84	424	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.97	
Frt		0.977			0.982			0.977			0.981	
Flt Protected				0.950				0.990			0.993	
Satd. Flow (prot)	0	3044	0	1604	3097	0	0	3235	0	0	3232	0
Flt Permitted				0.093				0.587			0.723	
Satd. Flow (perm)	0	3044	0	155	3097	0	0	1893	0	0	2337	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								24			15	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		281.8			79.6			176.4			131.7	
Travel Time (s)		20.3			5.7			12.7			9.5	
Confl. Peds. (#/hr)	85		88	88		85	190		123	123		190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	2%	4%	6%	0%	2%	5%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	0	822	146	111	629	84	143	444	107	88	446	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	968	0	111	713	0	0	694	0	0	613	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type		NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases				8			2			6		
Detector Phase		4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)		36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)		42.5		12.3	42.5		13.8	40.1		40.1	40.1	
Total Split (s)		43.0		13.0	56.0		14.0	60.0		46.0	46.0	
Total Split (%)		37.1%		11.2%	48.3%		12.1%	51.7%		39.7%	39.7%	
Maximum Green (s)		36.5		6.7	49.5		6.2	52.9		38.9	38.9	
Yellow Time (s)		3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)		3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag		Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)		8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)		28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)		84			61			194		100	100	
Act Effct Green (s)		37.5		50.7	50.5			53.9			39.9	
Actuated g/C Ratio		0.32		0.44	0.44			0.46			0.34	
v/c Ratio		0.98		0.68	0.53			0.71			0.75	
Control Delay		64.2		42.9	25.8			26.5			35.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		64.2		42.9	25.8			26.5			35.8	
LOS		E		D	C			C			D	
Approach Delay		64.2			28.1			26.5			35.8	
Approach LOS		E			C			C			D	
Queue Length 50th (m)		120.4		15.7	64.4			55.7			67.1	
Queue Length 95th (m)		#166.6		#37.7	83.1			72.3			90.5	
Internal Link Dist (m)		257.8			55.6			152.4			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		985		163	1348			983			813	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.98		0.68	0.53			0.71			0.75	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 22 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 110.0%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Weston Rd & Lawrence Ave W



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	33	36	34	30	33	37	0	15	10	0	10
Future Volume (vph)	17	33	36	34	30	33	37	0	15	10	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.5	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.6	3.5	3.6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.944			0.954			0.961			0.932	
Flt Protected		0.990			0.983			0.966			0.976	
Satd. Flow (prot)	0	1736	0	0	1782	0	0	1744	0	0	1709	0
Flt Permitted		0.990			0.983			0.966			0.976	
Satd. Flow (perm)	0	1736	0	0	1782	0	0	1744	0	0	1709	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		61.9			64.9			35.8			38.5	
Travel Time (s)		7.4			7.8			4.3			4.6	
Confl. Peds. (#/hr)	101					101	26		28	28		26
Confl. Bikes (#/hr)			1									3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	22	42	46	43	38	42	47	0	19	13	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	123	0	0	66	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	33	36	34	30	33	37	0	15	10	0	10
Future Volume (Veh/h)	17	33	36	34	30	33	37	0	15	10	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	22	42	46	43	38	42	47	0	19	13	0	13
Pedestrians		26			28						101	
Lane Width (m)		3.5			3.6						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		2			2						8	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		62										
pX, platoon unblocked												
vC, conflicting volume	181			88			293	376	93	402	378	186
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	181			88			293	376	93	402	378	186
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			97			92	100	98	97	100	98
cM capacity (veh/h)	1291			1520			578	487	947	448	486	774

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	110	123	66	26
Volume Left	22	43	47	13
Volume Right	46	42	19	13
cSH	1291	1520	651	567
Volume to Capacity	0.02	0.03	0.10	0.05
Queue Length 95th (m)	0.4	0.7	2.7	1.2
Control Delay (s)	1.7	2.7	11.2	11.7
Lane LOS	A	A	B	B
Approach Delay (s)	1.7	2.7	11.2	11.7
Approach LOS			B	B

Intersection Summary				
Average Delay		4.8		
Intersection Capacity Utilization		30.0%	ICU Level of Service	A
Analysis Period (min)		15		

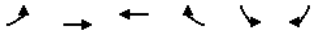
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	54	7	4	96	2
Future Volume (vph)	8	54	7	4	96	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.883				0.998	
Flt Protected				0.968	0.953	
Satd. Flow (prot)	1617	0	0	1819	1787	0
Flt Permitted				0.968	0.953	
Satd. Flow (perm)	1617	0	0	1819	1787	0
Link Speed (k/h)	30			30	50	
Link Distance (m)	64.9			20.8	55.0	
Travel Time (s)	7.8			2.5	4.0	
Confl. Peds. (#/hr)		16	16		37	77
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	9	60	8	4	107	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	0	0	12	109	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		15	25		25	15
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	8	54	7	4	96	2
Future Volume (vph)	8	54	7	4	96	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	60	8	4	107	2

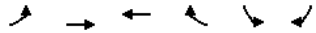
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	69	12	109
Volume Left (vph)	0	8	107
Volume Right (vph)	60	0	2
Hadj (s)	-0.48	0.13	0.19
Departure Headway (s)	3.7	4.3	4.2
Degree Utilization, x	0.07	0.01	0.13
Capacity (veh/h)	945	801	824
Control Delay (s)	7.0	7.4	7.9
Approach Delay (s)	7.0	7.4	7.9
Approach LOS	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	971	766	49	28	15
Future Volume (vph)	28	971	766	49	28	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.991		0.952	
Flt Protected		0.999			0.969	
Satd. Flow (prot)	0	3367	3345	0	1733	0
Flt Permitted		0.999			0.969	
Satd. Flow (perm)	0	3367	3345	0	1733	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		79.6	203.4		54.9	
Travel Time (s)		5.7	14.6		4.0	
Confl. Peds. (#/hr)	35			35		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	6%	2%	0%	0%
Adj. Flow (vph)	29	1011	798	51	29	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1040	849	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.0	3.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	971	766	49	28	15
Future Volume (Veh/h)	28	971	766	49	28	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	29	1011	798	51	29	16
Pedestrians					35	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		80				
pX, platoon unblocked					0.70	
vC, conflicting volume	884				1422	460
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	884				754	460
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				87	97
cM capacity (veh/h)	733				229	538

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	366	674	532	317	45
Volume Left	29	0	0	0	29
Volume Right	0	0	0	51	16
cSH	733	1700	1700	1700	288
Volume to Capacity	0.04	0.40	0.31	0.19	0.16
Queue Length 95th (m)	1.0	0.0	0.0	0.0	4.4
Control Delay (s)	1.3	0.0	0.0	0.0	19.8
Lane LOS	A				C
Approach Delay (s)	0.4		0.0		19.8
Approach LOS					C

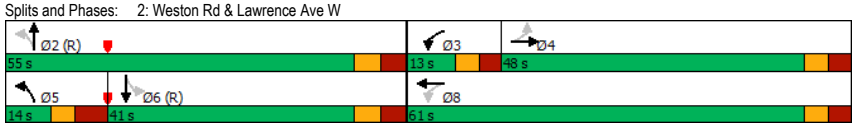
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	57.0%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	753	185	73	529	53	95	315	77	60	432	44
Future Volume (vph)	7	753	185	73	529	53	95	315	77	60	432	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.98	
Frt		0.971			0.986			0.976			0.988	
Flt Protected				0.950				0.990			0.994	
Satd. Flow (prot)	0	2903	0	1559	2989	0	0	3100	0	0	3137	0
Flt Permitted		0.950		0.134				0.599			0.817	
Satd. Flow (perm)	0	2757	0	218	2989	0	0	1849	0	0	2564	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								23			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		248.8			79.6			134.7			131.7	
Travel Time (s)		17.9			5.7			9.7			9.5	
Confl. Peds. (#/hr)	84		61	61		84	194		100	100		194
Confl. Bikes (#/hr)						1			6			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	10%	10%	7%	10%	8%	8%	9%	8%	9%	9%	5%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	7	768	189	74	540	54	97	321	79	61	441	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	964	0	74	594	0	0	497	0	0	547	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	36.0	36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)	43.0	43.0		13.0	43.0		14.0	41.0		41.0	41.0	
Total Split (s)	48.0	48.0		13.0	61.0		14.0	55.0		41.0	41.0	
Total Split (%)	41.4%	41.4%		11.2%	52.6%		12.1%	47.4%		35.3%	35.3%	
Maximum Green (s)	41.5	41.5		6.7	54.5		6.2	47.9		33.9	33.9	
Yellow Time (s)	3.3	3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)	3.2	3.2		3.1	3.2		4.5	3.6		3.6	3.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)	8.0	8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)	28.0	28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)	84	84			61			194		100	100	
Act Effct Green (s)		45.1		55.7	55.5			48.9			34.9	
Actuated g/C Ratio		0.39		0.48	0.48			0.42			0.30	
v/c Ratio		0.90		0.39	0.42			0.57			0.70	
Control Delay		46.6		22.5	20.8			25.4			38.3	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		46.6		22.5	20.8			25.4			38.3	
LOS		D		C	C			C			D	
Approach Delay		46.6			21.0			25.4			38.3	
Approach LOS		D			C			C			D	
Queue Length 50th (m)		117.1		9.4	47.2			40.2			60.5	
Queue Length 95th (m)		#162.2		18.3	62.2			54.3			81.8	
Internal Link Dist (m)		224.8			55.6			110.7			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		1073		193	1430			877			777	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.90		0.38	0.42			0.57			0.70	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 34.6		Intersection LOS: C	
Intersection Capacity Utilization 130.4%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Weston Rd & Lawrence Ave W

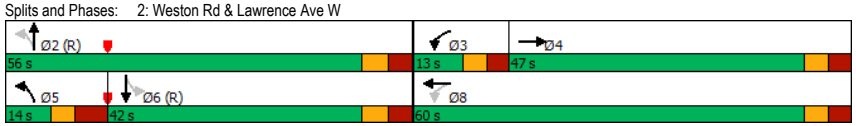


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	781	139	105	598	80	136	422	102	84	424	75
Future Volume (vph)	0	781	139	105	598	80	136	422	102	84	424	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		1%			2%			1%			-2%	
Storage Length (m)	0.0		0.0	21.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (m)	7.5			20.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99		0.99	0.99			0.97			0.97	
Frt		0.977			0.982			0.977			0.981	
Flt Protected				0.950				0.990			0.993	
Satd. Flow (prot)	0	3044	0	1604	3097	0	0	3235	0	0	3232	0
Flt Permitted				0.112				0.574			0.725	
Satd. Flow (perm)	0	3044	0	187	3097	0	0	1852	0	0	2343	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								23			15	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		281.8			79.6			176.4			131.7	
Travel Time (s)		20.3			5.7			12.7			9.5	
Confl. Peds. (#/hr)	85		88	88		85	190		123	123		190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	2%	4%	6%	0%	2%	5%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	31	0	0	25	0	0	0	0	0	10	0
Adj. Flow (vph)	0	822	146	111	629	84	143	444	107	88	446	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	968	0	111	713	0	0	694	0	0	613	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.0			3.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.02	1.11	1.02	1.11	1.10	1.03	1.02	1.02	1.02	1.00	1.03	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type		NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases				8			2			6		
Detector Phase		4		3	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)		36.0		6.0	36.0		6.0	33.0		33.0	33.0	
Minimum Split (s)		43.0		12.3	43.0		13.8	41.0		41.0	41.0	
Total Split (s)		47.0		13.0	60.0		14.0	56.0		42.0	42.0	
Total Split (%)		40.5%		11.2%	51.7%		12.1%	48.3%		36.2%	36.2%	
Maximum Green (s)		40.5		6.7	53.5		6.2	48.9		34.9	34.9	
Yellow Time (s)		3.3		3.2	3.3		3.3	3.5		3.5	3.5	
All-Red Time (s)		3.2		3.1	3.2		4.5	3.6		3.6	3.6	
Lost Time Adjust (s)		-1.0		-1.0	-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.5		5.3	5.5			6.1			6.1	
Lead/Lag		Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		Max		None	Max		Max	C-Max		C-Max	C-Max	
Walk Time (s)		8.0			8.0			8.0		8.0	8.0	
Flash Dont Walk (s)		28.0			28.0			25.0		25.0	25.0	
Pedestrian Calls (#/hr)		84			61			194		100	100	
Act Effct Green (s)		41.6		54.7	54.5			49.9			35.9	
Actuated g/C Ratio		0.36		0.47	0.47			0.43			0.31	
v/c Ratio		0.89		0.62	0.49			0.77			0.83	
Control Delay		46.1		32.8	22.6			31.8			43.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		46.1		32.8	22.6			31.8			43.6	
LOS		D		C	C			C			D	
Approach Delay		46.1			24.0			31.8			43.6	
Approach LOS		D			C			C			D	
Queue Length 50th (m)		113.7		14.7	60.1			59.8			70.6	
Queue Length 95th (m)		#152.9		#28.2	77.5			77.6			#68.2	
Internal Link Dist (m)		257.8			55.6			152.4			107.7	
Turn Bay Length (m)				21.0								
Base Capacity (vph)		1093		182	1455			903			735	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.89		0.61	0.49			0.77			0.83	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 116			
Offset: 22 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 36.5		Intersection LOS: D	
Intersection Capacity Utilization 110.0%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Weston Rd & Lawrence Ave W



APPENDIX

H TTC RIDERSHIP

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 1: 00:00 TO 08:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	446	0	446	39	11.4
3	KEELE ST AT GLENLAKE	0	9	33	422	39	10.8
4	KEELE ST AT HUMBERSIDE	0	11	14	419	39	10.7
5	KEELE ST AT ANNETTE	0	10	23	406	39	10.4
6	KEELE ST AT DUNDAS ST W	0	28	30	404	39	10.4
7	KEELE ST AT JUNCTION	0	13	18	399	39	10.2
8	KEELE ST AT WEST TORONTO	0	7	36	370	39	9.5
9	KEELE ST AT ST CLAIR AVE W	0	72	64	378	39	9.7
10	WESTON RD AT BIRDSTONE CR N	0	11	25	364	39	9.3
11	WESTON RD AT GUNNS RD	0	5	24	345	39	8.8
12	WESTON RD AT MCCORMACK	0	16	30	331	39	8.5
13	WESTON RD AT NORTHLAND	0	17	13	335	39	8.6
14	WESTON RD AT SENECA	0	2	3	334	39	8.6
15	WESTON RD AT ROGERS RD	0	57	22	369	39	9.5
16	WESTON RD AT BLACK CREEK DR	0	56	17	408	39	10.5
17	WESTON RD AT LAMBTON	0	13	4	417	39	10.7
18	WESTON RD AT DENNIS	0	25	7	435	39	11.2
19	WESTON RD AT YORK AVE	0	5	9	431	39	11.1
20	WESTON RD AT EGLINTON AVE W	0	84	59	456	39	11.7
21	WESTON RD AT OXFORD	0	66	2	520	39	13.3
22	WESTON RD AT RAY	0	62	38	544	39	13.9
23	WESTON RD AT VICTORIA BLVD	0	21	3	562	39	14.4
24	WESTON RD AT CRAYDON	0	11	21	552	39	14.2
25	WESTON RD AT JANE ST	0	99	131	520	39	13.3
26	WESTON RD AT DORA SPENCER	0	12	0	532	39	13.6
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	55	63	524	39	13.4
28	WESTON RD AT CLOUSTON	0	20	18	526	39	13.5
29	WESTON RD AT DENISON	0	25	5	546	39	14.0
30	WESTON RD AT VICTORIA AVE	0	9	8	547	39	14.0
31	WESTON RD AT WRIGHT	0	85	21	611	39	15.7
32	WESTON RD AT LAWRENCE AVE W	0	98	204	505	39	12.9
33	WESTON RD AT JOHN	0	16	25	496	39	12.7
34	WESTON RD AT KING	0	48	77	467	39	12.0
35	WESTON RD AT FERN	0	10	17	460	39	11.8
36	WESTON RD AT CHURCH	0	59	18	501	39	12.8
37	WESTON RD AT COULTER	0	75	18	558	39	14.3
38	WESTON RD AT PARKE	0	12	5	565	39	14.5
39	WESTON RD AT OAK	0	54	44	575	39	14.7
40	WESTON RD AT CARDELL	0	7	17	565	39	14.5
41	WESTON RD AT KNOB HILL DR	0	11	65	511	39	13.1
42	WESTON RD AT WALSH	0	24	510	25	39	0.6
43	ALBION RD AT WESTON RD	0	7	1	31	39	0.8
44	WESTON RD AT ALBION RD	0	0	31	0	39	0.0
TOTALS	FOR PERIOD 1: 00:00 TO 08:59	0	1773	1773	18712	1677	11.2

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 1: 00:00 TO 08:59

PERIOD RIDING INDEX	=	11.2	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	10.6	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.1	
AVERAGE ONS/TRIP	=	45.5	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 2: 09:00 TO 14:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	745	0	745	39	19.1
3	KEELE ST AT GLENLAKE	0	20	13	752	39	19.3
4	KEELE ST AT HUMBERSIDE	0	10	24	738	39	18.9
5	KEELE ST AT ANNETTE	0	12	32	718	39	18.4
6	KEELE ST AT DUNDAS ST W	0	80	93	705	39	18.1
7	KEELE ST AT JUNCTION	0	12	11	706	39	18.1
8	KEELE ST AT WEST TORONTO	0	12	51	667	39	17.1
9	KEELE ST AT ST CLAIR AVE W	0	176	119	724	39	18.6
10	WESTON RD AT BIRDSTONE CR N	0	29	30	723	39	18.5
11	WESTON RD AT GUNNS RD	0	23	1	745	39	19.1
12	WESTON RD AT MCCORMACK	0	15	46	714	39	18.3
13	WESTON RD AT NORTHLAND	0	21	47	688	39	17.6
14	WESTON RD AT SENECA	0	6	9	685	39	17.6
15	WESTON RD AT ROGERS RD	0	145	50	780	39	20.0
16	WESTON RD AT BLACK CREEK DR	0	126	52	854	39	21.9
17	WESTON RD AT LAMBTON	0	20	25	849	39	21.8
18	WESTON RD AT DENNIS	0	11	28	832	39	21.3
19	WESTON RD AT YORK AVE	0	13	19	826	39	21.2
20	WESTON RD AT EGLINTON AVE W	0	105	123	808	39	20.7
21	WESTON RD AT OXFORD	0	56	48	816	39	20.9
22	WESTON RD AT RAY	0	63	42	837	39	21.5
23	WESTON RD AT VICTORIA BLVD	0	18	26	829	39	21.3
24	WESTON RD AT CRAYDON	0	22	30	821	39	21.1
25	WESTON RD AT JANE ST	0	121	190	752	39	19.3
26	WESTON RD AT DORA SPENCER	0	8	9	751	39	19.3
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	43	58	736	39	18.9
28	WESTON RD AT CLOUSTON	0	25	14	747	39	19.2
29	WESTON RD AT DENISON	0	30	20	757	39	19.4
30	WESTON RD AT VICTORIA AVE	0	8	15	750	39	19.2
31	WESTON RD AT WRIGHT	0	52	71	731	39	18.7
32	WESTON RD AT LAWRENCE AVE W	0	180	235	676	39	17.3
33	WESTON RD AT JOHN	0	70	100	646	39	16.6
34	WESTON RD AT KING	0	66	83	629	39	16.1
35	WESTON RD AT FERN	0	18	28	619	39	15.9
36	WESTON RD AT CHURCH	0	44	80	583	39	14.9
37	WESTON RD AT COULTER	0	42	78	547	39	14.0
38	WESTON RD AT PARKE	0	11	28	530	39	13.6
39	WESTON RD AT OAK	0	33	81	482	39	12.4
40	WESTON RD AT CARDELL	0	4	60	426	39	10.9
41	WESTON RD AT KNOB HILL DR	0	48	65	409	39	10.5
42	WESTON RD AT WALSH	0	40	386	63	39	1.6
43	ALBION RD AT WESTON RD	0	18	28	53	39	1.4
44	WESTON RD AT ALBION RD	0	0	53	0	39	0.0
TOTALS	FOR PERIOD 2: 09:00 TO 14:59	0	2601	2601	28449	1677	17.0

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 2: 09:00 TO 14:59

PERIOD RIDING INDEX	=	17.0	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	10.9	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.6	
AVERAGE ONS/TRIP	=	66.7	

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 3: 15:00 TO 18:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	1175	0	1175	33	35.6
3	KEELE ST AT GLENLAKE	0	10	27	1158	33	35.1
4	KEELE ST AT HUMBERSIDE	0	16	65	1109	33	33.6
5	KEELE ST AT ANNETTE	0	19	52	1076	33	32.6
6	KEELE ST AT DUNDAS ST W	0	73	88	1061	33	32.2
7	KEELE ST AT JUNCTION	0	8	16	1053	33	31.9
8	KEELE ST AT WEST TORONTO	0	12	35	1030	33	31.2
9	KEELE ST AT ST CLAIR AVE W	0	204	98	1136	33	34.4
10	WESTON RD AT BIRDSTONE CR N	0	26	52	1110	33	33.6
11	WESTON RD AT GUNNS RD	0	25	17	1118	33	33.9
12	WESTON RD AT MCCORMACK	0	24	62	1080	33	32.7
13	WESTON RD AT NORTHLAND	0	12	117	975	33	29.5
14	WESTON RD AT SENECA	0	11	12	974	33	29.5
15	WESTON RD AT ROGERS RD	0	119	53	1040	33	31.5
16	WESTON RD AT BLACK CREEK DR	0	58	83	1015	33	30.8
17	WESTON RD AT LAMBTON	0	4	40	979	33	29.7
18	WESTON RD AT DENNIS	0	7	39	947	33	28.7
19	WESTON RD AT YORK AVE	0	5	30	922	33	27.9
20	WESTON RD AT EGLINTON AVE W	0	138	97	963	33	29.2
21	WESTON RD AT OXFORD	0	34	74	923	33	28.0
22	WESTON RD AT RAY	0	33	45	911	33	27.6
23	WESTON RD AT VICTORIA BLVD	0	25	44	892	33	27.0
24	WESTON RD AT CRAYDON	0	12	52	852	33	25.8
25	WESTON RD AT JANE ST	0	113	174	791	33	24.0
26	WESTON RD AT DORA SPENCER	0	1	5	787	33	23.8
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	49	143	693	33	21.0
28	WESTON RD AT CLOUSTON	0	12	40	665	33	20.2
29	WESTON RD AT DENISON	0	7	43	629	33	19.1
30	WESTON RD AT VICTORIA AVE	0	8	21	616	33	18.7
31	WESTON RD AT WRIGHT	0	25	89	552	33	16.7
32	WESTON RD AT LAWRENCE AVE W	0	190	178	564	33	17.1
33	WESTON RD AT JOHN	0	55	43	576	33	17.5
34	WESTON RD AT KING	0	55	55	576	33	17.5
35	WESTON RD AT FERN	0	8	36	548	33	16.6
36	WESTON RD AT CHURCH	0	16	102	462	33	14.0
37	WESTON RD AT COULTER	0	15	116	361	33	10.9
38	WESTON RD AT PARKE	0	3	27	337	33	10.2
39	WESTON RD AT OAK	0	19	111	245	33	7.4
40	WESTON RD AT CARDELL	0	6	47	204	33	6.2
41	WESTON RD AT KNOB HILL DR	0	39	37	206	33	6.2
42	WESTON RD AT WALSH	0	44	203	47	33	1.4
43	ALBION RD AT WESTON RD	0	20	29	38	33	1.2
44	WESTON RD AT ALBION RD	0	0	38	0	33	0.0
TOTALS	FOR PERIOD 3: 15:00 TO 18:59	0	2735	2735	32396	1419	22.8

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 3: 15:00 TO 18:59

PERIOD RIDING INDEX	=	22.8	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	11.8	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.9	
AVERAGE ONS/TRIP	=	82.9	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 4: 19:00 TO 21:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	532	0	532	20	26.6
3	KEELE ST AT GLENLAKE	0	8	8	532	20	26.6
4	KEELE ST AT HUMBERSIDE	0	3	28	507	20	25.4
5	KEELE ST AT ANNETTE	0	2	20	489	20	24.5
6	KEELE ST AT DUNDAS ST W	0	30	54	465	20	23.3
7	KEELE ST AT JUNCTION	0	1	13	453	20	22.7
8	KEELE ST AT WEST TORONTO	0	2	10	445	20	22.3
9	KEELE ST AT ST CLAIR AVE W	0	76	46	475	20	23.8
10	WESTON RD AT BIRDSTONE CR N	0	13	14	474	20	23.7
11	WESTON RD AT GUNNS RD	0	5	6	473	20	23.7
12	WESTON RD AT MCCORMACK	0	1	18	456	20	22.8
13	WESTON RD AT NORTHLAND	0	6	31	431	20	21.6
14	WESTON RD AT SENECA	0	0	3	428	20	21.4
15	WESTON RD AT ROGERS RD	0	25	15	438	20	21.9
16	WESTON RD AT BLACK CREEK DR	0	11	37	412	20	20.6
17	WESTON RD AT LAMBTON	0	1	14	399	20	20.0
18	WESTON RD AT DENNIS	0	2	15	386	20	19.3
19	WESTON RD AT YORK AVE	0	1	19	368	20	18.4
20	WESTON RD AT EGLINTON AVE W	0	30	35	363	20	18.2
21	WESTON RD AT OXFORD	0	13	25	351	20	17.6
22	WESTON RD AT RAY	0	7	24	334	20	16.7
23	WESTON RD AT VICTORIA BLVD	0	5	19	320	20	16.0
24	WESTON RD AT CRAYDON	0	2	20	302	20	15.1
25	WESTON RD AT JANE ST	0	37	49	290	20	14.5
26	WESTON RD AT DORA SPENCER	0	1	4	287	20	14.4
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	5	45	247	20	12.4
28	WESTON RD AT CLOUSTON	0	1	17	231	20	11.6
29	WESTON RD AT DENISON	0	0	15	216	20	10.8
30	WESTON RD AT VICTORIA AVE	0	1	2	215	20	10.8
31	WESTON RD AT WRIGHT	0	8	29	194	20	9.7
32	WESTON RD AT LAWRENCE AVE W	0	61	45	210	20	10.5
33	WESTON RD AT JOHN	0	16	19	207	20	10.4
34	WESTON RD AT KING	0	18	17	208	20	10.4
35	WESTON RD AT FERN	0	2	12	198	20	9.9
36	WESTON RD AT CHURCH	0	8	39	167	20	8.4
37	WESTON RD AT COULTER	0	8	36	139	20	7.0
38	WESTON RD AT PARKE	0	3	12	130	20	6.5
39	WESTON RD AT OAK	0	5	32	103	20	5.2
40	WESTON RD AT CARDELL	0	0	18	85	20	4.3
41	WESTON RD AT KNOB HILL DR	0	8	15	78	20	3.9
42	WESTON RD AT WALSH	0	15	76	17	20	0.9
43	ALBION RD AT WESTON RD	0	7	9	15	20	0.8
44	WESTON RD AT ALBION RD	0	0	15	0	20	0.0
TOTALS	FOR PERIOD 4: 19:00 TO 21:59	0	980	980	13070	860	15.2

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 4: 19:00 TO 21:59

PERIOD RIDING INDEX	=	15.2	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	13.3	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.1	
AVERAGE ONS/TRIP	=	49.0	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 5: 22:00 TO 30:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	413	0	413	26	15.9
3	KEELE ST AT GLENLAKE	0	2	1	414	26	15.9
4	KEELE ST AT HUMBERSIDE	0	2	22	394	26	15.2
5	KEELE ST AT ANNETTE	0	2	16	380	26	14.6
6	KEELE ST AT DUNDAS ST W	0	19	33	366	26	14.1
7	KEELE ST AT JUNCTION	0	0	13	353	26	13.6
8	KEELE ST AT WEST TORONTO	0	1	6	348	26	13.4
9	KEELE ST AT ST CLAIR AVE W	0	43	23	368	26	14.2
10	WESTON RD AT BIRDSTONE CR N	0	6	16	358	26	13.8
11	WESTON RD AT GUNNS RD	0	1	4	355	26	13.7
12	WESTON RD AT MCCORMACK	0	0	20	335	26	12.9
13	WESTON RD AT NORTHLAND	0	3	20	318	26	12.2
14	WESTON RD AT SENECA	0	0	5	313	26	12.0
15	WESTON RD AT ROGERS RD	0	9	13	309	26	11.9
16	WESTON RD AT BLACK CREEK DR	0	5	23	291	26	11.2
17	WESTON RD AT LAMBTON	0	1	13	279	26	10.7
18	WESTON RD AT DENNIS	0	1	11	269	26	10.3
19	WESTON RD AT YORK AVE	0	0	4	265	26	10.2
20	WESTON RD AT EGLINTON AVE W	0	13	26	252	26	9.7
21	WESTON RD AT OXFORD	0	9	17	244	26	9.4
22	WESTON RD AT RAY	0	8	7	245	26	9.4
23	WESTON RD AT VICTORIA BLVD	0	0	17	228	26	8.8
24	WESTON RD AT CRAYDON	0	1	7	222	26	8.5
25	WESTON RD AT JANE ST	0	17	34	205	26	7.9
26	WESTON RD AT DORA SPENCER	0	0	0	205	26	7.9
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	2	21	186	26	7.2
28	WESTON RD AT CLOUSTON	0	0	11	175	26	6.7
29	WESTON RD AT DENISON	0	2	6	171	26	6.6
30	WESTON RD AT VICTORIA AVE	0	0	6	165	26	6.3
31	WESTON RD AT WRIGHT	0	4	20	149	26	5.7
32	WESTON RD AT LAWRENCE AVE W	0	34	23	160	26	6.2
33	WESTON RD AT JOHN	0	6	10	156	26	6.0
34	WESTON RD AT KING	0	2	13	145	26	5.6
35	WESTON RD AT FERN	0	1	8	138	26	5.3
36	WESTON RD AT CHURCH	0	4	23	119	26	4.6
37	WESTON RD AT COULTER	0	3	40	82	26	3.2
38	WESTON RD AT PARKE	0	2	7	77	26	3.0
39	WESTON RD AT OAK	0	6	27	56	26	2.2
40	WESTON RD AT CARDELL	0	0	6	50	26	1.9
41	WESTON RD AT KNOB HILL DR	0	5	9	46	26	1.8
42	WESTON RD AT WALSH	0	11	43	14	26	0.5
43	ALBION RD AT WESTON RD	0	6	8	12	26	0.5
44	WESTON RD AT ALBION RD	0	0	12	0	26	0.0
TOTALS	FOR PERIOD 5: 22:00 TO 30:59	0	644	644	9630	1118	8.6

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND PERIOD 5: 22:00 TO 30:59

PERIOD RIDING INDEX	=	8.6	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	15.0	STOPS
AVERAGE ONS/VEHICLE-STOP	=	0.6	
AVERAGE ONS/TRIP	=	24.8	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND ALL DAY

ROUTE STOP	LOCATION	STARTS	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	KEELE STATION	0	3311	0	3311	157	21.1
3	KEELE ST AT GLENLAKE	0	49	82	3278	157	20.9
4	KEELE ST AT HUMBERSIDE	0	42	153	3167	157	20.2
5	KEELE ST AT ANNETTE	0	45	143	3069	157	19.5
6	KEELE ST AT DUNDAS ST W	0	230	298	3001	157	19.1
7	KEELE ST AT JUNCTION	0	34	71	2964	157	18.9
8	KEELE ST AT WEST TORONTO	0	34	138	2860	157	18.2
9	KEELE ST AT ST CLAIR AVE W	0	571	350	3081	157	19.6
10	WESTON RD AT BIRDSTONE CR N	0	85	137	3029	157	19.3
11	WESTON RD AT GUNNS RD	0	59	52	3036	157	19.3
12	WESTON RD AT MCCORMACK	0	56	176	2916	157	18.6
13	WESTON RD AT NORTHLAND	0	59	228	2747	157	17.5
14	WESTON RD AT SENECA	0	19	32	2734	157	17.4
15	WESTON RD AT ROGERS RD	0	355	153	2936	157	18.7
16	WESTON RD AT BLACK CREEK DR	0	256	212	2980	157	19.0
17	WESTON RD AT LAMBTON	0	39	96	2923	157	18.6
18	WESTON RD AT DENNIS	0	46	100	2869	157	18.3
19	WESTON RD AT YORK AVE	0	24	81	2812	157	17.9
20	WESTON RD AT EGLINTON AVE W	0	370	340	2842	157	18.1
21	WESTON RD AT OXFORD	0	178	166	2854	157	18.2
22	WESTON RD AT RAY	0	173	156	2871	157	18.3
23	WESTON RD AT VICTORIA BLVD	0	69	109	2831	157	18.0
24	WESTON RD AT CRAYDON	0	48	130	2749	157	17.5
25	WESTON RD AT JANE ST	0	387	578	2558	157	16.3
26	WESTON RD AT DORA SPENCER	0	22	18	2562	157	16.3
27	WESTON RD AT SIDNEY BELSEY CRESCENT	0	154	330	2386	157	15.2
28	WESTON RD AT CLOUSTON	0	58	100	2344	157	14.9
29	WESTON RD AT DENISON	0	64	89	2319	157	14.8
30	WESTON RD AT VICTORIA AVE	0	26	52	2293	157	14.6
31	WESTON RD AT WRIGHT	0	174	230	2237	157	14.2
32	WESTON RD AT LAWRENCE AVE W	0	563	685	2115	157	13.5
33	WESTON RD AT JOHN	0	163	197	2081	157	13.3
34	WESTON RD AT KING	0	189	245	2025	157	12.9
35	WESTON RD AT FERN	0	39	101	1963	157	12.5
36	WESTON RD AT CHURCH	0	131	262	1832	157	11.7
37	WESTON RD AT COULTER	0	143	288	1687	157	10.7
38	WESTON RD AT PARKE	0	31	79	1639	157	10.4
39	WESTON RD AT OAK	0	117	295	1461	157	9.3
40	WESTON RD AT CARDELL	0	17	148	1330	157	8.5
41	WESTON RD AT KNOB HILL DR	0	111	191	1250	157	8.0
42	WESTON RD AT WALSH	0	134	1218	166	157	1.1

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND ALL DAY

ROUTE STOP	LOCATION	STARTS	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
43	ALBION RD AT WESTON RD	0	58	75	149	157	0.9
44	WESTON RD AT ALBION RD	0	0	149	0	157	0.0
TOTALS FOR NORTHBOUND ALL DAY		0	8733	8733	102257	6751	15.1

ROUTE: 89 WESTON
ROUTING CODE(S): _0,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 04:20 TO 26:14)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

NB CONTROL POINT: 9 KEELE ST AT ST CLAIR AVE W

NORTHBOUND ALL DAY

PERIOD RIDING INDEX	=	15.1	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	11.7	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.3	
AVERAGE ONS/TRIP	=	55.6	

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 1: 00:00 TO 08:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
5	WESTON RD AT ALBION RD	0	159	0	159	34	4.7
6	WESTON RD AT DEE	0	9	13	155	34	4.6
7	WESTON RD AT CARDELL	0	23	2	176	34	5.2
8	WESTON RD AT OAK	0	121	10	287	34	8.4
9	WESTON RD AT PARKE	0	27	2	312	34	9.2
10	WESTON RD AT COULTER	0	125	9	428	34	12.6
11	WESTON RD AT CHURCH	0	116	6	538	34	15.8
12	WESTON RD AT FERN	0	20	3	555	34	16.3
13	WESTON RD AT KING	0	40	24	571	34	16.8
14	WESTON RD AT JOHN	0	17	48	540	34	15.9
15	WESTON RD AT LAWRENCE AVE W	0	114	177	477	34	14.0
16	WESTON RD AT WILBY	0	83	17	543	34	16.0
17	WESTON RD AT VICTORIA AVE	0	6	1	548	34	16.1
18	WESTON RD AT DENISON	0	29	0	577	34	17.0
19	WESTON RD AT CLOUSTON	0	57	20	614	34	18.1
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	143	31	726	34	21.4
21	WESTON RD AT DORA SPENCER	0	24	0	750	34	22.1
22	WESTON RD AT JANE ST	0	179	104	825	34	24.3
23	WESTON RD AT ERNEST DOCKRAY	0	34	5	854	34	25.1
24	WESTON RD AT BARTONVILLE	0	49	4	899	34	26.4
25	WESTON RD AT RAY	0	31	26	904	34	26.6
26	WESTON RD AT OXFORD	0	80	5	979	34	28.8
27	WESTON RD AT EGLINTON AVE W	0	100	119	960	34	28.2
28	WESTON RD AT YORK AVE	0	34	5	989	34	29.1
29	WESTON RD AT DENNIS	0	39	16	1012	34	29.8
30	WESTON RD AT BUSHEY	0	52	2	1062	34	31.2
31	WESTON RD AT HUMBER BLVD	0	87	123	1026	34	30.2
32	WESTON RD AT AVON	0	23	99	950	34	27.9
33	WESTON RD AT SENECA	0	17	10	957	34	28.1
34	WESTON RD AT NORTHLAND	0	57	2	1012	34	29.8
35	WESTON RD AT MCCORMACK	0	38	7	1043	34	30.7
36	WESTON RD AT GUNNS RD	0	4	31	1016	34	29.9
37	WESTON RD AT BIRDSTONE CR N	0	24	19	1021	34	30.0
38	KEELE ST AT ST CLAIR AVE W	0	75	169	927	34	27.3
39	KEELE ST AT WEST TORONTO	0	17	11	933	34	27.4
40	KEELE ST AT JUNCTION	0	9	10	932	34	27.4
41	KEELE ST AT DUNDAS ST W	0	100	34	998	34	29.4
42	KEELE ST AT ANNETTE	0	45	11	1032	34	30.4
43	KEELE ST AT HUMBERSIDE	0	40	17	1055	34	31.0
44	KEELE ST AT HILLSVIEW	0	18	0	1073	34	31.6
45	KEELE ST AT GLENLAKE	0	30	11	1092	34	32.1
47	KEELE STATION	0	0	1092	0	34	0.0
TOTALS	FOR PERIOD 1: 00:00 TO 08:59	0	2295	2295	31507	1428	22.1

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 1: 00:00 TO 08:59

PERIOD RIDING INDEX	=	22.1	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	13.7	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.6	
AVERAGE ONS/TRIP	=	67.5	

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 2: 09:00 TO 14:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
5	WESTON RD AT ALBION RD	0	225	0	225	44	5.1
6	WESTON RD AT DEE	0	34	25	234	44	5.3
7	WESTON RD AT CARDELL	0	64	25	273	44	6.2
8	WESTON RD AT OAK	0	119	26	366	44	8.3
9	WESTON RD AT PARKE	0	35	6	395	44	9.0
10	WESTON RD AT COULTER	0	134	25	504	44	11.5
11	WESTON RD AT CHURCH	0	99	19	584	44	13.3
12	WESTON RD AT FERN	0	30	11	603	44	13.7
13	WESTON RD AT KING	0	79	81	601	44	13.7
14	WESTON RD AT JOHN	0	84	113	572	44	13.0
15	WESTON RD AT LAWRENCE AVE W	0	239	159	652	44	14.8
16	WESTON RD AT WILBY	0	92	42	702	44	16.0
17	WESTON RD AT VICTORIA AVE	0	5	5	702	44	16.0
18	WESTON RD AT DENISON	0	26	13	715	44	16.3
19	WESTON RD AT CLOUSTON	0	43	9	749	44	17.0
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	93	40	802	44	18.2
21	WESTON RD AT DORA SPENCER	0	22	3	821	44	18.7
22	WESTON RD AT JANE ST	0	202	125	898	44	20.4
23	WESTON RD AT ERNEST DOCKRAY	0	35	17	916	44	20.8
24	WESTON RD AT BARTONVILLE	0	41	30	927	44	21.1
25	WESTON RD AT RAY	0	48	52	923	44	21.0
26	WESTON RD AT OXFORD	0	48	42	929	44	21.1
27	WESTON RD AT EGLINTON AVE W	0	107	133	903	44	20.5
28	WESTON RD AT YORK AVE	0	42	13	932	44	21.2
29	WESTON RD AT DENNIS	0	28	8	952	44	21.6
30	WESTON RD AT BUSHEY	0	43	10	985	44	22.4
31	WESTON RD AT HUMBER BLVD	0	113	66	1032	44	23.5
32	WESTON RD AT AVON	0	38	152	918	44	20.9
33	WESTON RD AT SENECA	0	14	8	924	44	21.0
34	WESTON RD AT NORTHLAND	0	38	10	952	44	21.6
35	WESTON RD AT MCCORMACK	0	43	9	986	44	22.4
36	WESTON RD AT GUNNS RD	0	19	11	994	44	22.6
37	WESTON RD AT BIRDSTONE CR N	0	26	40	980	44	22.3
38	KEELE ST AT ST CLAIR AVE W	0	119	184	915	44	20.8
39	KEELE ST AT WEST TORONTO	0	33	7	941	44	21.4
40	KEELE ST AT JUNCTION	0	10	3	948	44	21.5
41	KEELE ST AT DUNDAS ST W	0	132	70	1010	44	23.0
42	KEELE ST AT ANNETTE	0	38	11	1037	44	23.6
43	KEELE ST AT HUMBERSIDE	0	27	7	1057	44	24.0
44	KEELE ST AT HILLSVIEW	0	2	3	1056	44	24.0
45	KEELE ST AT GLENLAKE	0	15	6	1065	44	24.2
47	KEELE STATION	0	0	1065	0	44	0.0
TOTALS	FOR PERIOD 2: 09:00 TO 14:59	0	2684	2684	32680	1848	17.7

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 2: 09:00 TO 14:59

PERIOD RIDING INDEX	=	17.7	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	12.2	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.5	
AVERAGE ONS/TRIP	=	61.0	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 3: 15:00 TO 18:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	STARVIEW LANE AT ST BASIL SCHOOL	0	34	0	34	1	34.0
2	WESTON RD AT BRADMORE	0	0	0	34	1	34.0
3	WESTON RD AT FLINDON	0	0	0	34	1	34.0
4	WESTON RD AT REUBEN	0	0	0	34	1	34.0
5	WESTON RD AT ALBION RD	0	297	7	324	35	9.3
6	WESTON RD AT DEE	0	40	21	343	35	9.8
7	WESTON RD AT CARDELL	0	78	26	395	35	11.3
8	WESTON RD AT OAK	0	80	44	431	35	12.3
9	WESTON RD AT PARKE	0	14	13	432	35	12.3
10	WESTON RD AT COULTER	0	49	53	428	35	12.2
11	WESTON RD AT CHURCH	0	48	34	442	35	12.6
12	WESTON RD AT FERN	0	13	11	444	35	12.7
13	WESTON RD AT KING	0	63	52	455	35	13.0
14	WESTON RD AT JOHN	0	88	90	453	35	12.9
15	WESTON RD AT LAWRENCE AVE W	0	268	111	610	35	17.4
16	WESTON RD AT WILBY	0	62	56	616	35	17.6
17	WESTON RD AT VICTORIA AVE	0	6	11	611	35	17.5
18	WESTON RD AT DENISON	0	14	24	601	35	17.2
19	WESTON RD AT CLOUSTON	0	21	23	599	35	17.1
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	66	69	596	35	17.0
21	WESTON RD AT DORA SPENCER	0	18	11	603	35	17.2
22	WESTON RD AT JANE ST	0	215	114	704	35	20.1
23	WESTON RD AT ERNEST DOCKRAY	0	31	31	704	35	20.1
24	WESTON RD AT BARTONVILLE	0	22	32	694	35	19.8
25	WESTON RD AT RAY	0	39	70	663	35	18.9
26	WESTON RD AT OXFORD	0	26	66	623	35	17.8
27	WESTON RD AT EGLINTON AVE W	0	91	100	614	35	17.5
28	WESTON RD AT YORK AVE	0	15	27	602	35	17.2
29	WESTON RD AT DENNIS	0	20	24	598	35	17.1
30	WESTON RD AT BUSHEY	0	20	15	603	35	17.2
31	WESTON RD AT HUMBER BLVD	0	59	51	611	35	17.5
32	WESTON RD AT AVON	0	25	87	549	35	15.7
33	WESTON RD AT SENECA	0	3	10	542	35	15.5
34	WESTON RD AT NORTHLAND	0	24	17	549	35	15.7
35	WESTON RD AT MCCORMACK	0	29	11	567	35	16.2
36	WESTON RD AT GUNNS RD	0	17	4	580	35	16.6
37	WESTON RD AT BIRDSTONE CR N	0	28	33	575	35	16.4
38	KEELE ST AT ST CLAIR AVE W	0	108	154	529	35	15.1
39	KEELE ST AT WEST TORONTO	0	41	9	561	35	16.0
40	KEELE ST AT JUNCTION	0	27	11	577	35	16.5
41	KEELE ST AT DUNDAS ST W	0	99	53	623	35	17.8
42	KEELE ST AT ANNETTE	0	31	15	639	35	18.3
43	KEELE ST AT HUMBERSIDE	0	28	11	656	35	18.7
44	KEELE ST AT HILLSVIEW	0	8	2	662	35	18.9
45	KEELE ST AT GLENLAKE	0	33	27	668	35	19.1

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 3: 15:00 TO 18:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
47	KEELE STATION	0	0	668	0	35	0.0
TOTALS	FOR PERIOD 3: 15:00 TO 18:59	0	2298	2298	23212	1474	15.7

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 3: 15:00 TO 18:59

PERIOD RIDING INDEX	=	15.7	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	10.1	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.6	
AVERAGE ONS/TRIP	=	65.7	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 4: 19:00 TO 21:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
5	WESTON RD AT ALBION RD	0	91	0	91	21	4.3
6	WESTON RD AT DEE	0	23	7	107	21	5.1
7	WESTON RD AT CARDELL	0	40	7	140	21	6.7
8	WESTON RD AT OAK	0	22	8	154	21	7.3
9	WESTON RD AT PARKE	0	7	6	155	21	7.4
10	WESTON RD AT COULTER	0	14	24	145	21	6.9
11	WESTON RD AT CHURCH	0	19	14	150	21	7.1
12	WESTON RD AT FERN	0	3	3	150	21	7.1
13	WESTON RD AT KING	0	11	17	144	21	6.9
14	WESTON RD AT JOHN	0	16	21	139	21	6.6
15	WESTON RD AT LAWRENCE AVE W	0	73	41	171	21	8.1
16	WESTON RD AT WILBY	0	20	12	179	21	8.5
17	WESTON RD AT VICTORIA AVE	0	4	1	182	21	8.7
18	WESTON RD AT DENISON	0	5	10	177	21	8.4
19	WESTON RD AT CLOUSTON	0	9	3	183	21	8.7
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	7	12	178	21	8.5
21	WESTON RD AT DORA SPENCER	0	2	0	180	21	8.6
22	WESTON RD AT JANE ST	0	76	32	224	21	10.7
23	WESTON RD AT ERNEST DOCKRAY	0	4	5	223	21	10.6
24	WESTON RD AT BARTONVILLE	0	2	11	214	21	10.2
25	WESTON RD AT RAY	0	10	17	207	21	9.9
26	WESTON RD AT OXFORD	0	6	24	189	21	9.0
27	WESTON RD AT EGLINTON AVE W	0	41	23	207	21	9.9
28	WESTON RD AT YORK AVE	0	3	8	202	21	9.6
29	WESTON RD AT DENNIS	0	7	4	205	21	9.8
30	WESTON RD AT BUSHEY	0	4	10	199	21	9.5
31	WESTON RD AT HUMBER BLVD	0	17	23	193	21	9.2
32	WESTON RD AT AVON	0	8	25	176	21	8.4
33	WESTON RD AT SENECA	0	1	4	173	21	8.2
34	WESTON RD AT NORTHLAND	0	11	6	178	21	8.5
35	WESTON RD AT MCCORMACK	0	8	5	181	21	8.6
36	WESTON RD AT GUNNS RD	0	4	2	183	21	8.7
37	WESTON RD AT BIRDSTONE CR N	0	20	10	193	21	9.2
38	KEELE ST AT ST CLAIR AVE W	0	53	47	199	21	9.5
39	KEELE ST AT WEST TORONTO	0	14	1	212	21	10.1
40	KEELE ST AT JUNCTION	0	1	4	209	21	10.0
41	KEELE ST AT DUNDAS ST W	0	35	20	224	21	10.7
42	KEELE ST AT ANNETTE	0	8	8	224	21	10.7
43	KEELE ST AT HUMBERSIDE	0	4	2	226	21	10.8
44	KEELE ST AT HILLSVIEW	0	1	0	227	21	10.8
45	KEELE ST AT GLENLAKE	0	4	6	225	21	10.7
47	KEELE STATION	0	0	225	0	21	0.0
TOTALS	FOR PERIOD 4: 19:00 TO 21:59	0	708	708	7518	882	8.5

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 4: 19:00 TO 21:59

PERIOD RIDING INDEX	=	8.5	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	10.6	STOPS
AVERAGE ONS/VEHICLE-STOP	=	0.8	
AVERAGE ONS/TRIP	=	33.7	

RIDING COUNT - 2. PASSENGER ACTIVITY BY STOP REPORT

Report: TRIPS_DM - 002
Version: 002

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 5: 22:00 TO 30:59

ROUTE STOP	LOCATION	START	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
5	WESTON RD AT ALBION RD	0	71	0	71	27	2.6
6	WESTON RD AT DEE	0	13	2	82	27	3.0
7	WESTON RD AT CARDELL	0	12	1	93	27	3.4
8	WESTON RD AT OAK	0	9	10	92	27	3.4
9	WESTON RD AT PARKE	0	3	2	93	27	3.4
10	WESTON RD AT COULTER	0	8	16	85	27	3.1
11	WESTON RD AT CHURCH	0	5	5	85	27	3.1
12	WESTON RD AT FERN	0	1	1	85	27	3.1
13	WESTON RD AT KING	0	1	5	81	27	3.0
14	WESTON RD AT JOHN	0	3	8	76	27	2.8
15	WESTON RD AT LAWRENCE AVE W	0	53	20	109	27	4.0
16	WESTON RD AT WILBY	0	10	10	109	27	4.0
17	WESTON RD AT VICTORIA AVE	0	0	0	109	27	4.0
18	WESTON RD AT DENISON	0	0	1	108	27	4.0
19	WESTON RD AT CLOUSTON	0	2	5	105	27	3.9
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	2	9	98	27	3.6
21	WESTON RD AT DORA SPENCER	0	4	0	102	27	3.8
22	WESTON RD AT JANE ST	0	37	12	127	27	4.7
23	WESTON RD AT ERNEST DOCKRAY	0	1	4	124	27	4.6
24	WESTON RD AT BARTONVILLE	0	0	3	121	27	4.5
25	WESTON RD AT RAY	0	2	6	117	27	4.3
26	WESTON RD AT OXFORD	0	1	8	110	27	4.1
27	WESTON RD AT EGLINTON AVE W	0	8	10	108	27	4.0
28	WESTON RD AT YORK AVE	0	2	5	105	27	3.9
29	WESTON RD AT DENNIS	0	1	1	105	27	3.9
30	WESTON RD AT BUSHEY	0	1	0	106	27	3.9
31	WESTON RD AT HUMBER BLVD	0	6	14	98	27	3.6
32	WESTON RD AT AVON	0	0	9	89	27	3.3
33	WESTON RD AT SENECA	0	2	1	90	27	3.3
34	WESTON RD AT NORTHLAND	0	2	1	91	27	3.4
35	WESTON RD AT MCCORMACK	0	5	0	96	27	3.6
36	WESTON RD AT GUNNS RD	0	2	0	98	27	3.6
37	WESTON RD AT BIRDSTONE CR N	0	2	2	98	27	3.6
38	KEELE ST AT ST CLAIR AVE W	0	12	21	89	27	3.3
39	KEELE ST AT WEST TORONTO	0	5	0	94	27	3.5
40	KEELE ST AT JUNCTION	0	3	0	97	27	3.6
41	KEELE ST AT DUNDAS ST W	0	15	8	104	27	3.9
42	KEELE ST AT ANNETTE	0	2	2	104	27	3.9
43	KEELE ST AT HUMBERSIDE	0	0	2	102	27	3.8
44	KEELE ST AT HILLSVIEW	0	0	0	102	27	3.8
45	KEELE ST AT GLENLAKE	0	0	1	101	27	3.7
47	KEELE STATION	0	0	101	0	27	0.0
TOTALS	FOR PERIOD 5: 22:00 TO 30:59	0	306	306	4059	1134	3.6

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND PERIOD 5: 22:00 TO 30:59

PERIOD RIDING INDEX	=	3.6	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	13.3	STOPS
AVERAGE ONS/VEHICLE-STOP	=	0.3	
AVERAGE ONS/TRIP	=	11.3	

ROUTE: 89 WESTON
ROUTING CODE(S): _0, _8,
COUNT: 3043 ON 2017-JAN-09:**M-F** (FROM 05:04 TO 26:16)
STOP CARD: 24 COUNT COVERAGE/METHOD: **PART(GE95)/APC**
STOPS: 1 TO 299
COMMENTS: Coverage: 99.4%.

TORONTO TRANSIT COMMISSION

SB CONTROL POINT: 38 KEELE ST AT ST CLAIR AVE W

SOUTHBOUND ALL DAY

ROUTE STOP	LOCATION	STARTS	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
1	STARVIEW LANE AT ST BASIL SCHOOL	0	34	0	34	1	34.0
2	WESTON RD AT BRADMORE	0	0	0	34	1	34.0
3	WESTON RD AT FLINDON	0	0	0	34	1	34.0
4	WESTON RD AT REUBEN	0	0	0	34	1	34.0
5	WESTON RD AT ALBION RD	0	843	7	870	161	5.4
6	WESTON RD AT DEE	0	119	68	921	161	5.7
7	WESTON RD AT CARDELL	0	217	61	1077	161	6.7
8	WESTON RD AT OAK	0	351	98	1330	161	8.3
9	WESTON RD AT PARKE	0	86	29	1387	161	8.6
10	WESTON RD AT COULTER	0	330	127	1590	161	9.9
11	WESTON RD AT CHURCH	0	287	78	1799	161	11.2
12	WESTON RD AT FERN	0	67	29	1837	161	11.4
13	WESTON RD AT KING	0	194	179	1852	161	11.5
14	WESTON RD AT JOHN	0	208	280	1780	161	11.1
15	WESTON RD AT LAWRENCE AVE W	0	747	508	2019	161	12.5
16	WESTON RD AT WILBY	0	267	137	2149	161	13.3
17	WESTON RD AT VICTORIA AVE	0	21	18	2152	161	13.4
18	WESTON RD AT DENISON	0	74	48	2178	161	13.5
19	WESTON RD AT CLOUSTON	0	132	60	2250	161	14.0
20	WESTON RD AT SIDNEY BELSEY CRESCENT	0	311	161	2400	161	14.9
21	WESTON RD AT DORA SPENCER	0	70	14	2456	161	15.3
22	WESTON RD AT JANE ST	0	709	387	2778	161	17.3
23	WESTON RD AT ERNEST DOCKRAY	0	105	62	2821	161	17.5
24	WESTON RD AT BARTONVILLE	0	114	80	2855	161	17.7
25	WESTON RD AT RAY	0	130	171	2814	161	17.5
26	WESTON RD AT OXFORD	0	161	145	2830	161	17.6
27	WESTON RD AT EGLINTON AVE W	0	347	385	2792	161	17.3
28	WESTON RD AT YORK AVE	0	96	58	2830	161	17.6
29	WESTON RD AT DENNIS	0	95	53	2872	161	17.8
30	WESTON RD AT BUSHEY	0	120	37	2955	161	18.4
31	WESTON RD AT HUMBER BLVD	0	282	277	2960	161	18.4
32	WESTON RD AT AVON	0	94	372	2682	161	16.7
33	WESTON RD AT SENECA	0	37	33	2686	161	16.7
34	WESTON RD AT NORTHLAND	0	132	36	2782	161	17.3
35	WESTON RD AT MCCORMACK	0	123	32	2873	161	17.8
36	WESTON RD AT GUNNS RD	0	46	48	2871	161	17.8
37	WESTON RD AT BIRDSTONE CR N	0	100	104	2867	161	17.8
38	KEELE ST AT ST CLAIR AVE W	0	367	575	2659	161	16.5
39	KEELE ST AT WEST TORONTO	0	110	28	2741	161	17.0
40	KEELE ST AT JUNCTION	0	50	28	2763	161	17.2
41	KEELE ST AT DUNDAS ST W	0	381	185	2959	161	18.4

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SOUTHBOUND ALL DAY

ROUTE STOP	LOCATION	STARTS	ONS	OFFS	ACCUM.	VEHICLES	AVG. LOAD
42	KEELE ST AT ANNETTE	0	124	47	3036	161	18.9
43	KEELE ST AT HUMBERSIDE	0	99	39	3096	161	19.2
44	KEELE ST AT HILLSVIEW	0	29	5	3120	161	19.4
45	KEELE ST AT GLENLAKE	0	82	51	3151	161	19.6
47	KEELE STATION	0	0	3151	0	161	0.0
TOTALS FOR SOUTHBOUND ALL DAY		0	8291	8291	98976	6766	14.6

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SOUTHBOUND ALL DAY

PERIOD RIDING INDEX	=	14.6	(AVERAGE OCCUPANCY)
AVERAGE TRIP LENGTH	=	11.9	STOPS
AVERAGE ONS/VEHICLE-STOP	=	1.2	
AVERAGE ONS/TRIP	=	51.5	

Exsiting (in report)

Route		Transit Unit	Capacity Per Transit Unit	Direction	Weekday A.M. Peak Hour			P.M. Peak Hour		
					Peak/Average Ridership per transit unit	Remaining Capacity	Utilization	Peak/Average Ridership per transit unit	Remaining Capacity	Utilization
89	Weston	Orion VII NG Hybrid	51	NB	13	38	25%	17	34	34%
			51	SB	14	37	27%	17	34	34%

Route 89 Headway

Direction	AM	PM
NB	5 mins	7 mins
SB	5 mins	7 mins

Future Background

Base Data Year	Horizon Year	Annual Growth
2019	2027	1.50%

Route		Transit Unit	Capacity Per Transit Unit	Direction	Weekday A.M. Peak Hour			P.M. Peak Hour		
					Peak/Average Ridership per transit unit	Remaining Capacity	Utilization	Peak/Average Ridership per transit unit	Remaining Capacity	Utilization
89	Weston	Orion VII NG Hybrid	51	NB	15	36	28%	19	32	38%
			51	SB	16	35	31%	20	31	38%

Future Total (in report)

	AM IN	AM OUT	PM IN	PM OUT
Transit Trips	2	31	24	8
NB (40%)				
SB (60%)				

Route		Weekday A.M. Peak Hour		Weekday P.M. Peak Hour	
		Direction	New Riders per Bus	Direction	New Riders per Bus
89	Weston	NB	1.1	NB	1.5
		SB	1.7	SB	2.2

Route		Transit Unit	Capacity Per Transit Unit	Direction	Weekday A.M. Peak Hour			P.M. Peak Hour		
					Peak/Average Ridership per transit unit	Remaining Capacity	Utilization	Peak/Average Ridership per transit unit	Remaining Capacity	Utilization
89	Weston	Orion VII NG Hybrid	51	NB	15	36	29%	19	32	38%
			51	SB	16	35	31%	20	31	39%