



BA Group

449 CARLAW AVENUE

PROPOSED MIXED-USE DEVELOPMENT

City of Toronto

Urban Transportation Considerations Report

Part 2 of 2 - Appendices

Prepared For: Choice Properties Limited Partnership

August 2022

**MOVEMENT
IN URBAN
ENVIRONMENTS**
BAGROUP.COM

Appendix A: Reduced Scale Architectural Plans





Artist conceptual rendering. This image is for illustrative purposes only

449 CARLAW AVENUE

TORONTO, ONTARIO

ISSUED FOR REZONING SUBMISSION THROUGH TRANSIT ORIENTED COMMUNITIES (TOC) PROGRAM

Date: August 24th, 2022

CLIENT

Choice Properties Limited Partnership
700-22 St Clair Ave E
Toronto, ON
M4T 2S5

ARCHITECT

Hariri Pontarini Architects
235 Carlaw Avenue
Suite 301, Toronto, ON
M4M 2S1

STRUCTURAL ENGINEER

Entuitive
200 University Ave
7th Floor, Toronto, ON
M5H 3C6

SITE SERVICES

CounterPoint Engineering
8395 Jane St
Vaughan, ON
L4K 5Y2

TRAFFIC ENGINEER

BA Group
45 St. Clair Avenue W
Suite 300, Toronto, ON
M4V 1K9

LANDSCAPE ARCHITECT

LandArt
4696 Bartlett Rd
Suite 6, Beamsville, ON
L0R 1B1

URBAN PLANNER

USI
197 Spadina Ave,
Toronto, ON
M5T 2C8

RAIL CONSULTANT

HATCH
Global Delivery Centre
Sheridan Science & Technology Park
2800 Speakman Drive
Mississauga, ON
L5K 2R7

DRAWING LIST	
Sheet Name	Sheet Number
COVER PAGE	A001
RENDERINGS	A002
CONTEXT PLAN	A101
SURVEY	A102
PROJECT STATISTICS	A103
SITE PLAN LAND OWNERSHIP	A104
SITE PLAN	A105
LEVEL P2 - RESIDENTIAL PARKING	A201
LEVEL P1 - RESIDENTIAL PARKING	A202
LEVEL P0 - RETAIL PARKING	A203
LEVEL 1	A204
LEVEL 2	A205
LEVEL 2 MEZZANINE	A206
LEVEL 3	A207
LEVEL 4	A208
LEVEL 5	A209
LEVEL 6	A210
LEVEL 7	A211
LEVEL (TYP)	A212
MPH TOWER C - LEVEL 31	A213
MPH TOWER B - LEVEL 36	A214
LEVEL 39	A215
LEVEL 40	A216
MPH TOWER A - LEVEL 41	A217
ROOF PLAN	A218
WEST ELEVATION	A401
SOUTH ELEVATION	A402
EAST ELEVATION	A403
NORTH ELEVATION	A404
OVERALL SECTION 1	A501
SECTION 01 (TOWER A)	A502
SECTION 02 (TOWER B)	A503
SECTION 03 (TOWER C)	A504
PODIUM SECTIONS	A505
MASSING AXONOMETRIC VIEWS	A601

General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4901
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:

CARLAW + GERRARD
Toronto, Ontario

COVER PAGE

Project number: 1941
Scale:
Sheet Start Date: 04/14/22
Drawn / Checked by: HPA
Drawing No.: Revision:

A001





This image is a conceptual rendering and is proposed for illustrative purposes only



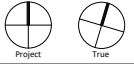
This image is a conceptual rendering and is proposed for illustrative purposes only



This image is a conceptual rendering and is proposed for illustrative purposes only

General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural Drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



NORTH

Project

True

KEYPLAN



LEGEND

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOD PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4903 fax: 416-929-8924
info@hp-arch.com hariripontarini.com

Project Title:

CARLAW + GERRARD
Toronto, Ontario

RENDERINGS

Project number: 1941

Scale:

Sheet Start Date: 04/14/22

Drawn / Checked by: HPA

Drawing No.:

Revision:

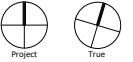
A002





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural Drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



NORTH Project True

KEYPLAN



LEGEND

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOD PROGRAM	2023-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-8903
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:

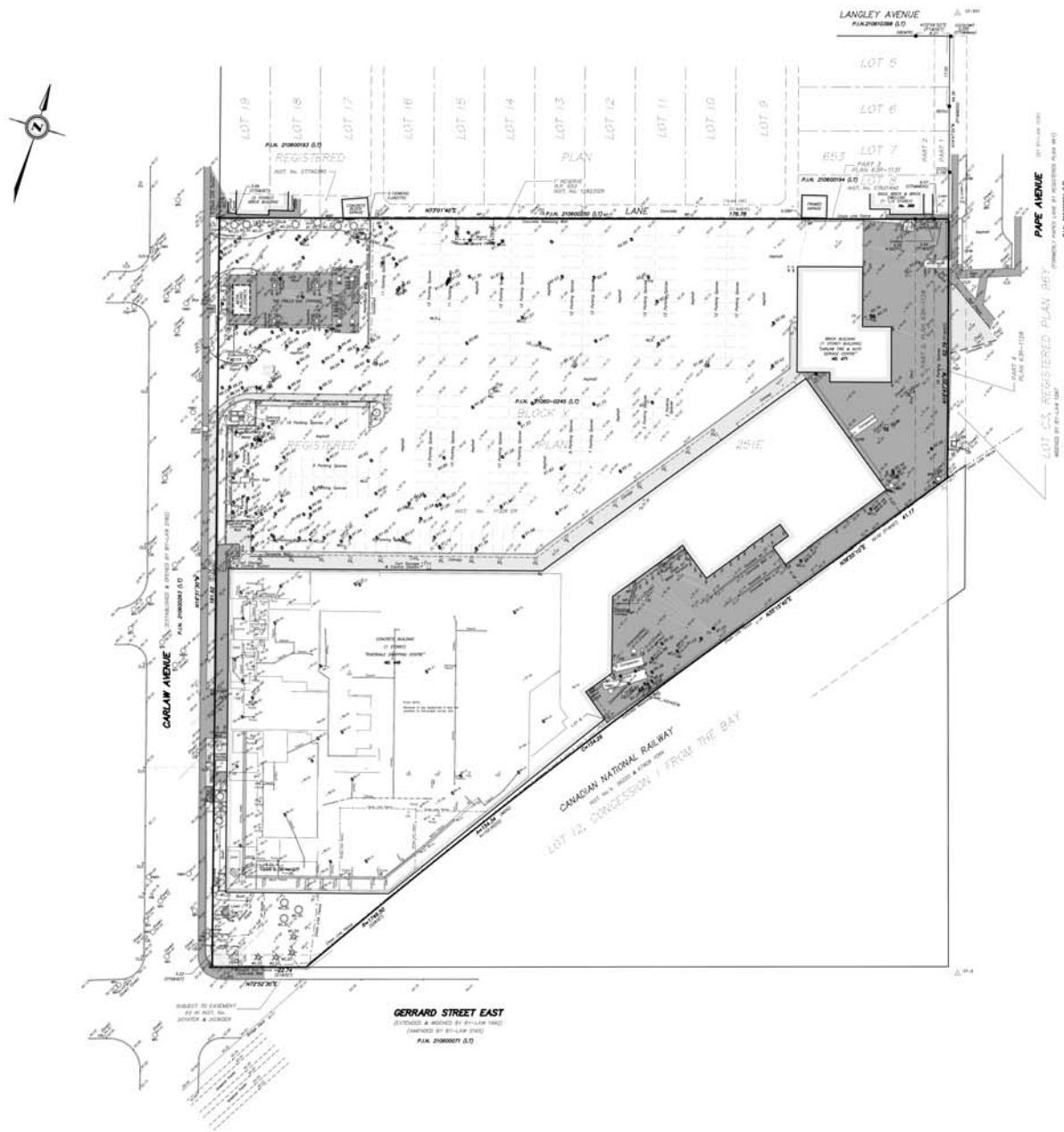
CARLAW + GERRARD
Toronto, Ontario

CONTEXT PLAN

Project number: 1941
Scale: 1 : 1000
Sheet Start Date: 04/14/22
Drawn / Checked by: HPA
Drawing No.: Revision:

A101





PLAN OF SURVEY WITH TOPOGRAPHY OF
BLOCK X
REGISTERED PLAN 251E
CITY OF TORONTO

SCALE 1 : 500

SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS
2016

C THE INFORMATION CONTAINED ON THIS PLAN OF SURVEY HAS BEEN OBTAINED BY THE SURVEYOR BY MEANS OF A SURVEY AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.

ELEVATION NOTE

ELEVATIONS ARE BASED ON THE CANADIAN GEODETIC DATUM AND WERE DERIVED FROM CITY OF TORONTO BENCH MARK 812, HAVING A PUBLISHED ELEVATION OF 89.488 metres.

BEARING NOTE

BEARINGS HEREON ARE GRID BEARINGS AND ARE DERIVED FROM HORIZONTAL CONTROL MONUMENTS NO. 3-CIT E 217844.73 N 483448.87 831-CIT E 317576.42 N 483448.35 AND ARE REFERRED TO THE GENERAL MERIDIAN 79°30' WEST LONGITUDE, ZONE 10.

METRIC

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

LEGEND

#	DENOTES	SURVEY MONUMENT FOUND
WT	WITNESS MONUMENT	
SB	STANDARD IRON BAR	
SSB	SHORT STANDARD IRON BAR	
IB	IRON BAR	
CC	CUT CROSS	
N/C, S/W	NORTH, SOUTH, EAST, WEST	
CU	CUT CROSS	
UN	UNKNOWN	
SVN	SPEIGHT AND VAN NOSTRAND LIMITED, O.L.S.	
RP	REGISTERED PLAN 251E	
#	ROUND	
PT	PLAN 428-1137	
D1	INST. NO. 111326	
D2	INST. NO. 87808 YORK	
CB	CATCH BASIN	
B	ROLLAND	
ATS	AUTOMATIC TRAFFIC SIGNAL	
CLS	CONCRETE LIGHT STANDARD	
CH	CUT CROSS	
FD	FIRE HYDRANT	
HB	HYDRO BOX	
GV	GAS VALVE	
CP	COLUMN	
COL	CONCRETE POLE	
HT	HYDRO TRANSFORMER	
MT	METER	
MTT	MANHOLE	
MM	HYDRO MANHOLE	
CV	REGULATION CONTROL VALVE	
MS	METAL POLE	
WP	WATER VALVE	
WF	WOODEN POLE	
FF	FISHED FLOOR	
SP	SARISSE BOX	
BRP	BREATHING PIPE	
FM	GAS METER	
MC	MONITORING WELL	
PL	PILLAR	
WP	WOODEN BELL POLE	
GM	GAS MANHOLE	
DT	DECIDUOUS TREE	
CT	CONIFEROUS TREE	
CR	CONCRETE	
BR	BRICK	
FS	FLAGSTONE	

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

- THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
- THE SURVEY WAS COMPLETED ON APRIL 18th, 2016.

DATE:

D. A. MILTON
CHARTERED LAND SURVEYOR

SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS
750 DUNDAS STREET, SUITE 800
TORONTO, ONTARIO M5G 1A4
TEL: 416 748-0744 FAX: 416 748-7868
E-MAIL: toronto@svng.on.ca

DRAWN: E. D. /B.B./J.D. FILE NAME: A0010384.DWG
CHECKED: D. A. W. PLOT SCALE: MET: 1=0.50
JOB No.: 001-0384 PLOTTED:
REF. No.: 2-251E UPDATED: APRIL 8, 2016

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REDZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

Project Title:

CARLAW + GERRARD
Toronto, Ontario

SURVEY

Drawing No.:

Revision:

A102



SUMMARY OF SITE AREAS AND FLOOR SPACE INDEX (FSI)			
	sq. m.	sq. ft.	
Original Lot Area	22,704	244,379	
Metrolinx O&A Tunnel & Station Area	7,824	84,217	
Streetside Parkland Dedication Area	3,170	34,274	
Level of New Street R.O.W.	3,665	39,562	
TOT Development area	8,445	90,902	
POPs area to be maintained by CDP	5,619	60,476	
Project FSI Total GFA/ Original Lot Area		4.06	

BUILDING HEIGHTS				
TOWER A	STY	HEIGHT	HEIGHT + MPH	CSO
TOWER B	35	124.70	130.70	213.20
TOWER C	30	109.70	115.70	198.20
ESTABLISH GRADE		88.5		

GFA Site Specific Definition	
Gross Floor Area (GFA) has been calculated in accordance with 569-2013, including exemptions for areas occupied by wet corridors, elevator shafts, garbage chutes, vehicle parking, bicycle parking, loading, mechanical penthouse and required indoor amenity.	

BUILDING SUMMARY STATS							
	GROSS CONSTRUCTION AREA (GCA)		GROSS FLOOR AREA (GFA)				
	sq. m.	sq. ft.	sq. m.	sq. ft.	sq. m.	sq. ft.	
ABOVE GRADE (w/o Required Indoor Amenity)	103,981	1,119,242	84,125	905,511	7,586	81,651	
BELOW GRADE	23,974	247,386	307	3,304	225	2,420	
TOTAL	126,955	1,366,628	84,432	908,815	7,810	84,071	
GRAND TOTAL GFA (Base +Non Base)			82,242	992,887			

Toronto Zoning Bylaw 569-2013									
Below Grade Parking: Building Area	Gross Construction Area (GCA)				Deductions		Residential Gross Floor Area (GFA)		Non-Residential Gross Floor Area (GFA)
	LEVELS	Total Area (SQM)	Total Area (SQF)	Total Area (SQM)	Total Area (SQF)	Total Area (SQM)	Total Area (SQF)	Total Area (SQM)	Total Area (SQF)
Below Grade	LEVELS								
	Level P1	6,957	74,887	6,957	74,887	0	0	0	0
	Level P2	6,908	74,200	7,873	84,742	135	1,458	0	0
	Level P3	6,908	74,200	7,873	84,742	135	1,458	0	0
Total		22,974	247,386	22,642	241,561	307	3,304	225	2,420

Toronto Zoning Bylaw 569-2013																							
GROSS CONSTRUCTION AREA (GCA)						DEDUCTIONS				RESIDENTIAL GROSS FLOOR AREA (GFA)				NON-RESIDENTIAL GROSS FLOOR AREA (GFA)				UNIT MIX					
TOWER C	LEVELS	Typical Storeys	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	# Unit Per Floor	1 STUDIO	1 Bed	1 Bed + Den	2 Bed	2 Bed + Den	3 Bed	Total	
	Typical Storeys	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	SM per Floor	SF per Floor	Total Area (SF)	# Unit Per Floor	1 STUDIO	1 Bed	1 Bed + Den	2 Bed	2 Bed + Den	3 Bed	Total		
TOWER C	Misch.	1	835	6,830	635	6,831	835	6,830	635	6,831	0	0	0	0	0	0	0	0	0	0	0	0	
	Level 08-20	23	825	8,880	18,975	204,245	47	505	1,079	11,618	778	8,375	17,896	197,827	11	23	93	46	46	23	23	253	
	Level 01	1	779	8,385	779	8,385	47	505	67	685	732	7,880	732	7,882	0	0	0	0	1	1	0	0	
	TOTAL				20,389	219,464						18,618	206,509										
TOWER B	Misch.	1	806	4,375	606	4,374	806	4,374	606	4,374	0	0	0	0	0	0	0	0	0	0	0	0	
	Level 08-25	28	825	8,880	23,100	248,046	48	521	1,555	16,587	777	8,360	21,745	234,059	11	28	140	29	28	16	16	808	
	Level 01	1	633	6,815	633	6,813	48	521	48	521	585	6,292	585	6,292	0	0	0	0	0	0	0	0	
	TOTAL				24,339	259,834						22,329	240,351										
TOWER A	Misch.	1	589	6,340	589	6,341	589	6,341	589	6,341	0	0	0	0	0	0	0	0	0	0	0	0	
	Level 01	1	803	8,640	803	8,641	53	571	53	571	720	8,070	720	8,070	11	1	4	0	0	0	1	11	
	Level 08	1	812	8,740	812	8,740	53	571	53	571	729	8,170	729	8,170	11	1	4	2	0	0	1	11	
	Level 08-30	31	825	8,880	25,575	275,267	53	571	1,643	17,688	772	8,310	23,532	257,599	11	31	124	62	62	31	31	341	
PODIUM	Level 01	1	826	8,680	826	8,687	53	571	53	571	773	8,316	773	8,316	11	1	2	2	1	1	1	11	
	TOTAL				28,605	292,814						26,213	282,151										
	Level 06			4,263	45,881			148	1,587			4,134	44,284			2	15	6	11	7	1	42	
	Level 05			4,263	45,890			148	1,587			4,115	44,293			0	15	6	11	7	1	42	
Level 04			4,265	45,928			149	1,592			4,105	44,124			2	15	6	11	7	1	42		
Level 03			4,211	43,173			147	1,560			4,041	43,135											
Level 02 POP (EXCL)			952	10,247			76	812			88	364											
Level 01			6,626	69,576			3,006	31,504			570	10,438											
Level 01			6,668	71,777			3,087	33,465			4,188	39,855											
TOTAL			30,848	351,193							19,114	31,297											
Grand Total			103,981	1,119,242			10,111	108,830			86,285	928,761		7,586	81,651								
Proposed %														8%	38%	15%	17%	10%	100%				
Required Indoor Amenity																							
Residential GFA for all 3 Towers (Above Grade) (w/o req. indoor amenity)														7,586	81,651								
Non-Residential GFA (Above Grade)														307	3,306								
Residential GFA (Below Grade)														225	2,422								
Non-Residential GFA (Below Grade)																							
Total GFA (w/o req. indoor amenity)														92,242	992,888								

AMENITY			
INDOOR AMENITY	sq. m.	sq. ft.	
REQUIRED INDOOR AMENITY	2,160	2,327	
PROVIDED INDOOR AMENITY	2,160	2,327	
Level 1	2,160	2,327	
OUTDOOR AMENITY	sq. m.	sq. ft.	
REQUIRED OUTDOOR AMENITY	2,160	2,327	
PROVIDED OUTDOOR AMENITY	2,160	2,327	
Level 1	2,160	2,327	
TOTAL AMENITY (INDOOR + OUTDOOR)	4,320	4,654	
Total Required	4,320	4,654	
Total Provided	4,320	4,654	

GREEN ROOF STATISTICS			
GROSS FLOOR AREA	sq. m.	sq. ft.	
GROSS FLOOR AREA	82,242	884,887	
TOTAL ROOF AREA	6,358	68,688	
Area of Residential Private Terrace (Level 2)	196	2,127	
RoofTop Outdoor Amenity space (Level 3)	2,177	23,420	
Area of Renewable Energy (Level 3)	0	0	
Towers Roof Area with Slope less than 750m	0	0	
TOTAL AVAILABLE ROOF SPACE	5,584	60,141	
GREEN ROOF COVERAGE	Required	Proposed	
Coverage of Available Roof Space (%)	2,151	2,214	
Coverage of Available Roof Space (%)	60%	62%	

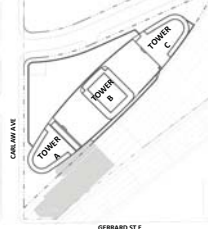
VEHICULAR PARKING					
RETAIL*	ST	VISITOR*	RESIDENTIAL*	TOTAL	
RETAIL	10	0	0	10	
P1 RESIDENTIAL	0	54	2	56	
P2 RESIDENTIAL	0	0	0	0	
TOTAL	10	54	2	66	
* 20% of total parking to provide EV charging stations					
LOADING SPACES					
REQUIRED	1 TYP G, 1 TYPE A, and 2 TYPE B				
PROVIDED	1 TYP G, 1 TYPE A, 3 TYPE B and 2 TYPE C				

BICYCLE				
RETAIL	Short-Term		Long-Term*	Total
	0.3+3		0.2	
	Required	12	6	18
	Proposed	12	6	18
Residential	Short-Term		Long-Term*	Total
	0.1		0.9	
	Required	108	972	1080
	Proposed	108	972	1080
TOTAL	Required	120	978	1098
	Proposed	120	978	1098

General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only. Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural Drawings. The locations shown on the Architectural Drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.

KEYPLAN



LEGEND

Cycling Infrastructure			
Number of short-term bicycle parking spaces	Number of long-term bicycle parking spaces	Number of shower and change facilities (non-residential)	Number of shower and change facilities (residential)
120	120	1	1
100%	100%	100%	100%

CLIENT



DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REDLINING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

255 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4901
fax: 416-929-8924
info@hpi-arch.com
hariripontarini.com

Project Title:

CARLAW + GERRARD
Toronto, Ontario

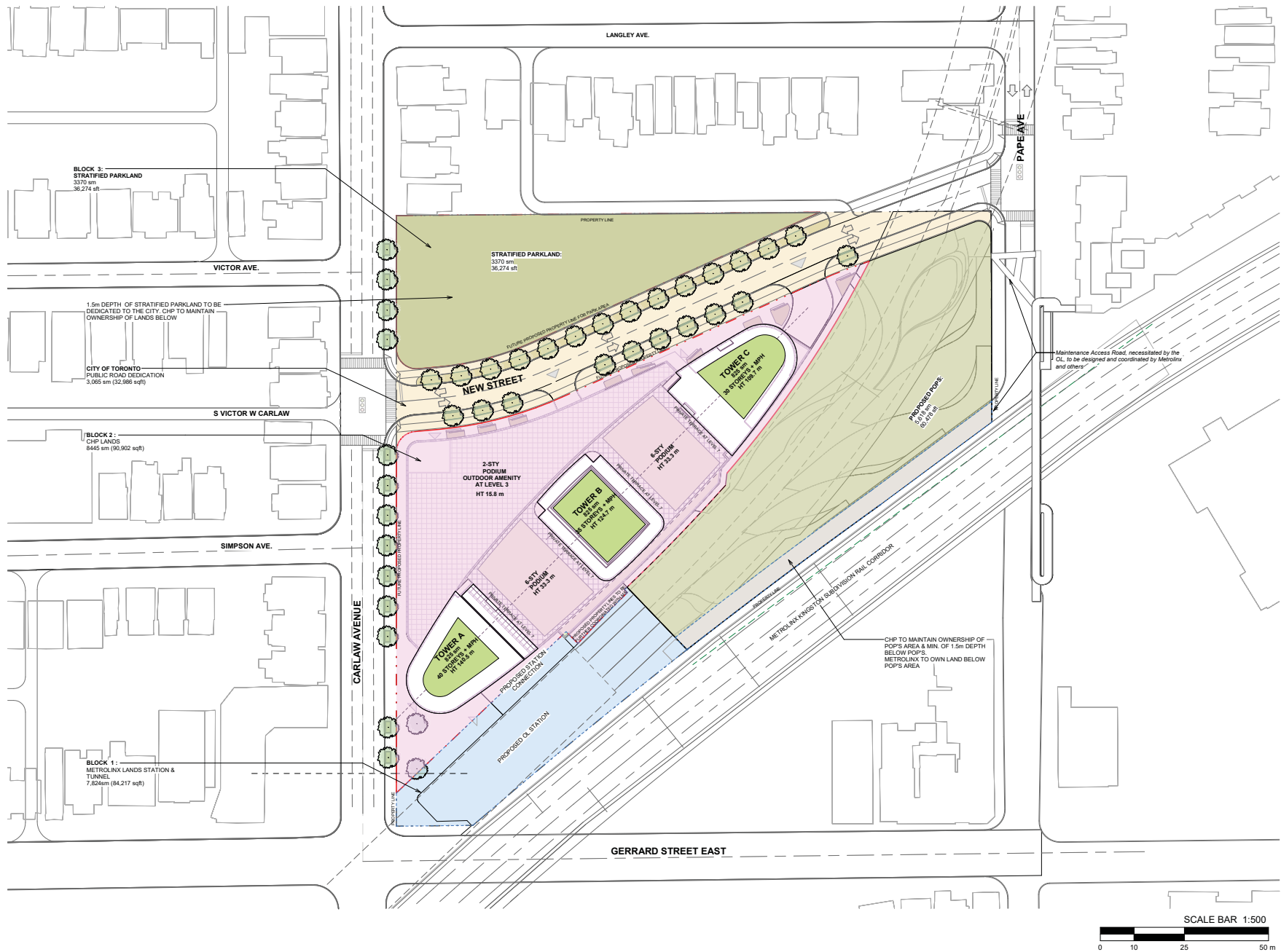
PROJECT STATISTICS

Project number: 1941
Scale:
Sheet Start Date: 08/31/21
Drawn / Checked by: HPA

Revision:

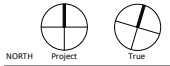
A103





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only. Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

LEGEND

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2023-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4903
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:
CARLAW + GERRARD
Toronto, Ontario

SITE PLAN LAND OWNERSHIP

Project number: 1941
Scale: 1:500
Sheet Start Date: 08/20/21
Drawn / Checked by: HPA
Drawing No.: Revision:

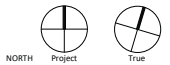
A104





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/verbal clarification or supplementary information regarding the intent of the Contract Documents. The Contractor for design compliance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2023-08-24

HARIRI PONTARINI ARCHITECTS

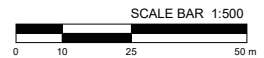
235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4903 fax: 416-929-8924
info@hp-arch.com hariripontarini.com

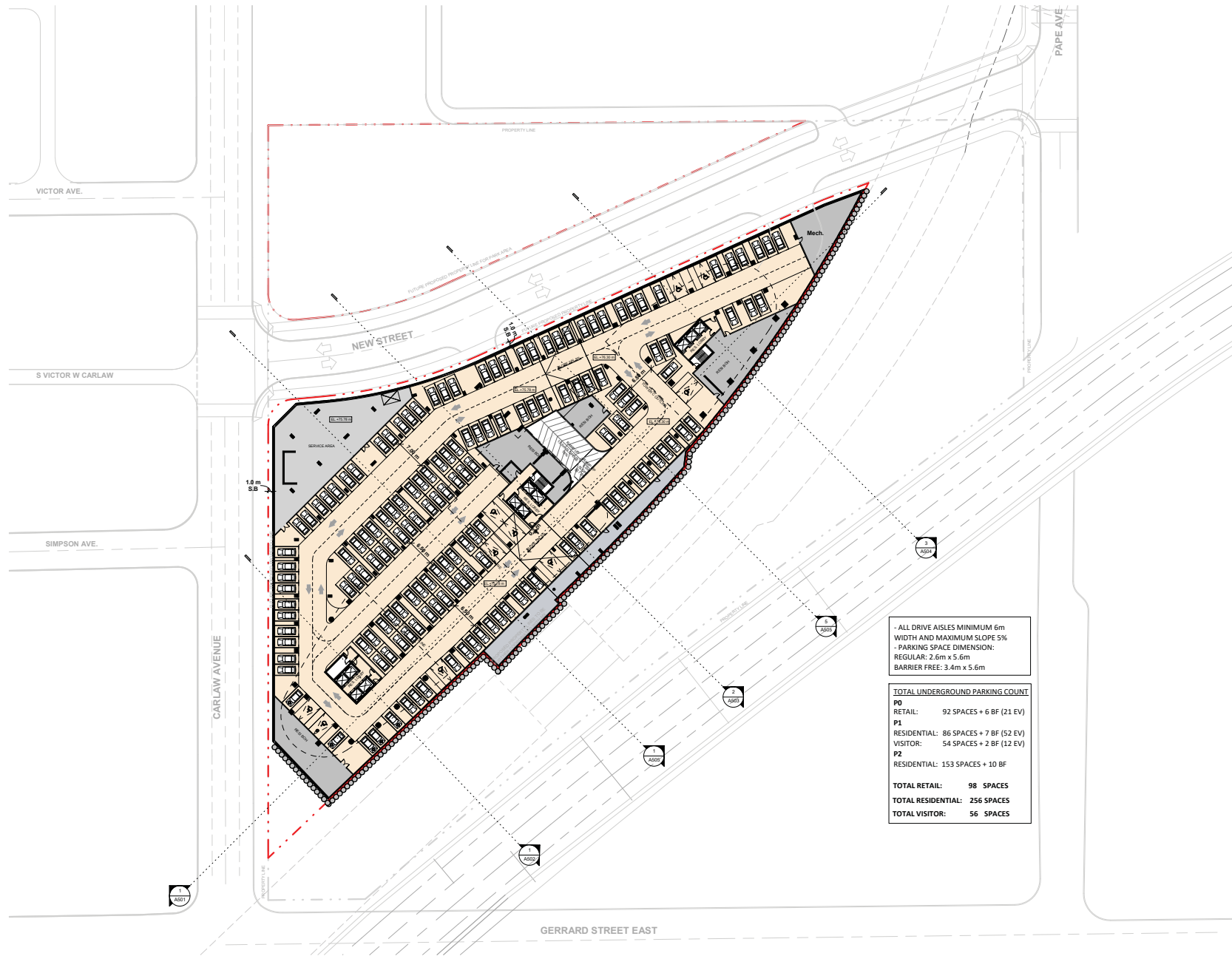
Project Title:
CARLAW + GERRARD
Toronto, Ontario

SITE PLAN

Project number: 1941
Scale: 1:500
Sheet Start Date: 07/22/21
Drawn / Checked by: HPA
Drawing No.: Revision:

A105



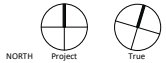


- ALL DRIVE AISLES MINIMUM 6m
WIDTH AND MAXIMUM SLOPE 5%
- PARKING SPACE DIMENSION:
REGULAR: 2.6m x 5.6m
BARRIER FREE: 3.4m x 5.6m

TOTAL UNDERGROUND PARKING COUNT	
P0	
RETAIL:	92 SPACES + 6 BF (21 EV)
P1	
RESIDENTIAL:	86 SPACES + 7 BF (52 EV)
VISITOR:	54 SPACES + 2 BF (12 EV)
P2	
RESIDENTIAL:	153 SPACES + 10 BF
TOTAL RETAIL:	98 SPACES
TOTAL RESIDENTIAL:	256 SPACES
TOTAL VISITOR:	56 SPACES

General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only. Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

- BACK OF THE HOUSE
- Mech.
- Res. Lobby
- Res. PARKING
- SERVICE
- STORAGE

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24
2	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4901
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:

CARLAW + GERRARD
Toronto, Ontario

LEVEL P2 - RESIDENTIAL PARKING

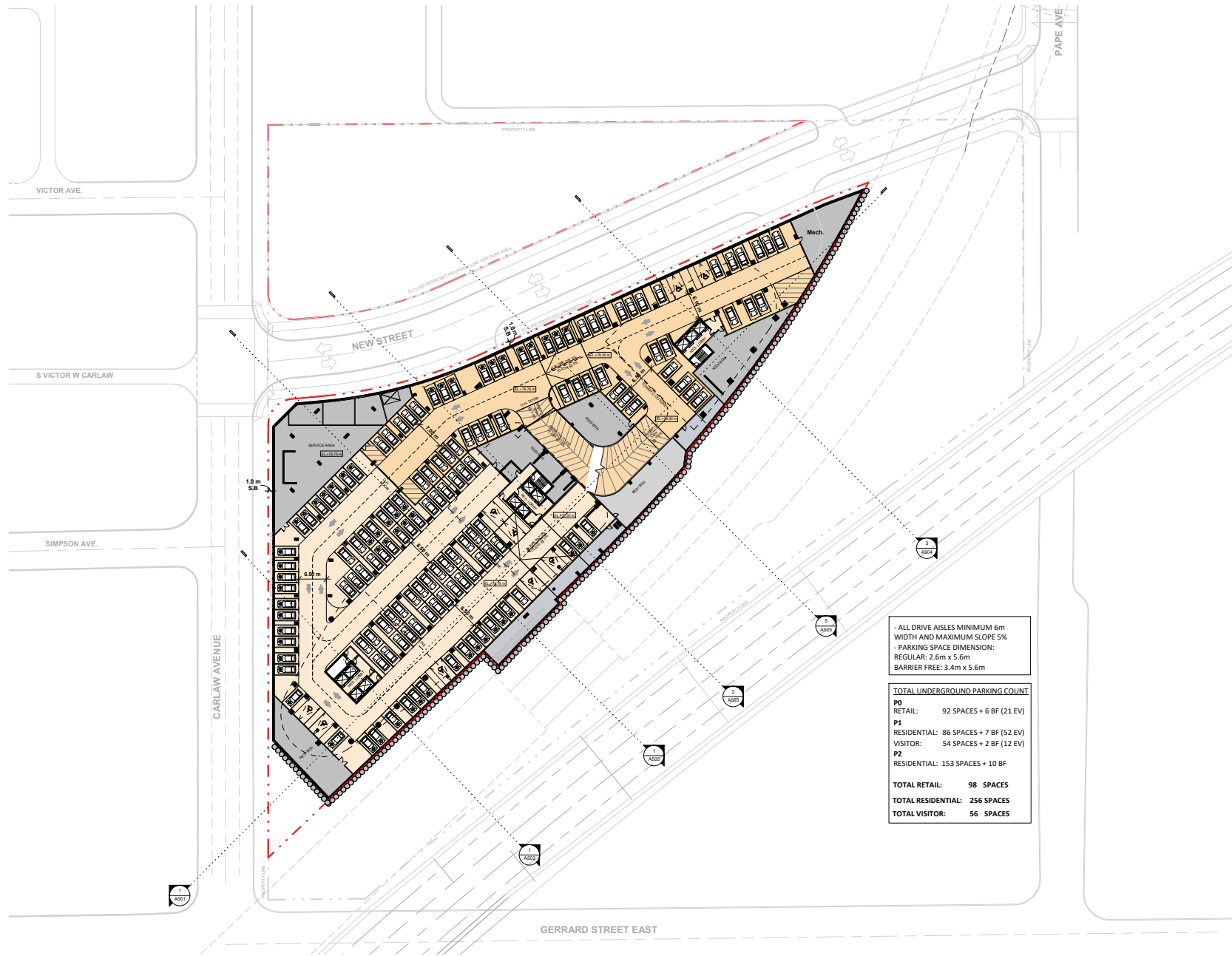
Project number: 1941
Scale: 1 : 400
Sheet Start Date: 02/16/22
Drawn / Checked by: HPA

Drawing No.:

Revision:

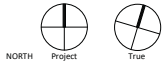
A201





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only. Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

- BACK OF THE HOUSE
- Mech.
- Res. Lobby
- RES. PARKING
- SERVICE
- STORAGE
- VISITOR PARKING
- EV PARKING SPACES

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24
2	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-8901
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:

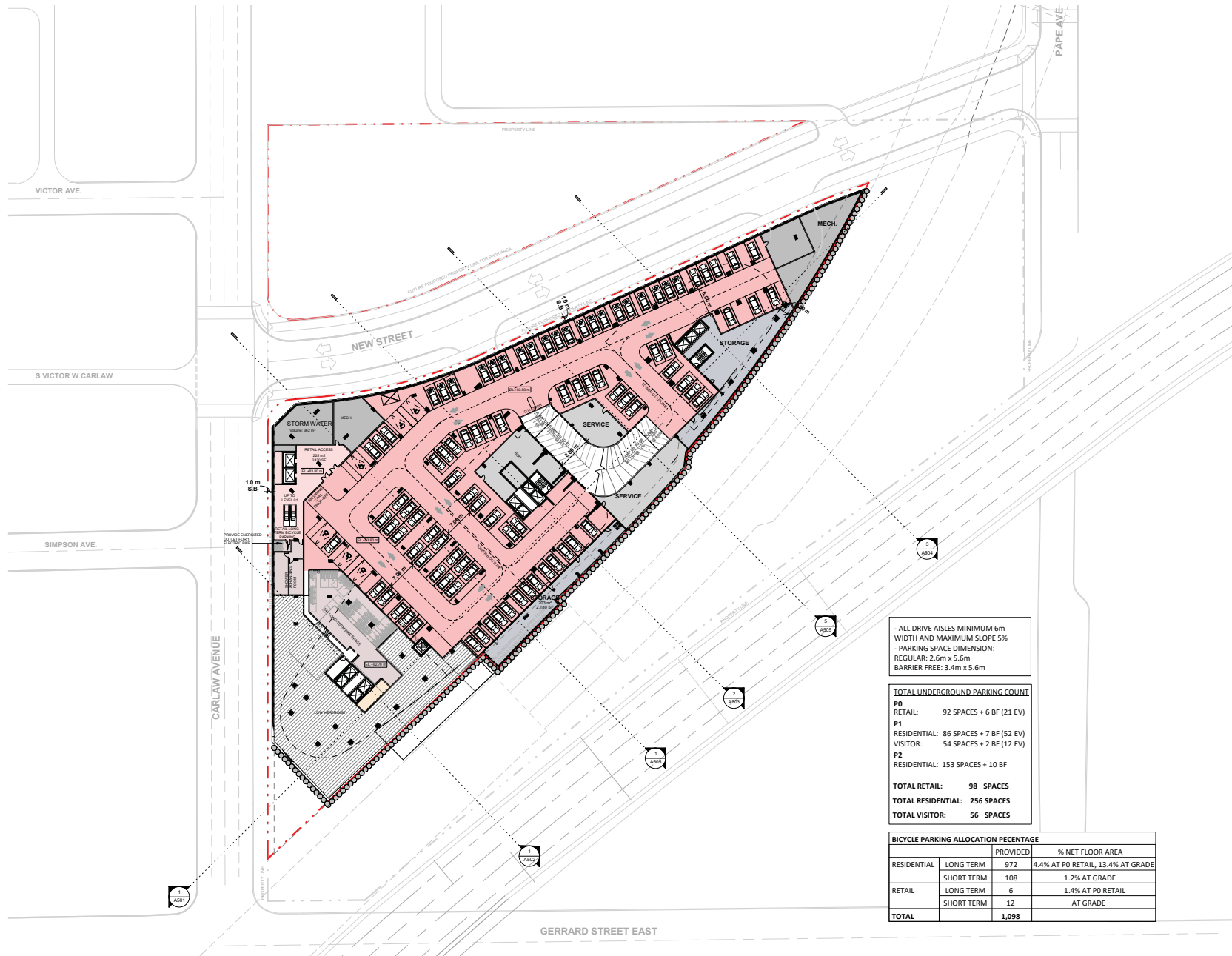
CARLAW + GERRARD
Toronto, Ontario

LEVEL P1 - RESIDENTIAL PARKING

Project number: 1941
Scale: As indicated
Sheet Start Date: 01/12/22
Drawn / Checked by: HPA
Drawing No.: Revision:

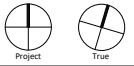
A202





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

- LONG TERM BIKE SPACE
- Low Headroom
- MECH
- RESIDENTIAL
- RETAIL
- RETAIL PARKING
- SERVICE
- STORAGE
- EV PARKING SPACES

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-4903
fax: 416-929-8924
info@hp-arch.com
hariripontarini.com

Project Title:

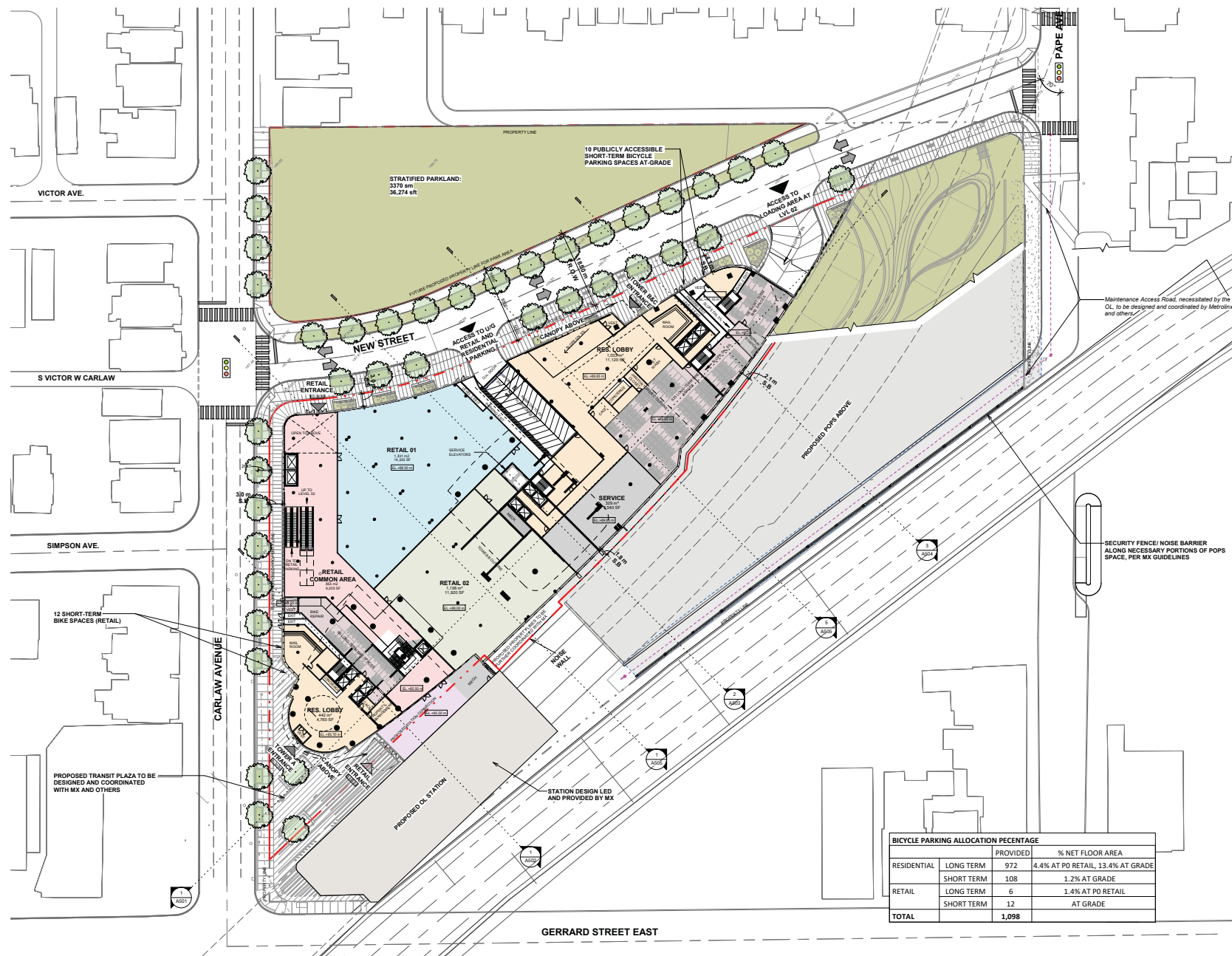
CARLAW + GERRARD
Toronto, Ontario

LEVEL P0 - RETAIL PARKING

Project number: 1941
Scale: As indicated
Sheet Start Date: 08/11/21
Drawn / Checked by: HPA
Drawing No.: Revision:

A203

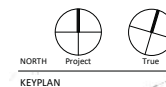




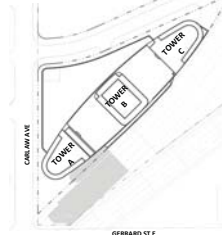
BICYCLE PARKING ALLOCATION PERCENTAGE			
		PROVIDED	% NET FLOOR AREA
RESIDENTIAL	LONG TERM	972	4.4% AT PO RETAIL, 13.4% AT GRADE
	SHORT TERM	108	1.2% AT GRADE
RETAIL	LONG TERM	6	1.4% AT PO RETAIL
	SHORT TERM	12	AT GRADE
TOTAL		1,098	

General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

- LONG TERM BIKE SPACE
- MECH.
- OLR Station
- RES. LOBBY
- RETAIL
- RETAIL 01
- RETAIL 02
- SERVICE
- UNPAID ZONE

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24
2	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24
3	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416-929-8903 fax: 416-929-8924
info@hp-arch.com hariripontarini.com

Project Title:

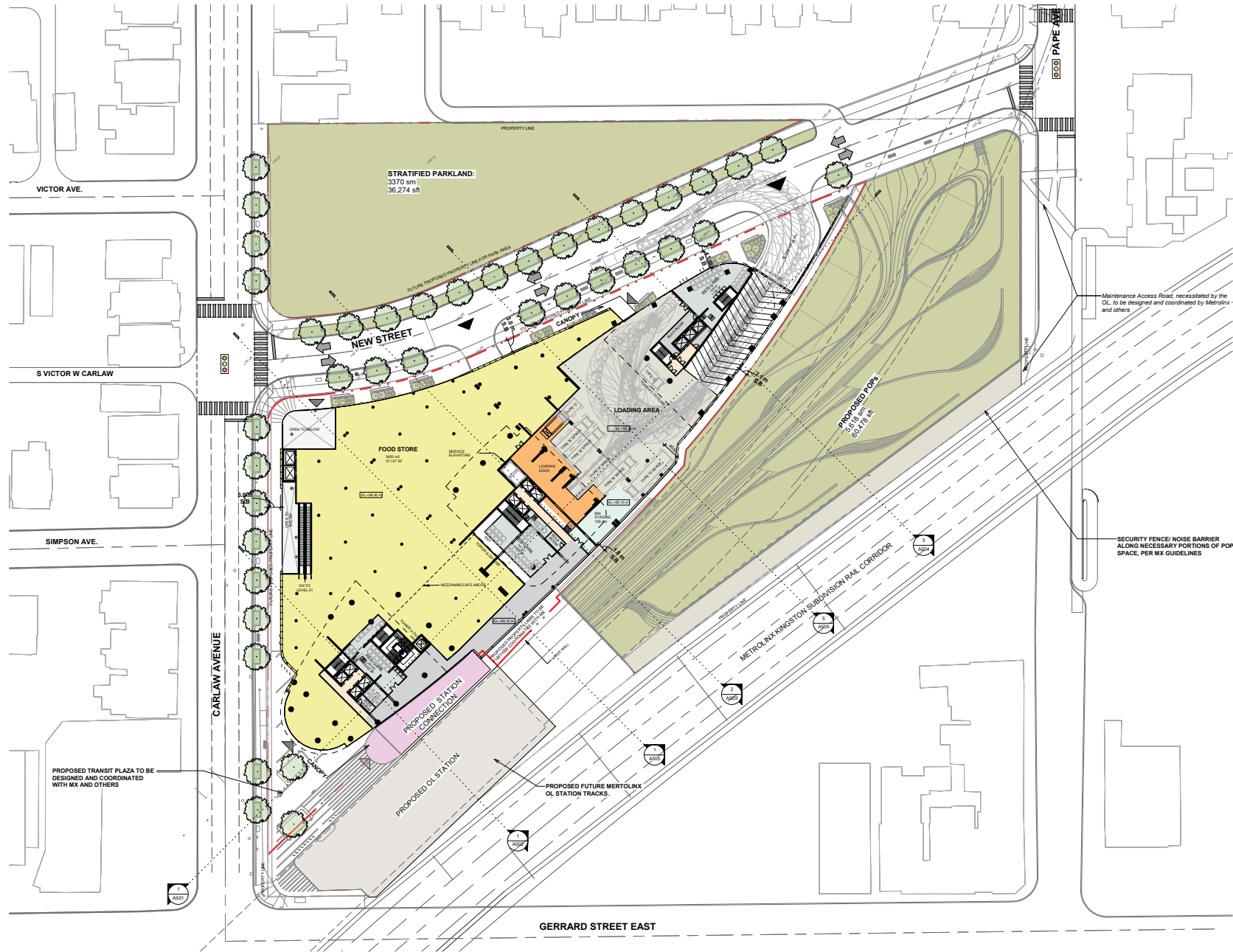
CARLAW + GERRARD
Toronto, Ontario

LEVEL 1

Project number: 1941
Scale: 1 : 400
Sheet Start Date: 09/09/21
Drawn / Checked by: HPA
Drawing No.: Revision:

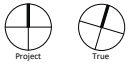
A204





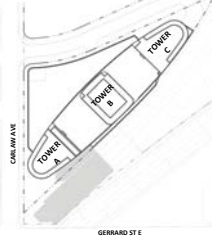
General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



NORTH Project True

KEYPLAN



LEGEND

- FOOD STORE
- LOADING AREA
- OLR Station
- RES. LOBBY
- RES. GARB.
- RESIDENTIAL
- SERVICE

CLIENT



DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2022-08-24
2	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2023-08-24
3	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2023-08-24

HARIRI PONTARINI ARCHITECTS
235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416 929 4903 fax: 416 929 8924
info@hp-arch.com hariripontarini.com

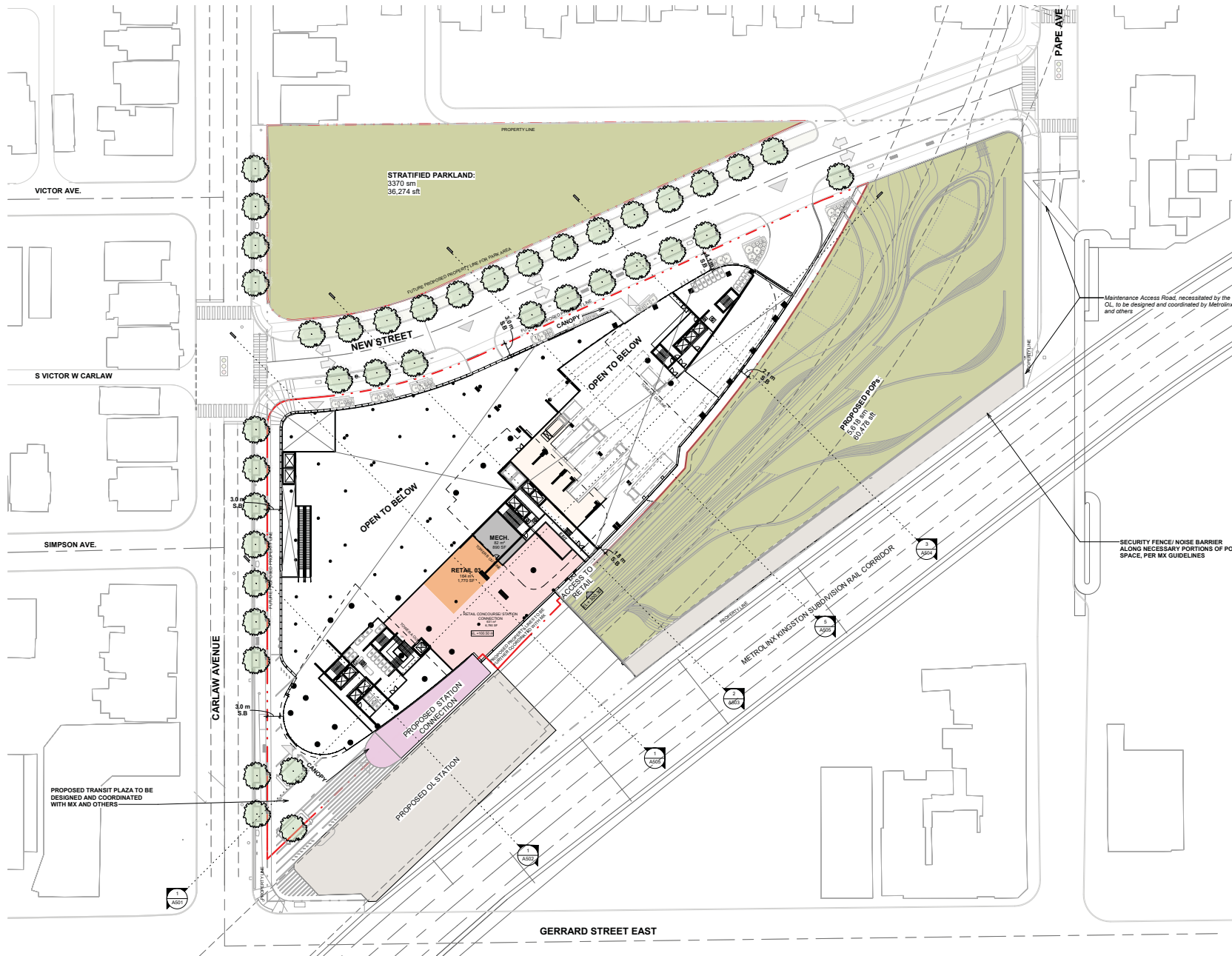
Project Title:
CARLAW + GERRARD
Toronto, Ontario

LEVEL 2

Project number: 1941
Scale: 1 : 400
Sheet Start Date: 08/18/21
Drawn / Checked by: HPA
Drawing No.: Revision:

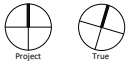
A205





General Notes

- These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the contractor. Upon written application the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
- Drawings are not to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.
- Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.



KEYPLAN



LEGEND

- MECH.
- RETAIL
- RETAIL 03

CLIENT

ChoiceProperties

DRAWING STATUS

No.	Description	Date
1	ISSUED FOR REZONING SUBMISSION THROUGH TOC PROGRAM	2023-08-24

HARIRI PONTARINI ARCHITECTS

235 Carlaw Avenue
Suite 301
Toronto, Canada M4M 2S1
tel: 416 929 4903
fax: 416 929 8924
info@hp-arch.com
hariripontarini.com

Project Title:

CARLAW + GERRARD
Toronto, Ontario

LEVEL 2 MEZZANINE

Project number: 1941
Scale: 1 : 400
Sheet Start Date: 04/13/22
Drawn / Checked by: HPA
Drawing No.: Revision:

A206



Appendix B: Functional Road Plan

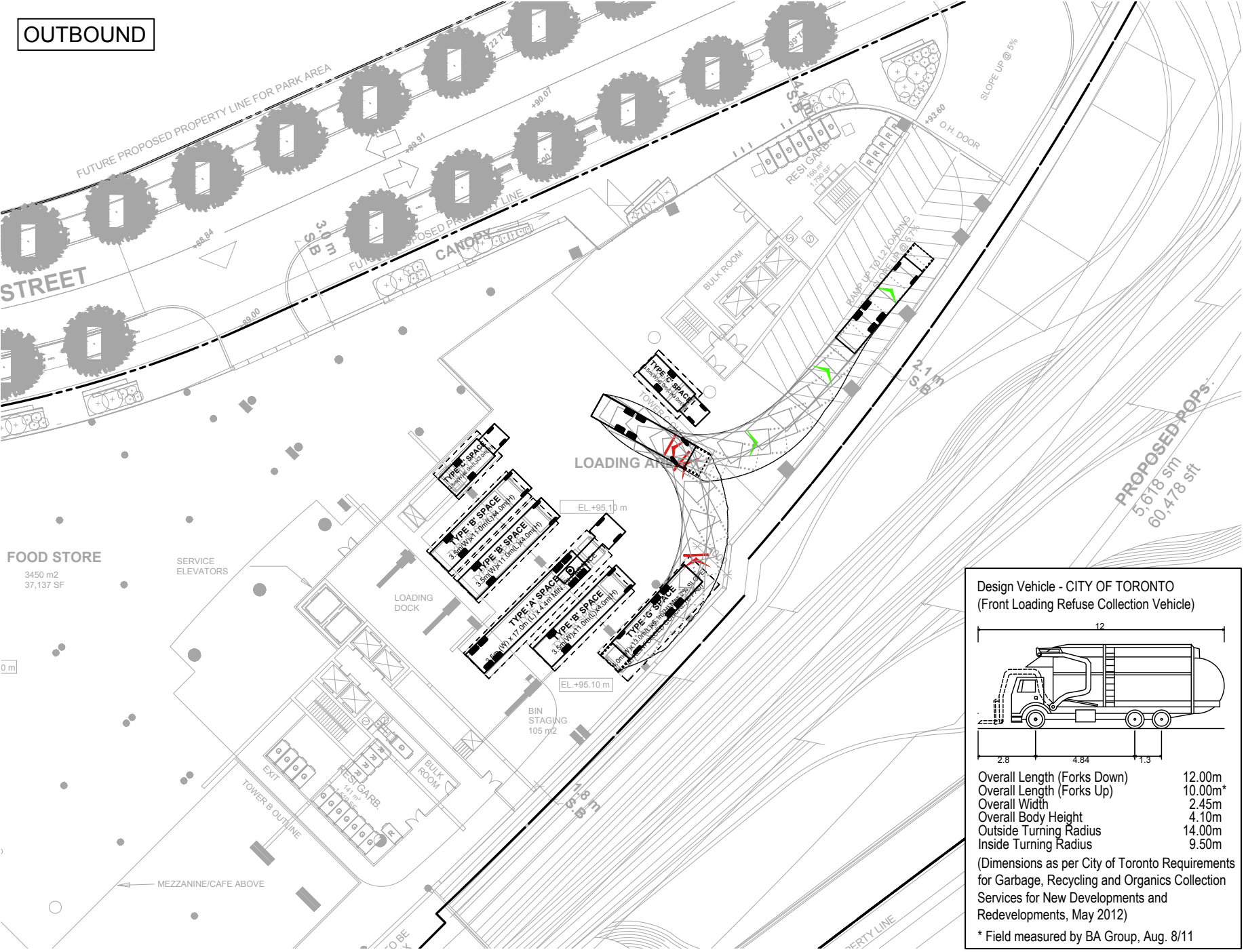
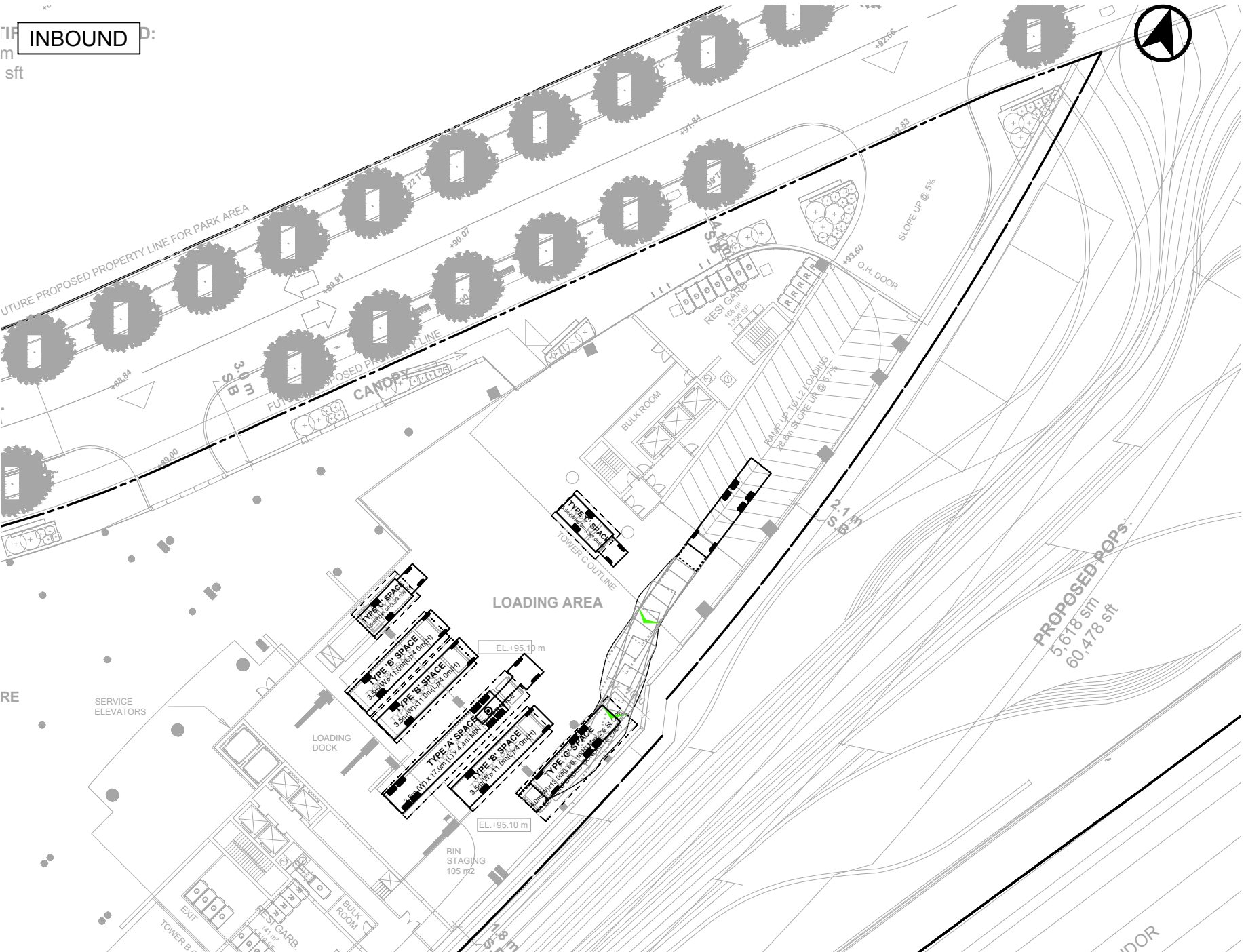




RP-01

Appendix C: Vehicle Manoeuvring Diagrams

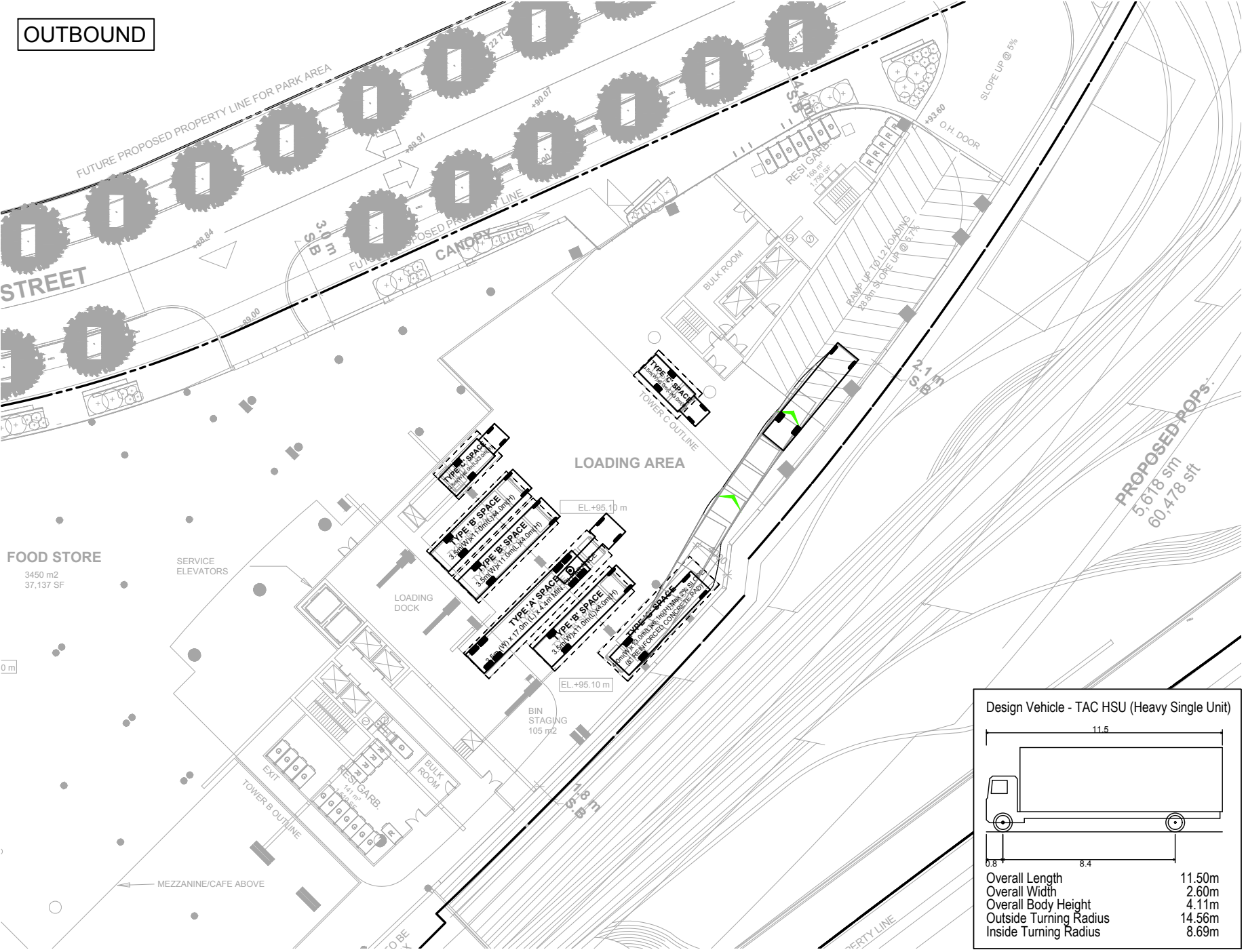
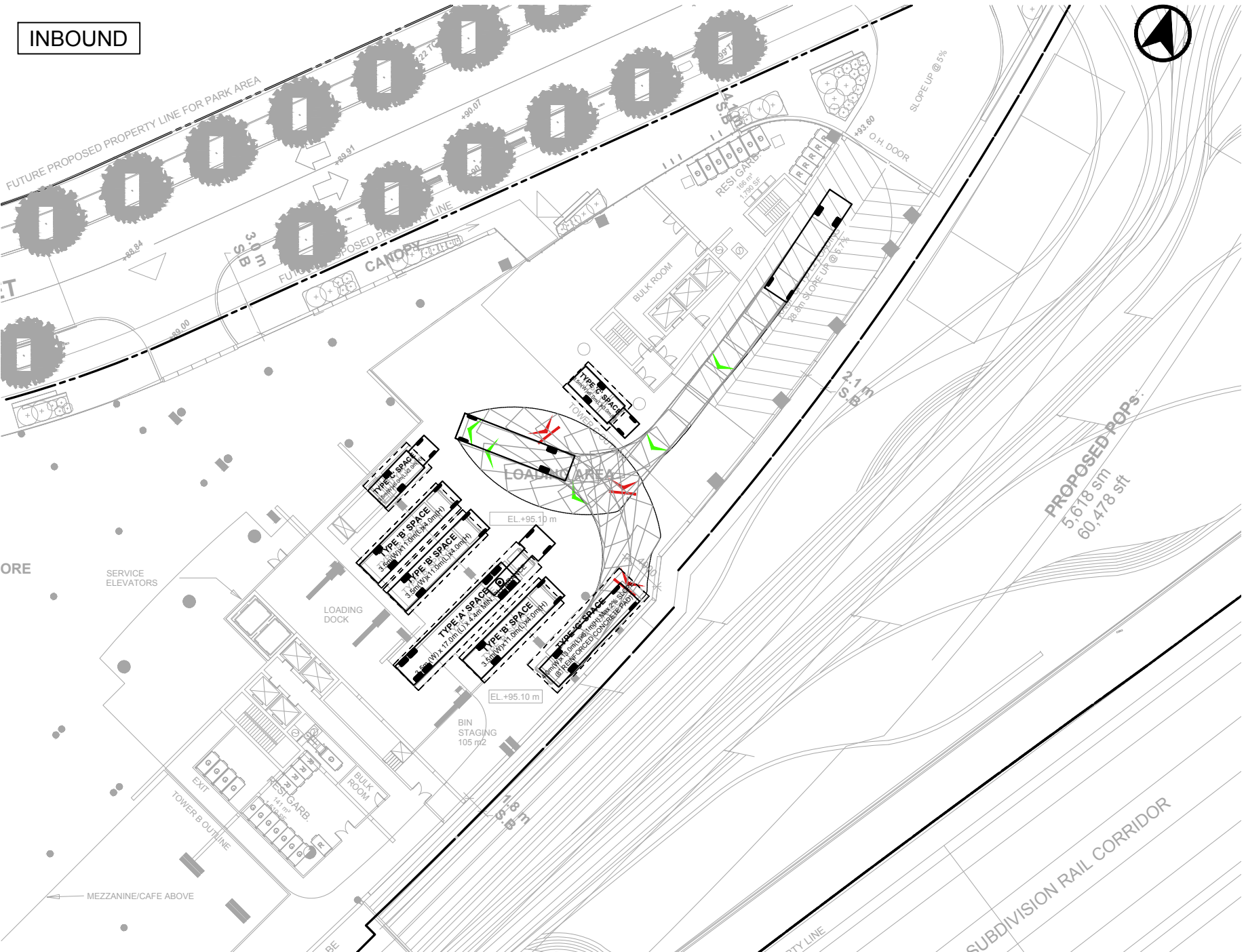




Design Vehicle - CITY OF TORONTO
(Front Loading Refuse Collection Vehicle)

Overall Length (Forks Down)	12.00m
Overall Length (Forks Up)	10.00m*
Overall Width	2.45m
Overall Body Height	4.10m
Outside Turning Radius	14.00m
Inside Turning Radius	9.50m

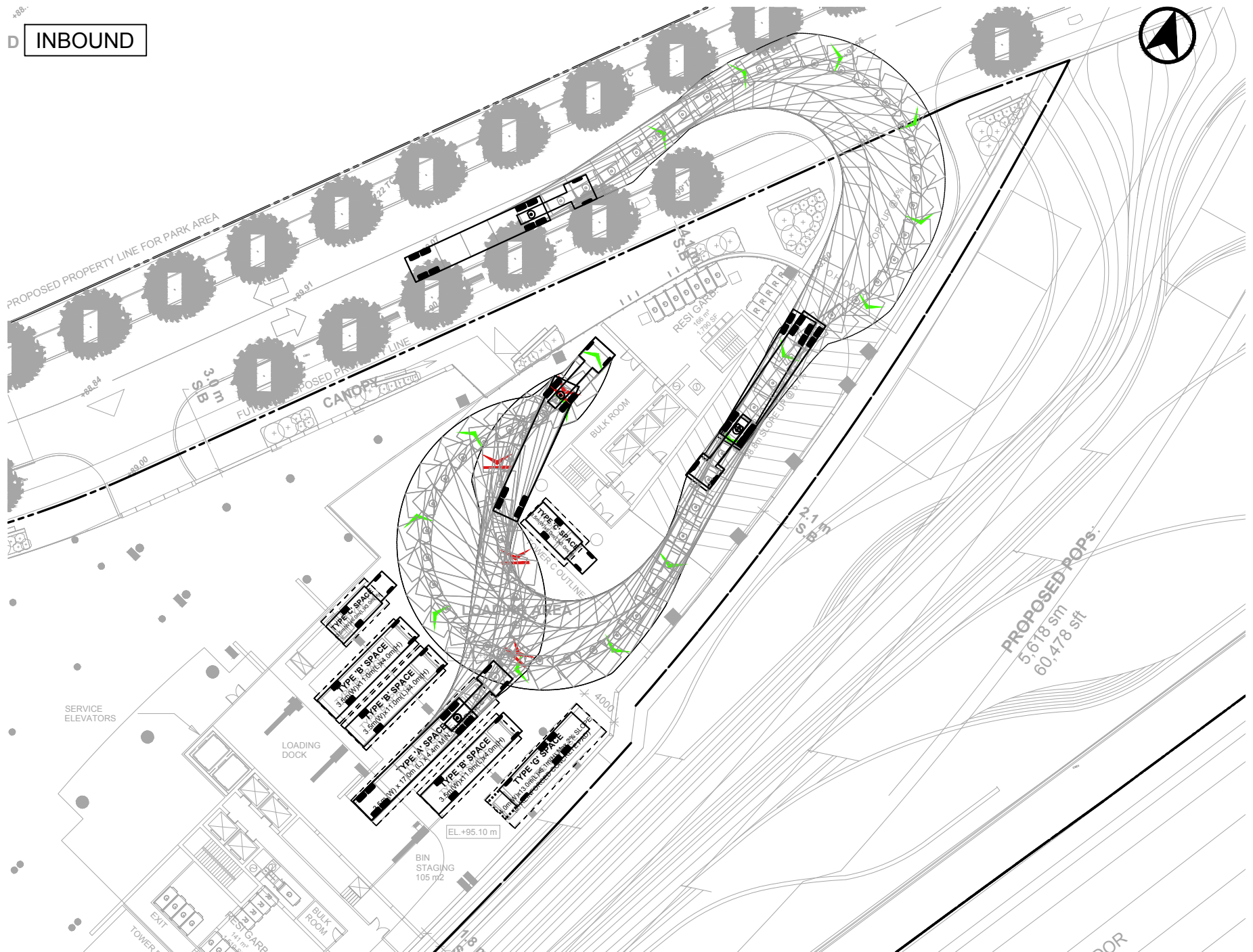
(Dimensions as per City of Toronto Requirements for Garbage, Recycling and Organics Collection Services for New Developments and Redevelopments, May 2012)
* Field measured by BA Group, Aug. 8/11



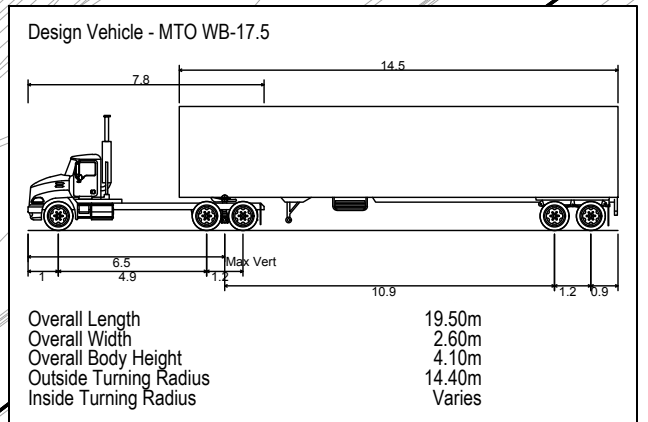
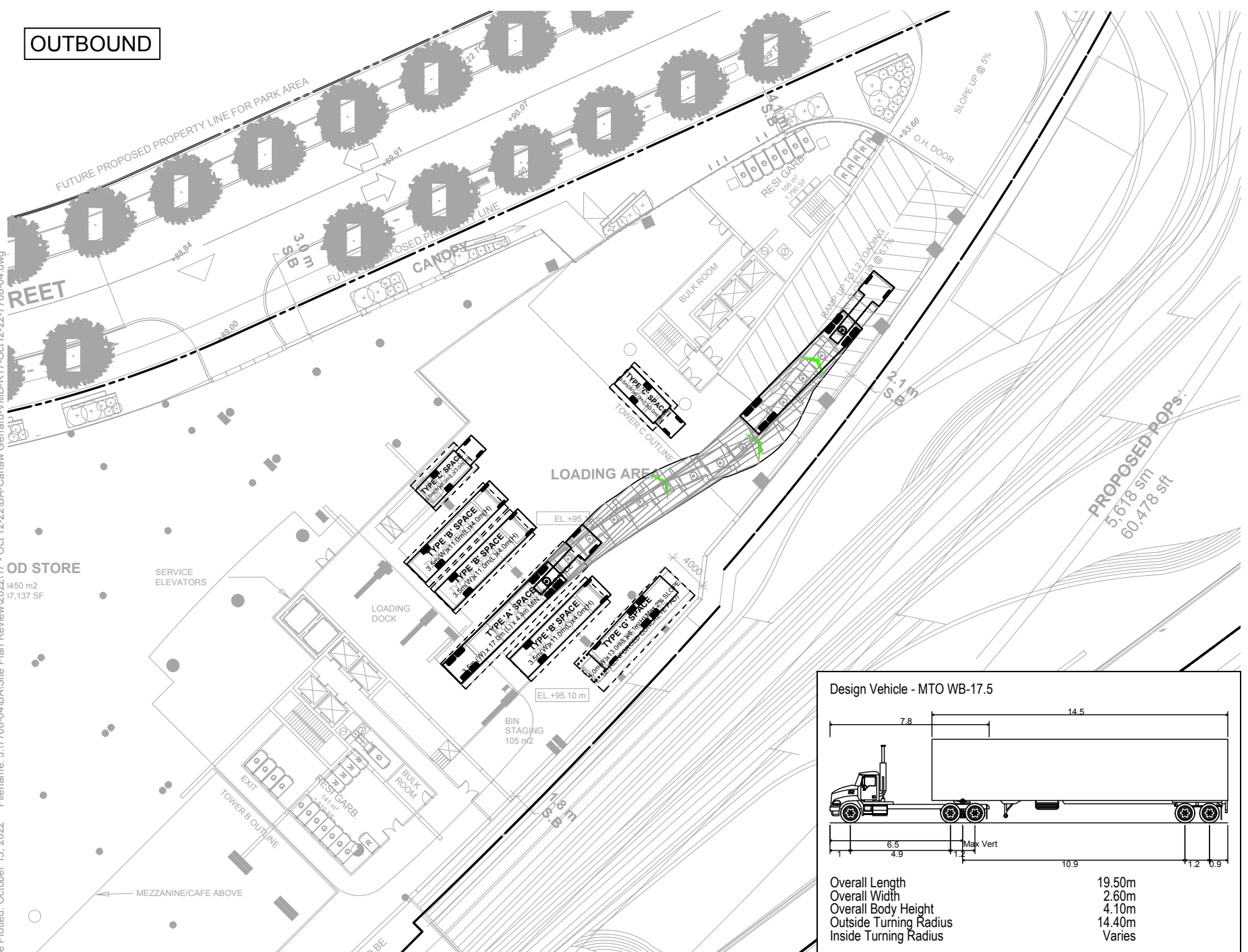
Design Vehicle - TAC HSU (Heavy Single Unit)

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

D INBOUND



OUTBOUND



CARLAW GERRARD
VEHICULAR MANOEUVRING DIAGRAM
GROCERY TYPE 'A' LOADING SPACE
MTO WB-17.5 TRUCK

Project: CARLAW GERRARD
Project No. 7708-04
Date: November 24, 2020
Revised: September 1, 2022

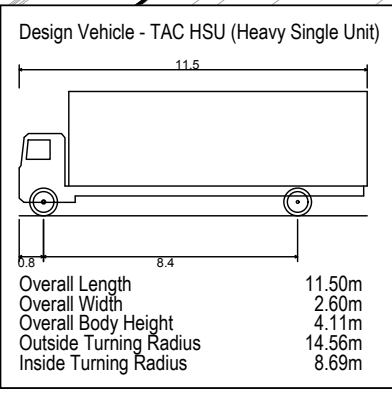
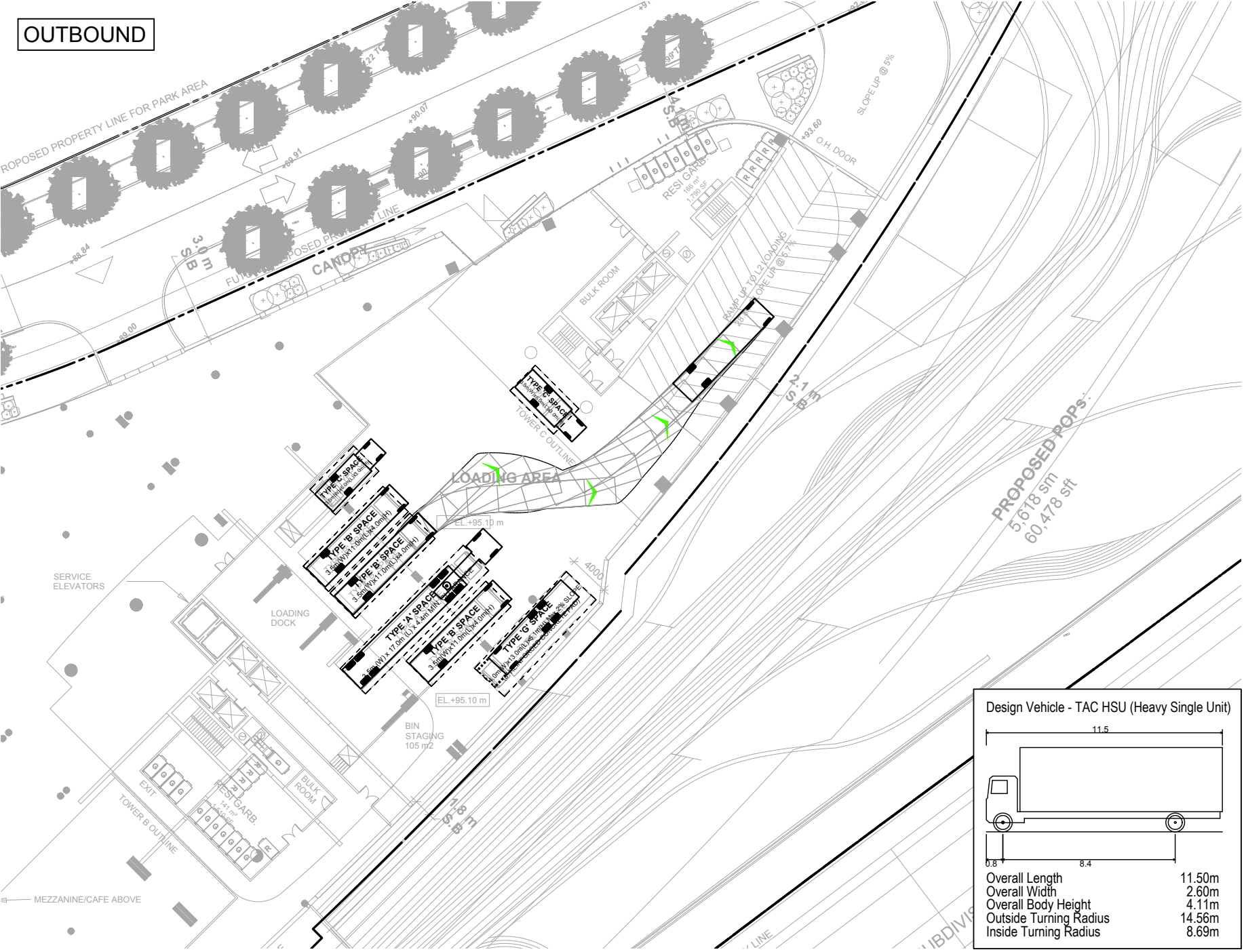
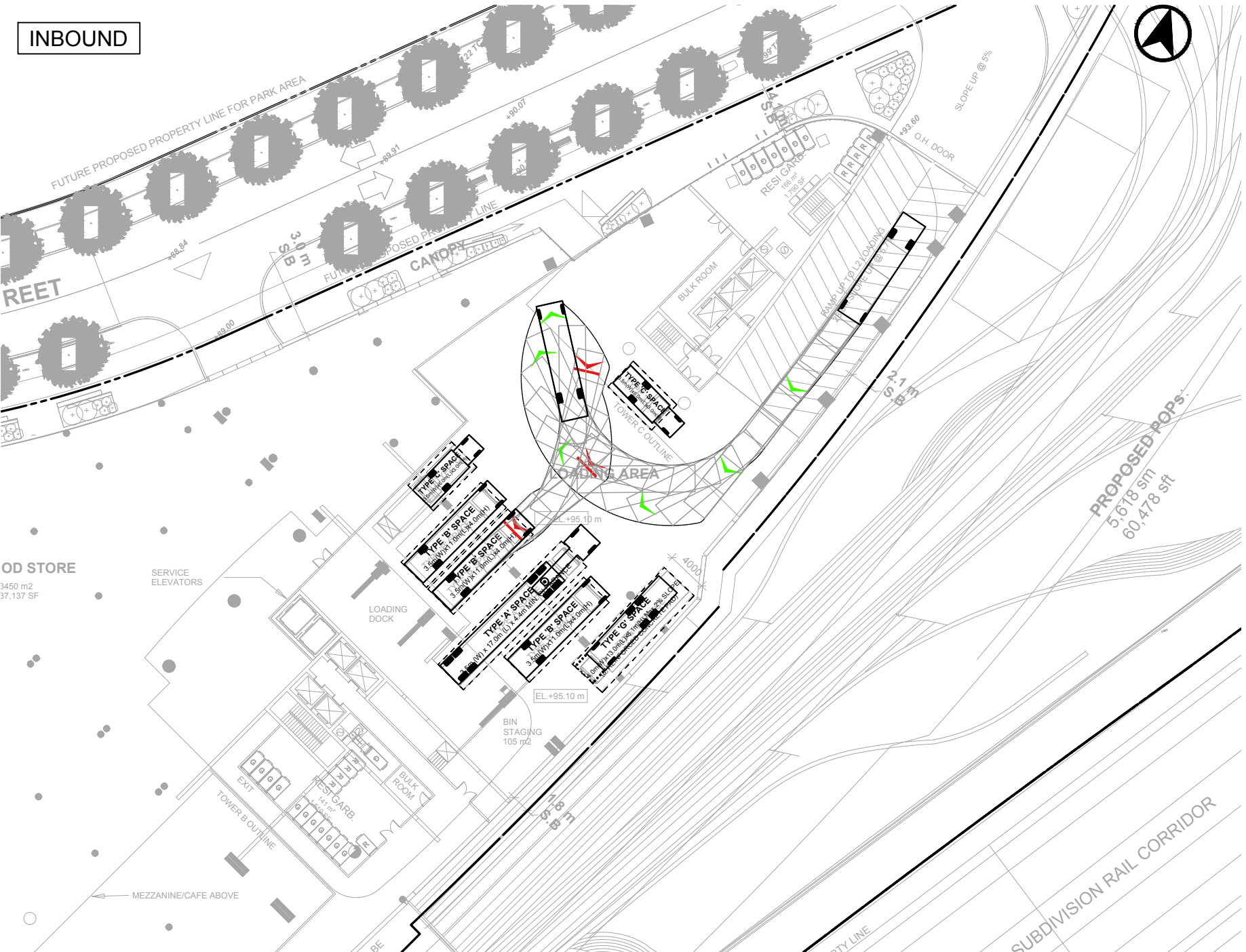
Scale

0 5 10 15 20m

1:500

Drawing No.

VMD-04



Appendix D: Residential Person Trip Generation Survey Data



Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: B-Street Condominiums
 Address: 783 Bathurst St & 10-20 Loretto Lane, Toronto
 Study Date: Thursday, September 20, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Condo Trip Gen Counts 195 units

Traffic											
Period Ending	Inbound			Outbound			2-Way			Hourly	
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total		
7:35	0	0	0	0	0	0	0	0	0		
7:40	1	0	1	2	0	2	3	0	3		
7:45	0	2	2	0	0	0	0	2	2		
7:50	1	0	1	1	0	1	2	0	2		
7:55	0	0	0	1	0	1	1	0	1		
8:00	0	0	0	3	0	3	3	0	3		
8:05	0	0	0	0	0	0	0	0	0		
8:10	0	0	0	0	1	1	0	1	1		
8:15	0	0	0	0	0	0	0	0	0		
8:20	0	0	0	0	0	0	0	0	0		
8:25	1	0	1	2	0	2	3	0	3		
8:30	0	0	0	0	0	0	0	0	0		15
8:35	0	0	0	1	0	1	1	0	1		16
8:40	1	0	1	1	0	1	2	0	2		15
8:45	0	0	0	0	0	0	0	0	0		13
8:50	0	0	0	0	0	0	0	0	0	11	
8:55	0	0	0	0	0	0	0	0	0	10	
9:00	1	0	1	1	0	1	2	0	2	9	
9:05	0	0	0	0	0	0	0	0	0	9	
9:10	0	0	0	1	0	1	1	0	1	9	
9:15	0	0	0	0	0	0	0	0	0	9	
9:20	0	0	0	0	0	0	0	0	0	9	
9:25	0	1	1	0	0	0	0	1	1	7	
9:30	0	0	0	1	0	1	1	0	1	8	
Total	5	3	8	14	1	15	19	4	23		
Peak Hour 7:30-8:30	3	2	5	9	1	10	12	3	15		
Trip Gen			0.03			0.05			0.08		

Vehicle Occupancy									
Inbound			Outbound			2-Way			Hourly
Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
0	0	0	0	0	0	0	0	0	16
1	0	1	2	0	2	3	0	3	
0	2	2	0	0	0	0	2	2	
1	0	1	2	0	2	3	0	3	
0	0	0	1	0	1	1	0	1	
0	0	0	3	0	3	3	0	3	
0	0	0	0	0	0	0	0	0	
0	0	0	0	1	1	0	1	1	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
1	0	1	2	0	2	3	0	3	
0	0	0	0	0	0	0	0	0	
0	0	0	1	0	1	1	0	1	
1	0	1	1	0	1	2	0	2	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0		

Traffic										
Period Ending	Inbound			Outbound			2-Way			Hourly
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
16:05	0	0	0	1	0	1	1	0	1	
16:10	0	0	0	0	1	1	0	1	1	
16:15	0	0	0	0	0	0	0	0	0	
16:20	0	0	0	0	0	0	0	0	0	
16:25	1	0	1	0	0	0	1	0	1	
16:30	1	0	1	2	0	2	3	0	3	
16:35	0	0	0	1	0	1	1	0	1	
16:40	0	0	0	0	0	0	0	0	0	
16:45	2	0	2	1	0	1	3	0	3	
16:50	0	0	0	0	0	0	0	0	0	
16:55	0	0	0	1	0	1	1	0	1	
17:00	0	0	0	0	0	0	0	0	0	
17:05	1	0	1	0	0	0	1	0	1	
17:10	0	1	1	0	0	0	0	1	1	
17:15	0	0	0	1	0	1	1	0	1	
17:20	0	0	0	0	0	0	0	0	0	
17:25	2	0	2	1	0	1	3	0	3	
17:30	1	0	1	0	0	0	1	0	1	
17:35	1	0	1	1	0	1	2	0	2	
17:40	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	2	2	0	2	2	
17:50	0	0	0	0	0	0	0	0	0	
17:55	0	0	0	0	0	0	0	0	0	
18:00	0	0	0	0	0	0	0	0	0	
Total	9	1	10	9	3	12	18	4	22	
Peak Hour 16:15-17:15	5	1	6	6	0	6	11	1	12	
Trip Gen	0.03			0.03			0.06			

Vehicle Occupancy									
Inbound			Outbound			2-Way			Hourly
Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
0	0	0	1	0	1	1	0	1	15
0	0	0	0	1	1	0	1	1	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
1	0	1	3	0	3	4	0	4	
2	0	2	1	0	1	3	0	3	
0	0	0	0	0	0	0	0	0	
2	0	2	2	0	2	4	0	4	
0	0	0	0	0	0	0	0	0	
0	0	0	2	0	2	2	0	2	
0	0	0	0	0	0	0	0	0	
1	0	1	0	0	0	1	0	1	
0	1	1	0	0	0	0	1	1	
0	1	1	1	0	1	1	1	2	
0	0	0	0	0	0	0	0	0	
2	0	2	1	0	1	3	0	3	
1	0	1	0	0	0	1	0	1	
1	0	1	1	0	1	2	0	2	
0	0	0	0	0	0	0	0	0	
0	1	1	0	2	2	0	3	3	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
10	3	13	12	3	15	22	6	28	
6	2	8	9	0	9	15	2	17	

Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: B-Street Condominiums
 Address: 783 Bathurst St & 10-20 Loretto Lane, Toronto
 Study Date: Thursday, September 20, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Person Trip Generation Counts (Condo only, excluding retail businesses at ground level) 195 units

	Inbound							Outbound							2-Way Total	Hourly Totals	
Period Ending	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total			
7:35	0	0	2	0	0	0	2	2	0	0	0	0	0	2	4	124	
7:40	1	0	1	0	1	0	3	2	0	0	0	2	0	4	7		
7:45	3	0	2	0	0	2	7	1	0	2	0	0	0	3	10		
7:50	0	0	1	0	1	0	2	8	0	0	0	2	0	10	12		
7:55	1	2	2	0	0	0	5	4	1	1	0	1	0	7	12		
8:00	0	0	1	0	0	0	1	7	0	0	0	3	0	10	11		
8:05	2	0	3	0	0	0	5	3	0	3	0	0	0	6	11		
8:10	0	0	2	0	0	0	2	7	1	0	0	0	1	9	11		
8:15	0	0	2	0	0	0	2	5	0	5	0	0	0	10	12		
8:20	0	0	0	0	0	0	0	6	0	2	2	0	0	10	10		
8:25	0	0	2	0	1	0	3	0	0	9	0	2	0	11	14		
8:30	2	0	1	0	0	0	3	4	0	3	0	0	0	7	10		
8:35	1	0	0	0	0	0	1	2	0	9	1	1	0	13	14		134
8:40	0	0	0	0	1	0	1	4	0	6	0	1	0	11	12		139
8:45	0	0	0	0	0	0	0	3	0	9	1	0	0	13	13		142
8:50	5	0	0	0	0	0	5	5	0	6	1	0	0	12	17		147
8:55	2	0	0	0	1	0	3	6	1	15	1	0	0	23	26	161	
9:00	0	0	2	0	0	0	2	1	0	15	4	1	0	21	23	173	
9:05	1	0	0	0	0	0	1	1	0	11	0	0	0	12	13	175	
9:10	2	0	0	1	0	0	3	1	0	4	0	1	0	6	9	173	
9:15	0	0	0	0	0	0	0	7	0	3	1	0	0	11	11	172	
9:20	1	0	1	0	0	0	2	0	0	2	0	0	0	2	4	166	
9:25	3	0	0	0	0	1	4	3	0	2	0	0	0	5	9	161	
9:30	0	0	0	0	0	0	0	2	0	2	0	1	0	5	5	156	
Total	24	2	22	1	5	3	57	84	3	109	11	15	1	223	280		
Peak Hour 8:05-9:05	11	0	9	0	3	0	23	44	2	90	10	5	1	152	175		
Person Trip Gen							0.12							0.78	0.90		

	Inbound							Outbound							2-Way Total	Hourly Totals
Period Ending	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total		
16:05	5	0	0	0	0	0	5	1	0	1	0	1	0	3	8	
16:10	2	0	0	0	0	0	2	6	0	2	0	0	1	9	11	
16:15	0	0	1	0	0	0	1	1	0	0	0	0	0	1	2	
16:20	1	0	4	0	0	0	5	1	0	0	0	0	0	1	6	
16:25	3	0	1	0	0	0	4	0	0	1	0	0	0	1	5	
16:30	1	0	2	0	1	0	4	0	0	1	0	3	0	4	8	
16:35	1	0	1	0	2	0	4	0	0	1	0	1	0	2	6	
16:40	3	0	4	0	0	0	7	0	0	5	0	0	0	5	12	
16:45	0	0	0	0	2	0	2	0	0	1	0	2	0	3	5	
16:50	1	0	4	0	0	0	5	1	0	6	0	0	0	7	12	
16:55	3	1	2	0	0	0	6	5	0	2	0	2	0	9	15	
17:00	0	0	1	0	0	0	1	1	0	0	0	0	0	1	2	
17:05	1	0	4	0	1	0	6	1	0	1	0	0	0	2	8	
17:10	0	0	5	0	0	1	6	1	0	1	0	0	0	2	8	
17:15	0	0	1	0	0	1	2	0	0	2	0	1	0	3	5	
17:20	6	0	2	0	0	0	8	0	0	1	0	0	0	1	9	
17:25	5	0	0	0	2	0	7	0	0	0	0	1	0	1	8	
17:30	6	0	1	0	1	0	8	5	1	0	0	0	0	6	14	
17:35	1	0	2	0	1	0	4	2	0	3	0	1	0	6	10	
17:40	6	0	2	0	0	0	8	5	0	3	0	0	0	8	16	
17:45	3	0	3	1	0	1	8	5	0	2	1	0	2	10	18	
17:50	7	0	1	0	0	0	8	4	0	1	0	0	0	5	13	
17:55	7	1	2	0	0	0	10	1	0	0	0	0	0	1	11	
18:00	10	1	5	0	0	0	16	5	0	0	0	0	0	5	21	
Total	72	3	48	1	10	3	137	45	1	34	1	12	3	96	233	
Peak Hour 17:00-18:00	52	2	28	1	5	3	91	29	1	14	1	3	2	50	141	
Person Trip Gen							0.47							0.26	0.72	

Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: Mosiac Condominiums
 Address: 736 Spadina Ave
 Study Date: Wednesday, September 12, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Condo Trip Gen Counts 216 units

Traffic											
Period Ending	Inbound			Outbound			2-Way			Hourly	
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total		
7:35	0	0	0	0	0	0	0	0	0		
7:40	0	0	0	0	0	0	0	0	0		
7:45	0	0	0	0	0	0	0	0	0		
7:50	0	0	0	1	0	1	1	0	1		
7:55	0	0	0	0	0	0	0	0	0		
8:00	0	0	0	0	0	0	0	0	0		
8:05	0	0	0	0	0	0	0	0	0		
8:10	0	0	0	1	0	1	1	0	1		
8:15	2	0	2	1	0	1	3	0	3		
8:20	0	0	0	2	0	2	2	0	2		
8:25	0	0	0	0	0	0	0	0	0		
8:30	0	0	0	1	0	1	1	0	1		
8:35	0	0	0	1	0	1	1	0	1		9
8:40	1	1	2	1	1	2	2	2	4		13
8:45	0	1	1	1	1	2	1	2	3		16
8:50	0	0	0	1	0	1	1	0	1		16
8:55	1	0	1	2	0	2	3	0	3	19	
9:00	0	0	0	0	0	0	0	0	0	19	
9:05	0	0	0	0	0	0	0	0	0	19	
9:10	1	0	1	0	0	0	1	0	1	19	
9:15	1	2	3	1	2	3	2	4	6	22	
9:20	2	0	2	1	0	1	3	0	3	23	
9:25	0	0	0	0	0	0	0	0	0	23	
9:30	0	0	0	0	0	0	0	0	0	22	
Total	8	4	12	14	4	18	22	8	30		
Peak Hour 8:15-9:15	4	4	8	10	4	14	14	8	22		
Trip Gen			0.04			0.06			0.10		

Vehicle Occupancy									
Inbound			Outbound			2-Way			Hourly
Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	1	0	1	1	0	1	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	2	0	2	2	0	2	
2	0	2	1	0	1	3	0	3	
0	0	0	3	0	3	3	0	3	
0	0	0	0	0	0	0	0	0	
0	0	0	1	0	1	1	0	1	
0	0	0	1	2	3	1	2	3	
1	0	1	1	2	3	2	2	4	
0	0	0	2	0	2	2	0	2	
0	0	0	1	0	1	1	0	1	
1	0	1	2	0	2	3	0	3	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
1	0	1	1	3	4	2	3	5	
1	0	1	1	0	1	2	0	2	
2	0	2	0	0	0	2	0	2	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
8	0	8	17	7	24	25	7	32	
4	0	4	13	7	20	17	7	24	

Traffic											
Period Ending	Inbound			Outbound			2-Way			Hourly	
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total		
16:05	1	0	1	0	0	0	1	0	1		
16:10	0	0	0	1	0	1	1	0	1		
16:15	3	0	3	0	0	0	3	0	3		
16:20	0	0	0	0	0	0	0	0	0		
16:25	0	0	0	0	0	0	0	0	0		
16:30	0	0	0	0	0	0	0	0	0		
16:35	1	0	1	0	0	0	1	0	1		
16:40	1	0	1	0	0	0	1	0	1		
16:45	1	0	1	0	0	0	1	0	1		
16:50	1	0	1	0	0	0	1	0	1		
16:55	0	1	1	0	1	1	0	2	2		
17:00	0	0	0	0	0	0	0	0	0		
17:05	0	0	0	0	0	0	0	0	0		10
17:10	5	0	5	1	0	1	6	0	6		15
17:15	1	0	1	0	0	0	1	0	1	13	
17:20	2	0	2	0	0	0	2	0	2	15	
17:25	1	0	1	2	0	2	3	0	3	18	
17:30	0	0	0	1	0	1	1	0	1	19	
17:35	2	0	2	0	0	0	2	0	2	20	
17:40	0	0	0	0	0	0	0	0	0	19	
17:45	0	1	1	0	1	1	0	2	2	20	
17:50	1	0	1	0	0	0	1	0	1	20	
17:55	0	0	0	0	0	0	0	0	0	18	
18:00	0	0	0	0	0	0	0	0	0	18	
Total	20	2	20	5	2	5	25	4	25		
Peak Hour 16:45-17:45	12	2	14	4	2	6	16	4	20		
Trip Gen			0.06			0.03			0.09		

Vehicle Occupancy									
Inbound			Outbound			2-Way			Hourly
Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
2	0	2	0	0	0	2	0	2	11
0	0	0	1	0	1	1	0	1	
3	0	3	0	0	0	3	0	3	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
2	0	2	0	0	0	2	0	2	
1	0	1	0	0	0	1	0	1	
1	0	1	0	0	0	1	0	1	
1	0	1	0	0	0	1	0	1	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
6	0	6	1	0	1	7	0	7	
2	0	2	0	0	0	2	0	2	
2	0	2	0	0	0	2	0	2	
1	0	1	2	0	2	3	0	3	
0	0	0	1	0	1	1	0	1	
2	0	2	0	0	0	2	0	2	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
1	0	1	0	0	0	1	0	1	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
24	0	24	5	0	5	29	0	29	
14	0	14	4	0	4	18	0	18	

Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: Mosiac Condominiums
 Address: 736 Spadina Ave
 Study Date: Wednesday, September 12, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Person Trip Generation Counts (Condo only, excluding retail businesses at ground level) 216 units

Period Ending	Inbound							Outbound							2-Way Total	Hourly Totals
	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total		
7:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	
7:50	0	0	0	0	0	0	0	1	0	1	0	1	0	3	3	
7:55	4	0	0	0	0	0	4	5	0	0	0	0	0	5	9	
8:00	1	0	0	0	0	0	1	3	0	1	0	0	0	4	5	
8:05	3	0	0	0	0	0	3	8	1	1	1	0	0	11	14	
8:10	1	0	0	0	0	0	1	4	0	1	1	2	0	8	9	
8:15	0	0	2	0	2	0	4	0	0	5	0	1	0	6	10	
8:20	0	0	0	0	0	0	0	6	0	3	0	3	0	12	12	
8:25	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5	
8:30	2	0	2	0	0	0	4	5	0	3	0	1	0	9	13	81
8:35	0	0	1	0	0	0	1	8	0	0	0	1	2	11	12	93
8:40	0	0	0	0	1	0	1	2	0	0	1	1	2	6	7	100
8:45	1	0	1	0	0	0	2	9	0	1	1	2	0	13	15	114
8:50	1	0	0	0	0	0	1	10	0	2	0	1	0	13	14	125
8:55	0	1	0	0	1	0	2	2	0	3	0	2	0	7	9	125
9:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3	3	123
9:05	1	0	0	0	0	0	1	1	0	1	0	0	0	2	3	112
9:10	1	0	0	0	1	0	2	4	0	2	0	1	3	10	12	115
9:15	0	0	2	0	1	0	3	4	0	1	0	1	0	6	9	114
9:20	3	0	0	0	2	0	5	4	0	1	0	0	0	5	10	112
9:25	2	0	0	0	0	0	2	5	0	1	0	0	0	6	8	115
9:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	2	104
Total	21	1	8	0	8	0	38	91	1	27	4	17	7	147	185	
Peak Hour 7:50-8:50	13	0	6	0	3	0	22	65	1	17	4	12	4	103	125	
Person Trip Gen							0.10							0.48	0.58	

Period Ending	Inbound							Outbound							2-Way Total	Hourly Totals
	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total	Front Door Peds	Front Door Cyclist	Rear Door Peds	Rear Door Cyclist	Garage (Veh Occ)	PUDO (Veh Occ)	Total		
16:05	3	0	1	0	2	0	6	2	0	0	0	0	0	2	8	
16:10	1	0	1	0	0	0	2	0	0	0	0	1	0	1	3	
16:15	3	0	0	0	3	0	6	1	0	2	0	0	0	3	9	
16:20	3	0	1	0	0	0	4	4	0	0	1	0	0	5	9	
16:25	3	0	2	0	0	0	5	0	0	1	2	0	0	3	8	
16:30	5	0	1	0	0	0	6	0	0	1	0	0	0	1	7	
16:35	4	0	0	0	2	0	6	0	0	0	0	0	0	0	6	
16:40	4	0	0	0	1	0	5	2	0	2	0	0	0	4	9	
16:45	2	0	2	0	1	0	5	7	0	0	0	0	0	7	12	
16:50	1	0	1	0	1	0	3	4	0	0	0	0	0	4	7	
16:55	3	0	2	1	0	0	6	0	0	0	0	0	0	0	6	
17:00	3	0	2	0	0	0	5	1	0	0	0	0	0	1	6	90
17:05	1	0	0	0	0	0	1	2	0	1	0	0	0	3	4	86
17:10	8	0	1	0	6	0	15	2	0	0	0	1	0	3	18	101
17:15	4	0	0	0	2	0	6	1	0	1	0	0	0	2	8	100
17:20	6	0	0	0	2	0	8	2	0	0	0	0	0	2	10	101
17:25	2	0	1	0	1	0	4	1	0	0	0	2	0	3	7	100
17:30	1	0	2	0	0	0	3	0	0	0	0	1	0	1	4	97
17:35	6	0	1	1	2	0	10	2	0	0	0	0	0	2	12	103
17:40	5	0	0	0	0	0	5	6	0	2	0	0	0	8	13	107
17:45	7	0	0	0	0	0	7	0	0	3	0	0	0	3	10	105
17:50	2	0	0	0	1	0	3	2	0	0	0	0	0	2	5	103
17:55	4	0	2	0	0	0	6	1	0	0	0	0	0	1	7	104
18:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2	3	101
Total	82	0	20	2	24	0	128	42	0	13	3	5	0	63	191	
Peak Hour 16:40-17:40	42	0	12	2	15	0	71	28	0	4	0	4	0	36	107	
Person Trip Gen							0.33							0.17	0.50	

Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: One Bedford Rd Condominiums
 Address: 1 Bedford Rd, Toronto
 Study Date: Tuesday, September 18, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Person Trip Generation Counts (Condo only, excluding retail businesses at ground level) 254 units

	Inbound					Outbound							
Period	Condo Doors		Garage	PUDO	Total	Condo Doors		Garage	PUDO	Total	2-Way Total	Hourly Totals	
Ending	Peds	Cyclist	(Veh Occ)	(Veh Occ)		Peds	Cyclist	(Veh Occ)	(Veh Occ)				
7:35	0	0	0	0	0	0	0	0	0	0	0		
7:40	0	0	0	0	0	3	0	0	0	3	3		
7:45	0	0	0	0	0	3	0	0	0	3	3		
7:50	1	0	1	0	2	4	0	1	0	5	7		
7:55	2	0	1	0	3	5	0	0	0	5	8		
8:00	0	0	1	1	2	4	0	0	1	5	7		
8:05	2	0	0	0	2	1	0	2	0	3	5		
8:10	0	0	0	0	0	6	0	1	0	7	7		
8:15	1	0	0	0	1	7	0	1	0	8	9		
8:20	1	0	2	0	3	6	0	1	0	7	10		
8:25	2	0	1	0	3	4	0	1	0	5	8	77	
8:30	1	0	0	0	1	6	0	3	0	9	10		
8:35	0	0	0	0	0	4	0	0	0	4	4		81
8:40	2	0	0	0	2	3	0	2	0	5	7		85
8:45	1	0	0	0	1	8	0	0	0	8	9		91
8:50	3	0	0	2	5	14	0	1	2	17	22		106
8:55	5	0	0	0	5	8	0	0	0	8	13		111
9:00	3	0	1	0	4	1	0	1	0	2	6		110
9:05	3	0	0	0	3	4	0	0	0	4	7		112
9:10	1	0	0	0	1	2	0	3	0	5	6		111
9:15	4	0	0	0	4	6	0	3	0	9	13	115	
9:20	3	0	0	0	3	7	0	2	0	9	12	117	
9:25	2	0	0	0	2	2	0	0	0	2	4	113	
9:30	2	0	0	0	2	0	0	0	0	0	2	105	
Total	39	0	7	3	49	108	0	22	3	133	182		
Peak Hour 8:20-9:20	28	0	2	2	32	67	0	16	2	85	117		
Person Trip Gen					0.13					0.33	0.46		

	Inbound					Outbound						
Period	Condo Doors		Garage	PUDO	Total	Condo Doors		Garage	PUDO	Total	2-Way Total	Hourly Totals
Ending	Peds	Cyclist	(Veh Occ)	(Veh Occ)		Peds	Cyclist	(Veh Occ)	(Veh Occ)			
16:05	7	0	0	0	7	4	0	1	0	5	12	
16:10	5	0	0	0	5	1	0	0	0	1	6	
16:15	5	1	0	0	6	1	0	0	0	1	7	
16:20	8	0	0	0	8	2	1	2	0	5	13	
16:25	2	0	1	3	6	1	0	0	3	4	10	
16:30	2	0	1	0	3	1	0	0	0	1	4	
16:35	5	0	1	0	6	2	0	1	0	3	9	
16:40	9	0	0	0	9	3	0	2	0	5	14	
16:45	7	0	1	0	8	1	0	3	0	4	12	
16:50	3	0	1	0	4	4	0	0	0	4	8	
16:55	7	0	0	0	7	0	0	1	0	1	8	
17:00	4	0	0	0	4	0	0	0	0	0	4	
17:05	4	0	0	0	4	5	0	2	0	7	11	106
17:10	6	0	0	0	6	4	0	1	0	5	11	111
17:15	5	0	0	0	5	3	0	0	0	3	8	112
17:20	7	0	0	3	10	4	0	0	3	7	17	116
17:25	6	0	1	2	9	3	0	2	2	7	16	122
17:30	4	0	0	0	4	5	0	3	0	8	12	130
17:35	3	0	1	0	4	5	0	0	0	5	9	130
17:40	4	0	1	0	5	2	0	3	0	5	10	126
17:45	3	0	0	0	3	2	0	0	0	2	5	119
17:50	5	0	2	0	7	5	0	0	0	5	12	123
17:55	3	0	0	0	3	4	0	1	0	5	8	123
18:00	5	0	0	0	5	3	0	0	0	3	8	127
Total	119	1	10	8	138	65	1	22	8	96	234	
Peak Hour 16:30-17:30	67	0	4	5	76	34	0	15	5	54	130	
Person Trip Gen					0.30					0.21	0.51	

Project No: 7579.03
 Project: Bloor / Spadina
 Study Location: One Bedford Rd Condominiums
 Address: 1 Bedford Rd, Toronto
 Study Date: Tuesday, September 18, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Condo Trip Gen Counts 254 units

Traffic

Period Ending	Inbound			Outbound			2-Way			Hourly
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
7:35	0	0	0	0	0	0	0	0	0	
7:40	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	
7:50	1	0	1	1	0	1	2	0	2	
7:55	1	0	1	0	0	0	1	0	1	
8:00	1	1	2	0	1	1	1	2	3	
8:05	0	0	0	2	0	2	2	0	2	
8:10	0	0	0	1	0	1	1	0	1	
8:15	0	0	0	1	0	1	1	0	1	
8:20	2	0	2	1	0	1	3	0	3	
8:25	1	0	1	1	0	1	2	0	2	
8:30	0	0	0	2	0	2	2	0	2	17
8:35	0	0	0	0	0	0	0	0	0	17
8:40	0	0	0	2	0	2	2	0	2	19
8:45	0	0	0	0	0	0	0	0	0	19
8:50	0	1	1	1	2	3	1	3	4	21
8:55	0	0	0	0	0	0	0	0	0	20
9:00	1	0	1	1	0	1	2	0	2	19
9:05	0	0	0	0	0	0	0	0	0	17
9:10	0	0	0	2	0	2	2	0	2	18
9:15	0	0	0	3	0	3	3	0	3	20
9:20	0	0	0	2	0	2	2	0	2	19
9:25	0	0	0	0	0	0	0	0	0	17
9:30	0	0	0	0	0	0	0	0	0	15
Total	7	2	9	20	3	23	27	5	32	
Peak Hour 8:15-9:15	4	1	5	13	2	15	17	3	20	
Trip Gen			0.02			0.06			0.08	

Vehicle Occupancy

Period Ending	Inbound			Outbound			2-Way			Hourly
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
7:35	0	0	0	0	0	0	0	0	0	
7:40	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	
7:50	1	0	1	1	0	1	2	0	2	
7:55	1	0	1	0	0	0	1	0	1	
8:00	1	1	2	0	1	1	1	2	3	
8:05	0	0	0	2	0	2	2	0	2	
8:10	0	0	0	1	0	1	1	0	1	
8:15	0	0	0	1	0	1	1	0	1	
8:20	2	0	2	1	0	1	3	0	3	
8:25	1	0	1	1	0	1	2	0	2	
8:30	0	0	0	3	0	3	3	0	3	18
8:35	0	0	0	0	0	0	0	0	0	18
8:40	0	0	0	2	0	2	2	0	2	20
8:45	0	0	0	0	0	0	0	0	0	20
8:50	0	2	2	1	2	3	1	4	5	23
8:55	0	0	0	0	0	0	0	0	0	22
9:00	1	0	1	1	0	1	2	0	2	21
9:05	0	0	0	0	0	0	0	0	0	19
9:10	0	0	0	3	0	3	3	0	3	21
9:15	0	0	0	3	0	3	3	0	3	23
9:20	0	0	0	2	0	2	2	0	2	22
9:25	0	0	0	0	0	0	0	0	0	20
9:30	0	0	0	0	0	0	0	0	0	17
Total	7	3	10	22	3	25	29	6	35	
Peak Hour 8:15-9:15	4	2	6	15	2	17	19	4	23	
Trip Gen										

Period Ending	Inbound			Outbound			2-Way			Hourly
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
16:05	0	0	0	1	0	1	1	0	1	
16:10	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	
16:20	0	0	0	2	0	2	2	0	2	
16:25	1	0	1	0	0	0	1	0	1	
16:30	1	2	3	0	2	2	1	4	5	
16:35	1	0	1	1	0	1	2	0	2	
16:40	0	0	0	2	0	2	2	0	2	
16:45	1	0	1	3	0	3	4	0	4	
16:50	1	0	1	0	0	0	1	0	1	
16:55	0	0	0	1	0	1	1	0	1	
17:00	0	0	0	0	0	0	0	0	0	19
17:05	0	0	0	2	0	2	2	0	2	20
17:10	0	0	0	1	0	1	1	0	1	21
17:15	0	0	0	0	0	0	0	0	0	21
17:20	0	3	3	0	3	3	0	6	6	25
17:25	1	2	3	2	2	4	3	4	7	31
17:30	0	0	0	3	0	3	3	0	3	29
17:35	1	0	1	0	0	0	1	0	1	28
17:40	1	0	1	3	0	3	4	0	4	30
17:45	0	0	0	0	0	0	0	0	0	26
17:50	2	0	2	0	0	0	2	0	2	27
17:55	0	0	0	1	0	1	1	0	1	27
18:00	0	0	0	0	0	0	0	0	0	27
Total	10	7	17	22	7	29	32	14	46	
Peak Hour 16:30-17:30	4	5	9	15	5	20	19	10	29	
Trip Gen			0.04			0.08			0.11	

Vehicle Occupancy

Period Ending	Inbound			Outbound			2-Way			Hourly
	Garage	PUDO	Total	Garage	PUDO	Total	Garage	PUDO	Total	
16:05	0	0	0	1	0	1	1	0	1	
16:10	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	
16:20	0	0	0	2	0	2	2	0	2	
16:25	1	0	1	0	0	0	1	0	1	
16:30	1	3	4	0	3	3	1	6	7	
16:35	1	0	1	1	0	1	2	0	2	
16:40	0	0	0	2	0	2	2	0	2	
16:45	1	0	1	3	0	3	4	0	4	
16:50	1	0	1	0	0	0	1	0	1	
16:55	0	0	0	1	0	1	1	0	1	
17:00	0	0	0	0	0	0	0	0	0	21
17:05	0	0	0	2	0	2	2	0	2	22
17:10	0	0	0	1	0	1	1	0	1	23
17:15	0	0	0	0	0	0	0	0	0	23
17:20	0	3	3	0	3	3	0	6	6	27
17:25	1	2	3	2	2	4	3	4	7	33
17:30	0	0	0	3	0	3	3	0	3	29
17:35	1	0	1	0	0	0	1	0	1	28
17:40	1	0	1	3	0	3	4	0	4	30
17:45	0	0	0	0	0	0	0	0	0	26
17:50	2	0	2	0	0	0	2	0	2	27
17:55	0	0	0	1	0	1	1	0	1	27
18:00	0	0	0	0	0	0	0	0	0	27
Total	10	8	18	22	8	30	32	16	48	
Peak Hour 16:30-17:30	4	5	9	15	5	20	19	10	29	
Trip Gen										

Appendix E: Retail Person Trip Generation Survey Data



Project No: 7579.03
 Project: Bloor /Spadina
 Study Location: Metro Supermarket, 425 Bloor St W
 Municipality: Toronto
 Study Date: Wednesday, October 3, 2018
 Study Time: 7:30-9:30 am, 4-6 pm Weather: clear, mild

Metro Door Counts

	Inbound						Outbound						2-Way									
	Bloor St Doors		Robert St Doors		Total		Bloor St Doors		Robert St Doors		Total		Bloor St Doors		Robert St Doors		Site Total					
Period Ending	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Total	Pedestrians	Cyclists	Total
7:35	2	0	0	0	2	0	1	0	1	0	2	0	3	0	1	0	4	0	4			
7:40	1	0	0	1	1	1	1	0	0	0	1	0	2	0	0	1	2	1	3			
7:45	3	0	0	0	3	0	0	0	0	1	0	1	3	0	0	1	3	1	4			
7:50	6	0	0	1	6	1	1	0	0	0	1	0	7	0	0	1	7	1	8			
7:55	1	0	2	0	3	0	6	0	0	1	6	1	7	0	2	1	9	1	10			
8:00	1	0	0	0	1	0	3	0	0	0	3	0	4	0	0	0	4	0	4			
8:05	1	0	1	0	2	0	4	0	0	0	4	0	5	0	1	0	6	0	6			
8:10	2	0	0	0	2	0	1	0	1	0	2	0	3	0	1	0	4	0	4			
8:15	2	0	1	0	3	0	2	0	0	0	2	0	4	0	1	0	5	0	5			
8:20	0	0	1	0	1	0	3	0	1	0	4	0	3	0	2	0	5	0	5			
8:25	1	0	1	0	2	0	2	0	1	0	3	0	3	0	2	0	5	0	5			
8:30	0	0	0	0	0	0	2	0	1	0	3	0	2	0	1	0	3	0	3	57	4	61
8:35	7	0	1	0	8	0	1	0	2	0	3	0	8	0	3	0	11	0	11	64	4	68
8:40	3	0	1	1	4	1	6	0	1	0	7	0	9	0	2	1	11	1	12	73	4	77
8:45	2	0	3	1	5	1	2	0	4	1	6	1	4	0	7	2	11	2	13	81	5	86
8:50	2	0	0	1	2	1	0	0	2	1	2	1	2	0	2	2	4	2	6	78	6	84
8:55	6	0	0	0	6	0	1	0	0	0	1	0	7	0	0	0	7	0	7	76	5	81
9:00	2	0	0	0	2	0	1	0	2	0	3	0	3	0	2	0	5	0	5	77	5	82
9:05	3	0	2	0	5	0	1	0	1	1	2	1	4	0	3	1	7	1	8	78	6	84
9:10	4	0	1	0	5	0	4	0	3	0	7	0	8	0	4	0	12	0	12	86	6	92
9:15	4	0	1	0	5	0	2	0	2	0	4	0	6	0	3	0	9	0	9	90	6	96
9:20	4	0	0	0	4	0	4	0	1	0	5	0	8	0	1	0	9	0	9	94	6	100
9:25	3	0	0	0	3	0	1	0	3	0	4	0	4	0	3	0	7	0	7	96	6	102
9:30	0	0	2	0	2	0	3	0	1	0	4	0	3	0	3	0	6	0	6	99	6	105
Total	60	0	17	5	77	5	52	0	27	5	79	5	112	0	44	10	156	10	166			
Peak Hour 8:30-9:30	40	0	11	3	51	3	26	0	22	3	48	3	66	0	33	6	99	6	105			
16:05	13	0	1	0	14	0	12	0	6	0	18	0	25	0	7	0	32	0	32			
16:10	8	0	7	1	15	1	21	1	5	0	26	1	29	1	12	1	41	2	43			
16:15	7	1	3	0	10	1	16	0	7	1	23	1	23	1	10	1	33	2	35			
16:20	11	0	4	0	15	0	4	0	10	0	14	0	15	0	14	0	29	0	29			
16:25	7	0	1	0	8	0	5	1	6	0	11	1	12	1	7	0	19	1	20			
16:30	10	1	1	0	11	1	14	1	6	0	20	1	24	2	7	0	31	2	33			
16:35	12	0	3	1	15	1	10	0	10	0	20	0	22	0	13	1	35	1	36			
16:40	10	1	5	0	15	1	13	0	9	1	22	1	23	1	14	1	37	2	39			
16:45	20	0	3	0	23	0	7	0	5	0	12	0	27	0	8	0	35	0	35			
16:50	15	0	7	2	22	2	17	0	11	1	28	1	32	0	18	3	50	3	53			
16:55	11	0	8	0	19	0	13	1	8	0	21	1	24	1	16	0	40	1	41			
17:00	9	1	5	0	14	1	14	0	7	0	21	0	23	1	12	0	35	1	36	417	15	432
17:05	18	0	7	0	25	0	14	0	15	0	29	0	32	0	22	0	54	0	54	439	15	454
17:10	20	1	6	0	26	1	23	0	8	1	31	1	43	1	14	1	57	2	59	455	15	470
17:15	19	0	3	0	22	0	24	0	7	0	31	0	43	0	10	0	53	0	53	475	13	488
17:20	35	0	7	2	42	2	25	1	4	0	29	1	60	1	11	2	71	3	74	517	16	533
17:25	11	0	3	0	14	0	13	0	4	1	17	1	24	0	7	1	31	1	32	529	16	545
17:30	15	1	2	0	17	1	16	0	5	0	21	0	31	1	7	0	38	1	39	536	15	551
17:35	4	0	11	0	15	0	12	0	12	1	24	1	16	0	23	1	39	1	40	540	15	555
17:40	29	1	8	0	37	1	29	0	5	0	34	0	58	1	13	0	71	1	72	574	14	588
17:45	29	0	9	0	38	0	32	0	7	0	39	0	61	0	16	0	77	0	77	616	14	630
17:50	17	0	2	0	19	0	21	0	11	0	32	0	38	0	13	0	51	0	51	617	11	628
17:55	22	0	5	0	27	0	29	0	8	0	37	0	51	0	13	0	64	0	64	641	10	651
18:00	21	0	4	1	25	1	17	2	9	0	26	2	38	2	13	1	51	3	54	657	12	669
Total	373	7	115	7	488	14	401	7	185	6	586	13	774	14	300	13	1074	27	1101			
Peak Hour 17:00-18:00	240	3	67	3	307	6	255	3	95	3	350	6	495	6	162	6	657	12	669			

Project No: 7708.03
 Project: Bloor / Dundas
 Study Location: Metro Supermarket, 425 Bloor St W
 Municipality: Toronto
 Study Date: Wednesday, October 3, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Traffic **Metro Related Only**

Period Ending	Area 1 (West Side of Lot)						Area 2 (East Side of Lot)						Total Metro											
	Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			2-Way			Hourly		
	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate
7:35	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	1	1	1.0			
7:40	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
7:45	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0			
7:50	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
7:55	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
8:00	3	3	1.0	1	1	1.0	0	0	0.0	0	0	0.0	3	3	1.0	1	1	1.0	4	4	1.0			
8:05	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0			
8:10	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0			
8:15	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0			
8:20	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
8:25	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0			
8:30	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	16	16	1.0
8:35	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	15	15	1.0
8:40	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	17	17	1.0
8:45	2	1	2.0	0	0	0.0	0	0	0.0	0	0	0.0	2	1	2.0	0	0	0.0	2	1	2.0	17	16	1.1
8:50	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	16	15	1.1
8:55	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	17	16	1.1
9:00	0	0	0.0	3	2	1.5	0	0	0.0	0	0	0.0	0	0	0.0	3	2	1.5	3	2	1.5	16	14	1.1
9:05	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	17	15	1.1
9:10	2	2	1.0	1	1	1.0	0	0	0.0	0	0	0.0	2	2	1.0	1	1	1.0	3	3	1.0	19	17	1.1
9:15	1	1	1.0	2	2	1.0	0	0	0.0	0	0	0.0	1	1	1.0	2	2	1.0	3	3	1.0	20	18	1.1
9:20	0	0	0.0	3	3	1.0	0	0	0.0	0	0	0.0	0	0	0.0	3	3	1.0	3	3	1.0	22	20	1.1
9:25	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	22	20	1.1
9:30	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	22	20	1.1
Total	19	18	1.1	18	17	1.1	0	0	0.0	1	1	1.0	19	18	1.1	19	18	1.1	38	36	1.1			
Peak Hour 8:30-9:30	10	9	1.1	12	11	1.1	0	0	0.0	0	0	0.0	10	9	1.1	12	11	1.1	22	20	1.1			
16:05	2	2	1.0	1	1	1.0	4	2	2.0	0	0	0.0	6	4	1.5	1	1	1.0	7	5	1.4			
16:10	2	2	1.0	3	1	3.0	0	0	0.0	0	0	0.0	2	2	1.0	3	1	3.0	5	3	1.7			
16:15	2	1	2.0	0	0	0.0	0	0	0.0	1	1	1.0	2	1	2.0	1	1	1.0	3	2	1.5			
16:20	1	1	1.0	3	2	1.5	1	1	1.0	1	1	1.0	2	2	1.0	4	3	1.3	6	5	1.2			
16:25	4	3	1.3	2	2	1.0	0	0	0.0	0	0	0.0	4	3	1.3	2	2	1.0	6	5	1.2			
16:30	2	1	2.0	0	0	0.0	2	1	2.0	2	2	1.0	4	2	2.0	2	2	1.0	6	4	1.5			
16:35	1	1	1.0	2	2	1.0	3	3	1.0	1	1	1.0	4	4	1.0	3	3	1.0	7	7	1.0			
16:40	1	1	1.0	4	4	1.0	1	1	1.0	3	1	3.0	2	2	1.0	7	5	1.4	9	7	1.3			
16:45	0	0	0.0	2	1	2.0	2	2	1.0	0	0	0.0	2	2	1.0	2	1	2.0	4	3	1.3			
16:50	2	2	1.0	4	4	1.0	1	1	1.0	1	0	0.0	3	3	1.0	5	4	1.3	8	7	1.1			
16:55	8	4	2.0	2	1	2.0	2	1	2.0	4	3	1.3	10	5	2.0	6	4	1.5	16	9	1.8			
17:00	1	1	1.0	2	2	1.0	1	1	1.0	1	1	1.0	2	2	1.0	3	3	1.0	5	5	1.0	82	62	1.3
17:05	5	3	1.7	3	3	1.0	0	0	0.0	1	1	1.0	5	3	1.7	4	4	1.0	9	7	1.3	84	64	1.3
17:10	1	1	1.0	2	2	1.0	1	1	1.0	1	1	1.0	2	2	1.0	3	3	1.0	5	5	1.0	84	66	1.3
17:15	1	1	1.0	1	1	1.0	0	0	0.0	3	2	1.5	1	1	1.0	4	3	1.3	5	4	1.3	86	68	1.3
17:20	1	1	1.0	4	2	2.0	1	1	1.0	1	1	1.0	2	2	1.0	5	3	1.7	7	5	1.4	87	68	1.3
17:25	1	1	1.0	5	2	2.5	0	0	0.0	0	0	0.0	1	1	1.0	5	2	2.5	6	3	2.0	87	66	1.3
17:30	0	0	0.0	3	2	1.5	1	1	1.0	1	1	1.0	1	1	1.0	4	3	1.3	5	4	1.3	86	66	1.3
17:35	3	1	3.0	1	1	1.0	0	0	0.0	0	0	0.0	3	1	3.0	1	1	1.0	4	2	2.0	83	61	1.4
17:40	2	2	1.0	4	2	2.0	0	0	0.0	0	0	0.0	2	2	1.0	4	2	2.0	6	4	1.5	80	58	1.4
17:45	1	1	1.0	1	1	1.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	3	3	1.0	79	58	1.4
17:50	2	1	2.0	0	0	0.0	0	0	0.0	0	0	0.0	2	1	2.0	0	0	0.0	2	1	2.0	73	52	1.4
17:55	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	58	44	1.3
18:00	2	1	2.0	2	1	2.0	1	1	1.0	0	0	0.0	3	2	1.5	2	1	2.0	5	3	1.7	58	42	1.4
Total	45	32	1.4	52	38	1.4	21	17	1.2	22	17	1.3	66	49	1.3	74	55	1.3	140	104	1.3			
Peak Hour 16:15-17:15	27	19	1.4	27	24	1.1	14	12	1.2	18	13	1.4	41	31	1.3	45	37	1.2	86	68	1.3			

Project No: 7708.03
 Project: Bloor / Dundas
 Study Location: Metro Supermarket, 425 Bloor St W
 Municipality: Toronto
 Study Date: Wednesday, October 3, 2018
 Study Time: 7:30-9:30 am, 4-6 pm

Traffic Non-Related Metro Vehicles Parked at Metro Stalls & Paid Stalls

Period Ending	Area 1 (Metro Stalls)						Area 2 (Metro Stalls)						Area 2 (Paid Stalls)						Total																	
	Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			2-Way			Hourly		
	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate			
7:35	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	#DIV/0!	1	1	1.0						
7:40	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0	#DIV/0!	1	1	1.0								
7:45	1	1	1.0	1	1	1.0	9	3	3.0	0	0	0.0	1	1	1.0	0	0	0.0	11	5	2.2	1	1	1.0	12	6	2.0									
7:50	0	0	0.0	0	0	0.0	4	2	2.0	1	1	1.0	0	0	0.0	0	0	0.0	4	2	2.0	1	1	1.0	5	3	1.7									
7:55	0	0	0.0	0	0	0.0	5	2	2.5	3	2	1.5	0	0	0.0	0	0	0.0	5	2	2.5	3	2	1.5	8	4	2.0									
8:00	1	1	1.0	0	0	0.0	2	1	2.0	1	1	1.0	0	0	0.0	3	2	1.5	1	1	1.0	4	3	1.3												
8:05	3	1	3.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	3	1	3.0	2	2	1.0	5	3	1.7									
8:10	0	0	0.0	0	0	0.0	5	2	2.5	2	2	1.0	1	1	1.0	0	0	0.0	6	3	2.0	2	2	1.0	8	5	1.6									
8:15	1	1	1.0	0	0	0.0	5	2	2.5	1	1	1.0	1	1	1.0	0	0	0.0	7	4	1.8	1	1	1.0	8	5	1.6									
8:20	0	0	0.0	0	0	0.0	4	2	2.0	2	2	1.0	1	1	1.0	0	0	0.0	5	3	1.7	2	2	1.0	7	5	1.4									
8:25	0	0	0.0	0	0	0.0	6	2	3.0	1	1	1.0	0	0	0.0	0	0	0.0	6	2	3.0	1	1	1.0	7	3	2.3									
8:30	2	1	2.0	0	0	0.0	5	2	2.5	2	1	2.0	0	0	0.0	0	0	0.0	7	3	2.3	2	1	2.0	9	4	2.3	75	43	1.7						
8:35	10	4	2.5	0	0	0.0	5	3	1.7	2	2	1.0	0	0	0.0	0	0	0.0	15	7	2.1	2	2	1.0	17	9	1.9	91	51	1.8						
8:40	6	0	0.0	1	1	1.0	5	2	2.5	4	4	1.0	0	0	0.0	0	0	0.0	11	2	5.5	5	5	1.0	16	7	2.3	106	57	1.9						
8:45	0	0	0.0	3	3	1.0	5	2	2.5	5	4	1.3	0	0	0.0	1	1	1.0	5	2	2.5	9	8	1.1	14	10	1.4	108	61	1.8						
8:50	0	0	0.0	1	1	1.0	4	2	2.0	4	4	1.0	0	0	0.0	0	0	0.0	4	2	2.0	5	5	1.0	9	7	1.3	112	65	1.7						
8:55	0	1	0.0	2	1	2.0	4	2	2.0	3	3	1.0	0	0	0.0	0	0	0.0	4	3	1.3	5	4	1.3	9	7	1.3	113	68	1.7						
9:00	1	0	0.0	0	0	0.0	4	2	2.0	1	1	1.0	0	0	0.0	0	0	0.0	5	2	2.5	1	1	1.0	6	3	2.0	115	68	1.7						
9:05	0	0	0.0	0	0	0.0	5	2	2.5	0	0	0.0	0	0	0.0	0	0	0.0	5	2	2.5	0	0	0.0	5	2	2.5	115	67	1.7						
9:10	0	0	0.0	0	0	0.0	7	3	2.3	1	1	1.0	0	0	0.0	0	0	0.0	7	3	2.3	1	1	1.0	8	4	2.0	115	66	1.7						
9:15	0	0	0.0	0	0	0.0	5	3	1.7	2	1	2.0	0	0	0.0	0	0	0.0	5	3	1.7	2	1	2.0	7	4	1.8	114	65	1.8						
9:20	0	0	0.0	0	0	0.0	1	1	1.0	2	2	1.0	0	0	0.0	0	0	0.0	1	1	1.0	2	2	1.0	3	3	1.0	110	63	1.7						
9:25	0	0	0.0	1	1	1.0	5	3	1.7	2	2	1.0	0	0	0.0	0	0	0.0	5	3	1.7	3	3	1.0	8	6	1.3	111	66	1.7						
9:30	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	104	64	1.6						
Total	25	10	2.5	9	8	1.1	96	44	2.2	42	38	1.1	6	6	1.0	1	1	1.0	127	60	2.1	52	47	1.1	179	107	1.7									
Peak Hour 8:00-9:00	23	8	2.9	7	6	1.2	52	23	2.3	29	27	1.1	3	3	1.0	1	1	1.0	78	34	2.3	37	34	1.1	115	68	1.7									
16:05	0	0	0.0	0	0	0.0	1	1	1.0	7	3	2.3	0	0	0.0	0	0	0.0	1	1	1.0	7	3	2.3	8	4	2.0									
16:10	0	0	0.0	0	0	0.0	1	1	1.0	7	2	3.5	0	0	0.0	0	0	0.0	1	1	1.0	7	2	3.5	8	3	2.7									
16:15	0	0	0.0	0	0	0.0	2	1	2.0	2	1	2.0	0	0	0.0	1	1	1.0	2	1	2.0	3	2	1.5	5	3	1.7									
16:20	1	1	1.0	0	0	0.0	0	0	0.0	4	1	4.0	2	1	2.0	0	0	0.0	3	2	1.5	4	1	4.0	7	3	2.3									
16:25	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0									
16:30	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0									
16:35	2	1	2.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	3	2	1.5	1	1	1.0	4	3	1.3									
16:40	0	0	0.0	0	0	0.0	2	2	1.0	2	1	2.0	0	0	0.0	0	0	0.0	2	2	1.0	2	1	2.0	4	3	1.3									
16:45	0	0	0.0	0	0	0.0	0	0	0.0	4	2	2.0	0	0	0.0	1	1	1.0	0	0	0.0	5	3	1.7	5	3	1.7									
16:50	0	0	0.0	2	1	2.0	0	0	0.0	2	1	2.0	0	0	0.0	1	1	1.0	0	0	0.0	5	3	1.7	5	3	1.7									
16:55	0	0	0.0	2	1	2.0	0	0	0.0	3	1	3.0	0	0	0.0	0	0	0.0	0	0	0.0	5	2	2.5	5	2	2.5									
17:00	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	53	29	1.8						
17:05	1	1	1.0	1	1	1.0	1	1	1.0	2	1	2.0	0	0	0.0	0	0	0.0	2	2	1.0	3	2	1.5	5	4	1.3	50	29	1.7						
17:10	0	0	0.0	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	44	28	1.6						
17:15	0	0	0.0	0	0	0.0	3	3	1.0	0	0	0.0	1	1	1.0	0	0	0.0	4	4	1.0	0	0	0.0	4	4	1.0	43	29	1.5						
17:20	0	0	0.0	0	0	0.0	1	1	1.0	4	2	2.0	1	1	1.0	0	0	0.0	2	2	1.0	4	2	2.0	6	4	1.5	42	30	1.4						
17:25	1	1	1.0	1	1	1.0	1	1	1.0	3	1	3.0	0	0	0.0	0	0	0.0	2	2	1.0	4	2	2.0	6	4	1.5	48	34	1.4						
17:30	0	0	0.0	2	1	2.0	0	0	0.0	6	3	2.0	0	0	0.0	5	3	1.7	0	0	0.0	13	7	1.9	13	7	1.9	60	40	1.5						
17:35	0	0	0.0	0	0	0.0	1	1	1.0	6	3	2.0	0	0	0.0	0	0	0.0	1	1	1.0	6	3	2.0	7	4	1.8	63	41	1.5						
17:40	0	0	0.0	0	0	0.0	3	3	1.0	2	1	2.0	0	0	0.0	0	0	0.0	3	3	1.0	2	1	2.0	5	4	1.3	64	42	1.5						
17:45	0	0	0.0	0	0	0.0	5	3	1.7	4	2	2.0	5	2	2.0	0	0	0.0	10	5	2.0	4	2	2.0	14	7	2.0	73	46	1.6						
17:50	0	0	0.0	0	0	0.0	1	1	1.0	4	2	2.0	0	0	0.0	0	0	0.0	1	1	1.0	4	2	2.0	5	3										

Project No: 7708.03
Project: Bloor / Dundas
Study Location: Metro Supermarket, 425 Bloor St W
Municipality: Toronto
Study Date: Tuesday, February 27, 2018
Study Time: 07:00-10:00, 16:00-19:00
Weather: clear, mild

Metro Door Counts

Period Ending	Inbound						Outbound						2-Way						Pedestrians	Hourly Cyclists	Total	
	Bloor St Doors		Robert St Doors		Total		Bloor St Doors		Robert St Doors		Total		Bloor St Doors		Robert St Doors		Site Total					
	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Pedestrians	Cyclists	Total			
7:05	3	1	2	0	5	1	3	1	1	0	4	1	6	2	3	0	9	2	11			
7:10	0	1	1	0	1	1	2	1	2	0	4	1	2	2	3	0	5	2	7			
7:15	1	0	2	0	3	0	0	0	3	0	3	0	1	0	5	0	6	0	6			
7:20	3	0	4	1	7	1	0	0	2	0	2	0	3	0	6	1	9	1	10			
7:25	3	0	5	1	8	1	6	0	2	0	8	0	9	0	7	1	16	1	17			
7:30	4	0	1	0	5	0	0	0	2	0	2	0	4	0	3	0	7	0	7			
7:35	1	0	1	0	2	0	3	0	3	0	6	0	4	0	4	0	8	0	8			
7:40	3	0	0	0	3	0	2	0	3	1	5	1	5	0	3	1	8	1	9			
7:45	4	0	1	0	5	0	4	0	2	1	6	1	8	0	3	1	11	1	12			
7:50	3	0	2	0	5	0	5	0	3	0	8	0	8	0	5	0	13	0	13			
7:55	5	0	4	0	9	0	3	0	2	0	5	0	8	0	6	0	14	0	14			
8:00	4	0	5	0	9	0	2	0	4	1	6	1	6	0	9	1	15	1	16	121	9	130
8:05	3	0	2	0	5	0	3	0	3	0	6	0	6	0	5	0	11	0	11	123	7	130
8:10	4	1	0	0	4	1	1	0	2	0	3	0	5	1	2	0	7	1	8	125	6	131
8:15	7	0	2	0	9	0	7	0	1	0	8	0	14	0	3	0	17	0	17	136	6	142
8:20	2	0	3	0	5	0	6	0	3	0	9	0	8	0	6	0	14	0	14	141	5	146
8:25	1	0	2	0	3	0	5	1	0	4	7	2	5	1	7	0	12	1	13	132	4	136
8:30	4	0	1	0	5	0	3	0	6	1	9	1	7	0	7	1	14	1	15	139	5	144
8:35	10	0	3	0	13	0	4	0	0	0	4	0	14	0	3	0	17	0	17	148	5	153
8:40	6	0	2	0	8	0	7	0	5	0	12	0	13	0	7	0	20	0	20	160	4	164
8:45	6	0	7	0	13	0	5	0	6	0	11	0	11	0	13	0	24	0	24	173	3	176
8:50	7	0	10	1	17	1	8	0	3	1	11	1	15	0	13	2	28	2	30	188	5	193
8:55	10	0	0	0	10	0	5	0	4	0	9	0	15	0	4	0	19	0	19	193	5	198
9:00	10	0	5	0	15	0	6	0	5	0	11	0	15	0	11	0	26	0	26	204	4	208
9:05	8	0	7	0	15	0	6	0	7	0	13	0	14	0	14	0	28	0	28	221	4	225
9:10	10	0	5	0	15	0	9	0	6	2	15	2	19	0	11	2	30	2	32	244	5	249
9:15	12	0	5	0	17	0	9	0	6	0	15	0	21	0	11	0	32	0	32	259	5	264
9:20	4	0	6	0	10	0	5	0	8	1	13	1	9	0	14	1	23	1	24	268	6	274
9:25	6	0	2	0	8	0	6	0	6	0	12	0	12	0	8	0	20	0	20	281	6	287
9:30	6	1	2	1	8	2	5	0	6	0	11	0	11	1	8	1	19	2	21	286	7	293
9:35	8	0	5	0	13	0	6	0	5	0	11	0	14	0	10	0	24	0	24	293	7	300
9:40	8	0	3	0	11	0	5	0	1	1	6	1	13	0	4	1	17	1	18	290	8	298
9:45	7	0	5	0	12	0	8	0	2	0	10	0	15	0	7	0	22	0	22	288	8	296
9:50	7	0	1	0	8	0	7	0	4	0	11	0	14	0	5	0	19	0	19	279	6	285
9:55	9	0	1	0	10	0	5	0	4	0	9	0	14	0	5	0	19	0	19	279	6	285
10:00	7	0	3	0	10	0	6	1	2	0	8	1	13	1	5	0	18	1	19	271	7	278
Total	196	4	110	4	306	8	162	3	128	9	290	12	358	7	238	13	596	20	616			
Peak Hour 8:45-9:45	96	1	55	2	151	3	77	0	60	5	137	5	173	1	115	7	288	8	296			
16:05	22	0	11	0	33	0	31	0	17	0	48	0	53	0	28	0	81	0	81			
16:10	24	2	10	0	34	2	25	0	9	0	34	0	49	2	19	0	68	2	70			
16:15	29	0	9	0	38	0	23	1	10	0	33	1	52	1	19	0	71	1	72			
16:20	37	1	4	0	41	1	25	2	8	0	33	2	62	3	12	0	74	3	77			
16:25	45	0	5	0	50	0	25	1	10	0	35	1	70	1	15	0	85	1	86			
16:30	28	1	8	0	36	1	37	1	5	0	42	1	65	2	13	0	78	2	80			
16:35	33	0	11	0	44	0	32	1	13	0	45	1	65	1	24	0	89	1	90			
16:40	23	0	10	0	33	0	25	0	14	0	39	0	48	0	24	0	72	0	72			
16:45	25	0	10	0	35	0	27	0	18	0	45	0	52	0	28	0	80	0	80			
16:50	26	2	2	0	28	2	30	1	8	0	38	1	56	3	10	0	66	3	69			
16:55	30	1	3	0	33	1	23	1	5	0	28	1	53	2	8	0	61	2	63			
17:00	31	1	6	1	37	2	39	3	6	0	45	3	70	4	12	1	82	5	87	907	20	927
17:05	31	2	6	0	37	2	26	1	9	0	35	1	57	3	15	0	72	3	75	898	23	921
17:10	31	0	9	0	40	0	39	1	6	0	45	1	65	1	15	0	85	1	86	915	22	937
17:15	34	1	6	0	40	1	40	1	13	0	53	1	74	2	19	0	93	2	95	937	23	960
17:20	40	0	8	0	48	0	23	1	11	0	34	1	63	1	19	0	82	1	83	945	21	966
17:25	39	1	11	0	50	1	29	0	15	0	44	0	68	1	26	0	94	1	95	954	21	975
17:30	35	0	5	0	40	0	49	1	8	0	57	1	84	1	13	0	97	1	98	973	20	993
17:35	41	0	8	0	49	0	29	1	20	0	49	1	70	1	28	0	98	1	99	982	20	1002
17:40	41	0	6	0	47	0	37	0	9	0	46	0	78	0	15	0	93	0	93	1003	20	1023
17:45	40	1	13	0	53	1	36	0	16	0	52	0	76	1	29	0	105	1	106	1028	21	1049
17:50	36	0	6	0	42	0	50	0	12	0	62	0	86	0	18	0	104	0	104	1066	18	1084
17:55	35	1	15	0	50	1	29	0	19	0	48	0	64	1	34	0	98	1	99	1103	17	1120
18:00	33	0	5	0	38	0	37	0	10	0	47	0	70	0	15	0	85	0	85	1106	12	1118
18:05	36	1	10	0	46	1	28	0	18	0	46	0	64	1	28	0	92	1	93	1126	10	1136
18:10	30	0	16	0	46	0	39	0	15	0	54	0	69	0	31	0	100	0	100	1141	9	1150
18:15	20	0	10	0	30	0	37	0	16	0	53	0	67	0	26	0	83	0	83	1131	7	1138
18:20	40	0	11	0	51	0	35	0	13	0	48	0	75	0	24	0	99	0	99	1148	6	1154
18:25	35	0	10	0	45	0	28	0	11	0	39	0	63	0	21	0	84	0	84	1138	5	1143
18:30	34	0	11	0	45	0	33	0	15	0	48	0	67	0	26	0	93	0	93	1134	4	1138
18:35	30	3	8	0	38	3	28	0	20	0	48	0	58	3	28	0	86	3	89	1122	6	1128
18:40	37	0	7	0	44	0	33	1	10	0	43	1	70	1	17	0	87	1	88	1116	7	1123
18:45	37	0	12	0	49	0	30	0	18	0	48	0	67	0	30	0	97	0	97			

Project No: 7708.03
Project: Bloor / Dundas
Study Location: Metro Supermarket, 425 Bloor St W
Municipality: Toronto
Study Date: Tuesday, February 27, 2018
Study Time: 07:00-10:00, 16:00-19:00

Vehicle Occupancy Metro Related Only

Period Ending	Area 1 (West Side of Lot)						Area 2 (East Side of Lot)						Total Metro											
	Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			2-Way			Hourly		
	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate	Total Occupants	Total Vehicles	Vehicle Occ Rate
7:05	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
7:10	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0			
7:15	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0			
7:20	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0			
7:25	3	2	1.5	1	1	1.0	0	0	0.0	0	0	0.0	3	2	1.5	1	1	1.0	4	3	1.3			
7:30	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0			
7:35	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0			
7:40	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0			
7:45	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
7:50	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0			
7:55	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
8:00	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	17	16	1.1
8:05	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	18	17	1.1
8:10	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	17	16	1.1
8:15	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	17	16	1.1
8:20	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	16	15	1.1
8:25	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	14	14	1.0
8:30	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0	14	14	1.0
8:35	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	14	14	1.0
8:40	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	14	14	1.0
8:45	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	16	16	1.0
8:50	2	2	1.0	2	2	1.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0	4	4	1.0	19	19	1.0
8:55	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	18	18	1.0
9:00	2	1	2.0	2	2	1.0	0	0	0.0	0	0	0.0	2	1	2.0	2	2	1.0	4	3	1.3	22	21	1.0
9:05	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	21	20	1.1
9:10	1	1	1.0	1	1	1.0	1	1	1.0	0	0	0.0	2	2	1.0	1	1	1.0	3	3	1.0	23	22	1.0
9:15	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	24	23	1.0
9:20	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	25	24	1.0
9:25	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	25	24	1.0
9:30	0	0	0.0	3	2	1.5	0	0	0.0	0	0	0.0	0	0	0.0	3	2	1.5	3	2	1.5	26	24	1.1
9:35	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	25	23	1.1
9:40	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	1	1	1.0	2	2	1.0	25	23	1.1
9:45	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	2	2	1.0	25	23	1.1
9:50	2	2	1.0	1	1	1.0	0	0	0.0	0	0	0.0	2	2	1.0	1	1	1.0	3	3	1.0	24	22	1.1
9:55	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	24	22	1.1
10:00	1	1	1.0	3	3	1.0	0	0	0.0	0	0	0.0	1	1	1.0	3	3	1.0	4	4	1.0	24	23	1.0
Total	32	30	1.1	27	26	1.0	3	3	1.0	1	1	1.0	35	33	1.1	28	27	1.0	63	60	1.1			
Peak Hour 8:30-9:30	13	12	1.1	11	10	1.1	2	2	1.0	0	0	0.0	15	14	1.1	11	10	1.1	26	24	1.1			
16:05	2	2	1.0	1	1	1.0	1	1	1.0	0	0	0.0	3	3	1.0	1	1	1.0	4	4	1.0			
16:10	3	2	1.5	1	1	1.0	0	0	0.0	0	0	0.0	3	2	1.5	1	1	1.0	4	3	1.3			
16:15	1	1	1.0	4	3	1.3	2	2	1.0	1	1	1.0	3	3	1.0	5	4	1.3	8	7	1.1			
16:20	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0			
16:25	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0			
16:30	5	3	1.7	3	3	1.0	0	0	0.0	0	0	0.0	5	3	1.7	3	3	1.0	8	6	1.3			
16:35	3	3	1.0	4	4	1.0	0	0	0.0	1	1	1.0	3	3	1.0	5	5	1.0	8	8	1.0			
16:40	2	1	2.0	3	3	1.0	2	1	2.0	0	0	0.0	4	2	2.0	3	3	1.0	7	5	1.4			
16:45	2	2	1.0	1	1	1.0	0	0	0.0	0	0	0.0	2	2	1.0	1	1	1.0	3	3	1.0			
16:50	3	2	1.5	5	3	1.7	0	0	0.0	1	1	1.0	3	2	1.5	6	4	1.5	9	6	1.5			
16:55	0	0	0.0	3	3	1.0	0	0	0.0	0	0	0.0	0	0	0.0	3	3	1.0	3	3	1.0			
17:00	1	1	1.0	0	0	0.0	2	2	1.0	0	0	0.0	3	3	1.0	0	0	0.0	3	3	1.0	60	51	1.2
17:05	0	0	0.0	2	2	1.0	0	0	0.0	1	1	1.0	0	0	0.0	3	2	1.5	3	2	1.5	59	49	1.2
17:10	3	1	3.0	0	0	0.0	0	0	0.0	0	0	0.0	3	1	3.0	0	0	0.0	3	1	3.0	58	47	1.2
17:15	4	3	1.3	1	1	1.0	0	0	0.0	0	0	0.0	4	3	1.3	1	1	1.0	5	4	1.3	55	44	1.3
17:20	1	1	1.0	5	3	1.7	0	0	0.0	2	1	2.0	1	1	1.0	7	4	1.8	8	5	1.6	62	48	1.3
17:25	0	0	0.0	4	3	1.3	0	0	0.0	0	0	0.0	0	0	0.0	4	3	1.3	4	3	1.3	64	49	1.3
17:30	2	1	2.0	2	2	1.0	1	1	1.0	0	0	0.0	3	2	1.5	2	2	1.0	5	4	1.3	61	47	1.3
17:35	0	0	0.0	4	2	2.0	0	0	0.0	0	0	0.0	0	0	0.0	4	2	2.0	4	2	2.0	57	41	1.4
17:40	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	1	1	1.0	51	37	1.4
17:45	4	2	2.0	4	2	2.0	2	1	2.0	0	0	0.0	6	3	2.0	4	2	2.0	10	5	2.0	58	39	1.5
17:50	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	51	35	1.5
17:55	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	49	33	1.5
18:00	1	1	1.0	3	3	1.0	0	0	0.0	0	0	0.0	1	1	1.0	3	3	1.0	4	4	1.0	50	34	1.5
18:05																								

Project No: 7708.03
Project: Bloor / Dundas
Study Location: Metro Supermarket, 425 Bloor St W
Municipality: Toronto
Study Date: Tuesday, February 27, 2018
Study Time: 07:00-10:00, 16:00-19:00

Vehicle Occupancy **Non-Related Metro Vehicles Parked at Metro Stalls & Paid Stalls**

Period Ending	Area 1 (Metro Stalls)						Area 2 (Metro Stalls)						Area 2 (Paid Stalls)						Total														
	Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			Total			2-Way			Hourly		
	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate	Total Occupants	Total Vehicles	Vehicle Occ. Rate			
7:05	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
7:10	0	0	0.0	0	0	0.0	3	2	1.5	0	0	0.0	0	0	0.0	0	0	0.0	3	2	1.5	0	0	0.0	3	2	1.5	0	0	0.0			
7:15	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
7:20	0	0	0.0	0	0	0.0	7	2	2.1	1	1	1.0	0	0	0.0	0	0	0.0	7	3	2.3	1	1	1.0	8	2	2.0	1	1	1.0			
7:25	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	1	1	1.0			
7:30	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	2	1	2.0	0	0	0.0	2	1	2.0	0	0	0.0	2	1	2.0	0	0	0.0			
7:35	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
7:40	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0			
7:45	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
7:50	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0			
7:55	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	2.0	0	0	0.0	2	2	2.0	0	0	0.0	2	2	2.0	0	0	0.0			
8:00	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0			
8:05	1	1	1.0	0	0	0.0	2	1	2.0	0	0	0.0	1	1	1.0	0	0	0.0	6	4	1.5	0	0	0.0	6	4	1.5	26	17	1.5			
8:10	0	0	0.0	0	0	0.0	2	1	2.0	0	0	0.0	0	0	0.0	2	1	2.0	2	1	2.0	2	1	2.0	4	2	2.0	4	2	2.0			
8:15	0	0	0.0	0	0	0.0	0	0	0.0	3	3	1.0	0	0	0.0	0	0	0.0	3	3	1.0	3	3	1.0	6	3	1.0	30	20	1.5			
8:20	0	0	0.0	0	0	0.0	3	1	3.0	0	0	0.0	1	1	1.0	0	0	0.0	4	2	2.0	0	0	0.0	4	2	2.0	26	18	1.4			
8:25	0	0	0.0	1	1	1.0	2	1	2.0	2	1	2.0	1	1	1.0	0	0	0.0	3	2	1.5	3	2	1.5	6	4	1.5	31	21	1.5			
8:30	0	0	0.0	0	0	0.0	2	2	3.5	1	1	1.0	1	1	1.0	0	0	0.0	8	3	2.7	1	1	1.0	9	4	2.3	38	24	1.6			
8:35	0	0	0.0	0	0	0.0	4	2	2.0	0	0	0.0	0	0	0.0	0	0	0.0	4	2	2.0	0	0	0.0	4	2	2.0	41	25	1.6			
8:40	0	0	0.0	0	0	0.0	2	1	2.0	1	1	1.0	0	0	0.0	1	1	1.0	2	1	2.0	2	2	1.0	4	3	1.3	44	27	1.6			
8:45	0	0	0.0	0	0	0.0	2	1	2.0	3	2	1.5	0	0	0.0	0	0	0.0	2	1	2.0	3	2	1.5	5	3	1.7	49	30	1.6			
8:50	0	0	0.0	0	0	0.0	1	1	1.0	2	2	1.0	0	0	0.0	0	0	0.0	1	1	1.0	2	2	1.0	3	3	1.0	51	32	1.6			
8:55	0	0	0.0	0	0	0.0	5	2	2.5	1	1	1.0	0	0	0.0	0	0	0.0	5	2	2.5	1	2	1.0	6	3	2.0	55	34	1.5			
9:00	0	0	0.0	0	0	0.0	2	1	2.0	3	3	1.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	54	33	1.6			
9:05	0	0	0.0	0	0	0.0	2	1	2.0	3	3	1.0	0	0	0.0	0	0	0.0	2	1	2.0	3	3	1.0	5	5	4	53	33	1.6			
9:10	0	0	0.0	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	51	33	1.5			
9:15	0	0	0.0	0	0	0.0	2	1	2.0	2	2	1.0	0	0	0.0	2	2	1.0	2	2	1.0	4	3	1.3	52	33	1.3	52	33	1.3			
9:20	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0	50	33	1.5			
9:25	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	44	29	1.5			
9:30	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	35	25	1.4			
9:35	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	31	23	1.3			
9:40	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	27	20	1.4			
9:45	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	23	18	1.3			
9:50	0	0	0.0	0	0	0.0	1	1	1.0	2	1	1.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	3	3	1.0	23	18	1.3			
9:55	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	1	1	1.0	2	2	1.0	19	17	1.1			
10:00	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0	20	18	1.1			
Total	2	2	1.0	2	2	1.0	53	28	1.9	25	23	1.1	9	7	1.3	3	2	1.5	64	37	1.7	30	27	1.1	94	64	1.5	244	141	1.6			
Peak Hour 8:00-9:00	1	1	1.0	1	1	1.0	32	14	2.3	13	11	1.2	4	4	1.0	3	2	1.5	37	19	1.9	17	14	1.2	54	33	1.6						
Common Peak 8:30-9:30	0	0	0.0	1	1	1.0	19	10	1.9	14	13	1.1	0	0	0.0	1	1	1.0	19	10	1.9	16	15	1.1	35	25	1.4						
16:05	0	0	0.0	0	0	0.0	10	3	3.3	3	3	1.0	0	0	0.0	0	0	0.0	10	3	3.3	1	1	1.0	11	4	3.1	13	5	3.3			
16:10	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0			
16:15	1	1	1.0	0	0	0.0	0	0	0.0	6	2	3.0	0	0	0.0	0	0	0.0	1	1	1.0	6	2	3.0	7	3	2.3						
16:20	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0						
16:25	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	2	1	1.0	0	0	0.0	2	2	2.0	0	0	0.0	2	2	1.0						
16:30	2	1	2.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	0	0	0.0	3	2	1.5	0	0	0.0	3	2	1.5						
16:35	0	0	0.0	0	0	0.0	3	3	1.0	6	2	3.0	0	0	0.0	1	1	1.0	3	3	1.0	7	3	2.3	10	6	1.7						
16:40	0	0	0.0	0	0	0.0	0	0	0.0	4	2	2.0	0	0	0.0	1	1	1.0	0	0	0.0	5	3	1.7	5	3	1.7						
16:45	0	0	0.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	0	0	0.0	1	1	1.0	0	0	0.0	1	1	1.0						
16:50	0	0	0.0	0	0	0.0	2	2	1.0	1	1	1.0	0	0	0.0	1	1	1.0	2	2	1.0	2	2	1.0	4	4	1.0						
16:55	0	0	0.0	0	0	0.0	0	0	0.0	5	2	2.5	1	1	1.0	0	0	0.0	1	1	1.0	5	2	2.5	6	3	2.0						
17:00	0	0	0.0	0	0	0.0	3	3	1.0	3	3	1.0	0	0	0.0	0	0	0.0	0	0	0.0	3	3	1.0	3	3	1.0	55	32	1.7			
17:05	0	0	0.0	0	0	0.0	2	1	1.0	2	2	1.0	0	0	0.0	0	0	0.0	2	2	1.0	2	2	1.0	4	4	1.0						
17:10	0	0	0.0	0	0	0.0	2	2	1.0	0	0	0.0	1	1	1.0	0	0	0.0	3	3	1.0	0	0	0.0	3	3	1.0	49	35	1.4			
17:15	1	1	1.0	0	0	0.0	1	1	1.0	4	2	2.0	0	0	0.0	1	1	1.0	2	1	1.0	5	3	1.7	7	5	1.4	49	37	1.3			
17:20	1	1	1.0	0	0	0.0	0	0	0.0	6	2	3.0	0	0	0.0	0	0	0.0	1	1	1.0	6	2	3.0	7	3	2.3	55	39	1.4			
17:25	0	0	0.0	0	0	0.0	3	2	1.5	2	1	1.0	0	0	0.0	3	2	1.5	2	2	1.0	5	3	1.7	8	4	2.0	61	45	1.5			
17:30	0																																

Hourly Summary

Hour Ending	Area 1 (Metro Stalls)						Area 2 (Metro Stalls)						Area 2 (Paid Stalls)						Total									
	Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			Inbound			Outbound			2-Way			
	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	Total	Vehicle	Occ Rate	
	Occupants			Occupants			Occupants			Occupants			Occupants			Occupants			Occupants			Occupants			Occupants			
8:00	1	1	0.0	0	0	0.0	12	7	1.7	2	2	1.0	5	3	1.7	0	0	0.0	18	11	1.6	2	2	1.0	20	13	1.5	
9:00	1	1	0.0	0	0	0.0	32	14	2.3	13	11	1.2	4	4	1.0	3	2	0.0	37	19	1.9	17	14	1.2	54	33	1.6	
10:00	0	0	0.0	1	1	1.0	9	7	1.3	10	10	1.0	0	0	0.0	0	0	0.0	6	9	7	1.3	11	11	1.0	20	18	1.1
Total	2	2	1.0	2	2	1.0	53	28	1.9	25	23	1.1	9	7	1.3	3	2	1.5	64	37	1.7	30	27	1.1	94	64	1.5	
Peak Hour																												
8:00-9:00	0	0	0.0	1	1	1	9	7	1.3	10	10	1.0	0	0	0	0	0	0.0	9	7	1.3	11	11	1.0	20	18	1.1	
17:00	3	2	1.5	0	0	0.0	19	12	1.6	28	13	2.2	2	2	1.0	3	3	1.0	24	16	1.5	31	16	1.9	55	32	1.7	
18:00	2	2	1.0	3	1	3.0	14	12	1.2	34	17	2.0	3	3	1.0	9	4	2.3	19	17	1.1	46	22	2.1	65	39	1.7	
19:00	6	3	2.0	4	2	2.0	3	3	1.0	9	4	2.3	0	0	0.0	3	1	3.0	9	6	1.5	16	7	2.3	25	13	1.9	
Total	11	7	1.6	7	3	2.3	36	27	1.3	71	34	2.1	5	5	1.0	15	8	1.9	52	39	1.3	164	110	1.5	353	230	1.5	
Peak Hour																												
17:00-18:00	2	2	1.0	3	1	3.0	14	12	1.2	34	17	2.0	3	3	1	9	4	2.3	19	17	1.1	46	22	2.1	65	39	1.7	

Project No: 6589.34
 Project: 2442-2454 Bloor St W
 Study Location: Fiesta Farms (Christie St / Essex St)
 Municipality: Toronto
 Study Date: Thursday, September 27, 2018
 Study Time: 7:30-10:30 am, 4-7 pm

Pedestrian Door Counts (Grocery Store only, exclude Garden Centre)

Period Ending	Inbound			Outbound			2-Way Totals	Hourly Totals
	Pedestrians	Cyclists	Total	Pedestrians	Cyclists	Total		
7:35	1	0	1	0	0	0	1	
7:40	2	0	2	0	0	0	2	
7:45	1	0	1	0	0	0	1	
7:50	0	0	0	0	0	0	0	
7:55	0	0	0	0	0	0	0	
8:00	2	0	2	0	0	0	2	
8:05	10	2	12	0	0	0	10	
8:10	4	1	5	3	0	3	7	
8:15	2	0	2	4	0	4	6	
8:20	7	1	8	3	0	3	10	
8:25	5	0	5	1	1	2	6	
8:30	5	0	5	2	0	2	7	52
8:35	3	0	3	7	0	7	10	61
8:40	8	0	8	5	0	5	13	72
8:45	7	1	8	11	0	11	18	89
8:50	9	1	10	4	1	5	13	102
8:55	8	0	8	7	0	7	15	117
9:00	9	0	9	8	0	8	17	132
9:05	5	0	5	4	0	4	9	131
9:10	10	0	10	4	0	4	14	138
9:15	9	0	9	10	0	10	19	151
9:20	5	1	6	4	1	5	9	150
9:25	7	0	7	4	0	4	11	155
9:30	6	0	6	3	0	3	9	157
9:35	5	0	5	8	0	8	13	160
9:40	4	0	4	8	1	9	12	159
9:45	9	0	9	5	0	5	14	155
9:50	6	0	6	7	0	7	13	155
9:55	5	0	5	3	0	3	8	148
10:00	1	0	1	3	0	3	4	135
10:05	4	0	4	4	0	4	8	134
10:10	30	0	30	5	0	5	35	155
10:15	12	1	13	7	0	7	19	155
10:20	7	1	8	22	0	22	29	175
10:25	2	0	2	3	0	3	5	169
10:30	3	0	3	10	2	12	13	173
Total	213	9	222	169	6	175	382	
Peak Hour 9:20-10:20	96	2	98	79	1	80	175	
16:05	18	0	18	17	0	17	35	
16:10	17	0	17	16	0	16	33	
16:15	20	1	21	11	0	11	31	
16:20	19	1	20	14	0	14	33	
16:25	21	2	23	13	1	14	34	
16:30	14	1	15	12	0	12	26	
16:35	12	2	14	9	1	10	21	
16:40	9	2	11	24	2	26	33	
16:45	8	0	8	25	1	26	33	
16:50	10	1	11	9	0	9	19	
16:55	14	4	18	11	2	13	25	
17:00	11	0	11	10	0	10	21	344
17:05	16	3	19	11	2	13	27	336
17:10	20	1	21	12	1	13	32	335
17:15	31	0	31	8	1	9	39	343
17:20	19	0	19	9	1	10	28	338
17:25	22	2	24	7	2	9	29	333
17:30	20	0	20	15	1	16	35	342
17:35	20	1	21	16	1	17	36	357
17:40	20	5	25	12	1	13	32	356
17:45	18	5	23	9	0	9	27	350
17:50	11	0	11	13	3	16	24	355
17:55	28	1	29	16	1	17	44	374
18:00	19	0	19	9	0	9	28	381
18:05	12	0	12	15	2	17	27	381
18:10	9	2	11	13	2	15	22	371
18:15	7	0	7	15	0	15	22	354
18:20	12	1	13	7	2	9	19	345
18:25	19	1	20	6	2	8	25	341
18:30	19	1	20	8	0	8	27	333
18:35	13	0	13	10	0	10	23	320
18:40	10	0	10	8	0	8	18	306
18:45	10	0	10	10	0	10	20	299
18:50	15	1	16	18	0	18	33	308
18:55	5	0	5	6	1	7	11	275
19:00	18	3	21	4	0	4	22	269
Total	566	41	607	428	30	458	994	
Peak Hour 17:00-18:00	244	18	262	137	14	151	381	

Project No: 6589.34
 Project: 2442-2454 Bloor St W
 Study Location: Fiesta Farms (Christie St / Essex St)
 Municipality: Toronto
 Study Date: Thursday, September 27, 2018
 Study Time: 7:30-10:30 am, 4-7 pm

Site Traffic (Grocery Store only, exclude Garden Centre)

	East Driveway		Centre Driveway		West Driveway		Christie Street		Site Total			
Period Ending	In	Out	In	Out	In	Out	In	Out	In	Out	2-Way	Hourly
7:35	0	0	0	0	0	0	0	0	0	0	0	
7:40	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	0	
7:50	1	0	0	0	0	0	0	0	1	0	1	
7:55	0	0	1	0	0	0	0	0	1	0	1	
8:00	0	1	0	0	1	0	0	0	1	1	2	
8:05	2	0	1	0	0	0	0	0	3	0	3	
8:10	0	0	1	1	0	0	0	0	1	1	2	
8:15	2	2	0	0	0	0	0	0	2	2	4	
8:20	1	1	0	0	0	0	0	0	1	1	2	
8:25	1	0	1	0	0	0	0	0	2	0	2	
8:30	1	0	0	0	0	0	0	0	1	0	1	18
8:35	0	0	0	2	0	0	0	0	0	2	2	20
8:40	1	0	0	2	1	0	0	0	2	2	4	24
8:45	0	1	1	0	0	0	0	0	1	1	2	26
8:50	1	1	3	1	0	0	0	0	4	2	6	31
8:55	2	0	0	0	0	0	0	0	2	0	2	32
9:00	0	1	1	1	0	0	0	0	1	2	3	33
9:05	5	0	2	1	1	0	0	0	8	1	9	39
9:10	2	0	0	0	0	1	0	0	2	1	3	40
9:15	1	1	0	1	0	0	0	0	1	2	3	39
9:20	3	1	0	2	0	0	0	0	3	3	6	43
9:25	1	1	2	1	0	0	0	0	3	2	5	46
9:30	3	0	0	1	0	0	0	0	3	1	4	49
9:35	0	2	1	0	0	0	0	0	1	2	3	50
9:40	4	2	0	2	0	1	0	0	4	5	9	55
9:45	5	0	0	0	0	0	0	0	5	0	5	58
9:50	1	1	0	0	0	0	0	0	1	1	2	54
9:55	0	0	3	5	0	0	0	0	3	5	8	60
10:00	1	1	0	0	0	1	1	0	2	2	4	61
10:05	2	1	0	0	0	0	0	1	2	2	4	56
10:10	2	0	0	0	0	0	0	0	2	0	2	55
10:15	2	1	0	0	0	0	0	0	2	1	3	55
10:20	0	2	1	0	0	0	0	0	1	2	3	52
10:25	1	0	0	0	0	0	0	0	1	0	1	48
10:30	1	0	1	1	0	0	0	0	2	1	3	47
Total	46	20	19	21	3	3	1	1	69	45	114	
Ped Peak 9:20-10:20	21	11	7	9	0	2	1	1	29	23	52	
Site Peak 9:00-10:00	26	9	8	13	1	3	1	0	36	25	61	
Trip Rate									1.27	0.88	2.16	
16:05	3	1	2	5	0	0	0	0	5	6	11	
16:10	3	2	4	4	0	0	0	0	7	6	13	
16:15	4	4	0	3	0	1	0	0	4	8	12	
16:20	7	1	5	1	0	0	0	0	12	2	14	
16:25	2	3	2	1	0	0	0	0	4	4	8	
16:30	2	2	1	3	0	0	0	0	3	5	8	
16:35	4	4	4	3	0	0	0	0	8	7	15	
16:40	3	5	3	7	0	0	0	0	6	12	18	
16:45	5	6	3	5	1	0	0	0	9	11	20	
16:50	2	1	4	4	0	1	0	0	6	6	12	
16:55	4	2	2	0	0	0	0	0	6	2	8	
17:00	5	2	3	1	0	0	0	0	8	3	11	150
17:05	1	3	0	5	0	0	0	0	1	8	9	148
17:10	1	6	3	4	0	0	0	0	4	10	14	149
17:15	5	0	1	0	0	0	0	0	6	0	6	143
17:20	3	2	2	2	0	0	0	0	5	4	9	138
17:25	3	2	2	3	0	0	0	0	5	5	10	140
17:30	3	1	4	1	0	0	0	0	7	2	9	141
17:35	3	3	1	3	0	0	0	0	4	6	10	136
17:40	7	4	1	1	0	0	0	0	8	5	13	131
17:45	5	2	1	4	0	0	0	0	6	6	12	123
17:50	2	2	3	2	0	0	0	0	5	4	9	120
17:55	3	2	3	3	0	0	0	0	6	5	11	123
18:00	0	3	2	3	0	0	1	0	3	6	9	121
18:05	1	2	1	3	0	0	0	0	2	5	7	119
18:10	4	0	2	4	0	0	0	0	6	4	10	115
18:15	1	4	2	0	0	0	0	1	3	5	8	117
18:20	3	3	3	5	0	0	0	0	6	8	14	122
18:25	4	2	5	2	0	0	0	0	9	4	13	125
18:30	2	3	3	1	0	0	0	0	5	4	9	125
18:35	6	6	1	0	0	0	0	0	7	6	13	128
18:40	1	3	1	2	0	0	0	0	2	5	7	122
18:45	3	2	0	2	0	0	0	0	3	4	7	117
18:50	2	5	3	3	0	0	0	0	5	8	13	121
18:55	5	1	1	3	0	0	0	0	6	4	10	120
19:00	4	2	3	0	0	0	0	0	7	2	9	120
Total	116	96	81	93	1	2	1	1	199	192	391	
Ped Peak 17:00-18:00	36	30	23	31	0	0	1	0	60	61	121	
Site Peak 16:00-17:00	44	33	33	37	1	2	0	0	78	72	150	
Trip Rate									2.76	2.54	5.30	

Note:
 Site GFA 2830 sqm <- measured from Google Earth building footprint

Fiesta Farms Traffic Summary

Date 28-Sep-18

Time End	Front Door				Fiesta Gardens Parking 1 (Eric)				Fiesta Gardens Parking 2 (Vith)				Christie Street Parking			
	Pedestrians		Cyclist		Vehicle		Driver		Vehicle		Driver		Vehicle		Driver	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
7:10																
7:15																
7:20																
7:25																
7:30																
7:35	1															
7:40	2															
7:45	1															
7:50					1		1									
7:55																
8:00	2					1		1		1		1				
8:05	10				2		2		1		2		2			
8:10	4	3	1						1	1		2	2			
8:15	2	4			2	2	2	2								
8:20	7	3	1		1	1	1	1								
8:25	5	1			1		1		1			1				
8:30	5	2			1		1									
8:35	3	7									2		2			
8:40	8	5			1		1				2		2			
8:45	7	11	1			1	1	1	1	3	1	3	1			
8:50	9	4	1	1	1	1	1	1	1	3	1	3	1			
8:55	8	7			2		2									
9:00	9	8				1		1	1	1	1	1	1			
9:05	5	4			5		6		2	1	2	1				
9:10	10	4			2		2									
9:15	9	10			1	1	1	1			1		1			
9:20	5	4	1		3	1	3	1			2		2			
9:25	7	4			1	1	1	1	2	1	2	1				
9:30	6	3			3		3				1		1			
9:35	5	8				2		2	1		1					
9:40	4	8		1	4	2	4	2			2		2			
9:45	9	5			5		5									
9:50	6	7			1	1	1	1								
9:55	5	3							3	5	3	5				
10:00	1	3			1	1	1	1							1	
10:05	4	4			2	1	2	1					1			
10:10	30	5			2		2							1		1
10:15	12	7	1		2	1	2	1								
10:20	7	22	1			2		2	1		1					
10:25	2	3			1		1									
10:30	3	10		2	1		1		1	1	1	1				
16:05	18	17			3	1	3	1	2	5	2	6				
16:10	17	16			3	2	4	2	4	4	5	6				
16:15	20	11	1		4	4	5	4		3		3				
16:20	19	14	1		7	1	11	1	5	1	6	1				
16:25	21	13	2	1	2	3	2	6	2	1	3	1				
16:30	14	12	1		2	2	2	2	1	3	1	4				
16:35	12	9	2	1	4	4	4	4	4	3	4	3				
16:40	9	24	2	2	3	5	3	8	3	7	3	7				
16:45	8	25		1	5	6	5	6	3	5	3	6				
16:50	10	9	1		2	1	2	1	4	4	5	4				
16:55	14	11	4	2	4	2	4	2	2	0	2	0				
17:00	11	10			5	2	6	2	3	1	3	1				
17:05	16	11	3	2	1	3	1	3	0	5	0	5				
17:10	20	12	1	1	1	6	1	6	3	4	4	5				
17:15	31	8		1	5	0	7	0	1	0	1	0				
17:20	19	9		1	3	2	4	2	2	2	2	2				
17:25	22	7	2	2	3	2	3	2	2	3	2	4				
17:30	20	15		1	3	1	3	2	4	1	4	1				
17:35	20	16	1	1	3	3	4	4	1	3	1	3				
17:40	20	12	5	1	7	4	9	5	1	1	1	1				
17:45	18	9	5		5	2	6	2	1	4	1	5				
17:50	11	13		3	2	2	6	2	3	2	4	2				
17:55	28	16	1	1	3	2	4	2	3	3	3	3				
18:00	19	9			0	3	0	4	2	3	2	3	1		1	
18:05	12	15		2	1	2	1	2	1	3	2	3				
18:10	9	13	2	2	4	0	4	0	2	4	3	4				
18:15	7	15			1	4	1	2	0	2	0	2				
18:20	12	7	1	2	3	3	5	3	3	5	3	8			1	
18:25	19	6	1	2	4	2	5	2	5	2	6	2				
18:30	19	8	1		2	3	2	3	3	1	3	1				
18:35	13	10			6	6	6	6	1	0	1	0				
18:40	10	8			1	3	1	3	1	2	1	2				
18:45	10	10			3	2	3	2	0	2	0	2				
18:50	15	18	1		2	5	2	5	3	3	3	3				
18:55	5	6		1	5	1	6	1	1	3	1	3				
19:00	18	4	3		4	2	5	3	3	0	3	0				

Pedestrian			Cyclist			Hourly Volume			Vehicle (Person)			Total	
In	Out	2-way	In	Out	2-way	In	Out	2-way	In	Out	2-way	In	Out
16	0	16	2	0	2	6	1	7	18	0	18		
20	3	23	3	0	3	8	3	11	23	3	26		
22	7	29	3	0	3	10	5	15	25	7	32		
29	10	39	4	0	4	11	6	17	33	10	43		
34	11	45	4	1	5	13	6	19	38	12	50		
39	13	52	4	1	5	14	6	20	43	14	57		
41	20	61	4	1	5	14	8	22	45	21	66		
47	25	72	4	1	5	15	10	25	51	26	77		
53	36	89	5	1	6	16	11	27	58	37	95		
62	40	102	6	2	8	19	13	32	68	42	110		
70	47	117	6	2	8	20	13	33	76	49	125		
77	55	132	6	2	8	21	14	35	83	57	140		
72	59	131	4	2	6	25	15	40	76	61	137		
78	60	138	3	2	5	25	13	38	81	62	143		
85	66	151	3	2	5	24	13	37	88	68	156		
83	67	150	3	3	6	26	15	41	86	70	156		
85	70	155	3	2	5	27	17	44	88	72	160		
86	71	157	3	2	5	29	18	47	89	73	162		
88	72	160	3	2	5	30	18	48	91	74	165		
84	75	159	3	3	6	33	20	53	87	78	165		
86	69	155	2	3	5	37	19	56	88	72	160		
83	72	155	1	2	3	34	18	52	84	74	158		
80	68	148	1	2	3	35	23	58	81	70	151		
72	63	135	1	2	3	36	22	58	73	65	138		
71	63	134	1	2	3	30	23	53	72	65	137		
91	64	155	1	2	3	30	23	53	92	66	158		
94	61	155	2	2	4	31	22	53	96	63	159		
96	79	175	2	1	3	29	21	50	98	80	178		
91	78	169	2	1	3	27	19	46	93	79	172		
88	85	173	2	3	5	26	19	45	90	88	178		
173	171	344	14	7	21	88	81	169	187	178	365		
171	165	336	17	9	26	84	82	166	188	174	362		
174	161	335	18	10	28	80	85	165	192	171	363		
185	158	343	17	11	28	83	78	161	202	169	371		
185	153	338	16	12	28	72	80	152	201	165	366		
186	147	333	16	13	29	72	79	151	202	160	362		
192	150	342	15	14	29	76	76	152	207	164	371		
200	157	357	14	14	28	73	76	149	214	171	385		
211	145	356	17	13	30	77	67	144	228	158	386		
221	129	350	22	12	34	76	62	138	243	141	384		
222	133	355	21	15	36	79	61	140	243	148	391		
236	138	374	18	14	32	80	64	144	254	152	406		
244	137	381	18	14	32	74	68	142	262	151	413		
240	141	381	15	14	29	76	65	141	255	155	410		
229	142	371	16	15	31	78	58	136	245	157	402		
205	149	354	16	14	30	73	63	136	221	163	384		
198	147	345	17	15	32	75	70	145	215	162	377		
195	146	341	16	15	31	81	68	149	211	161	372		
194	139	333	17	14	31	79	69	148	211	153	364		
187	133	320	16	13	29	81	68	149	203	146	349		
177	129	306	11	12	23	73	67	140	188	141	329		
169	130	299	6	12	18	69	64	133	175	142	317		
173	135	308	7	9	16	64	68	132	180	144	324		
150	125	275	6	9	15	64	67	131	156	134	290		
149	120	269	9	9	18	69	63	132	158	129	287		

Project No: 6589.34
 Project: 2442-2454 Bloor St W
 Study Location: Fiesta Farms (Christie St / Essex St)
 Municipality: Toronto
 Study Date: Friday, September 28, 2018
 Study Time: 7:30-10:30 am, 4-7 pm

Pedestrian Door Counts (Grocery Store only, exclude Garden Centre)

Period Ending	Inbound			Outbound			2-Way Totals	Hourly Totals
	Pedestrians	Cyclists	Total	Pedestrians	Cyclists	Total		
7:35	1	0	1	0	0	0	1	
7:40	2	0	2	0	0	0	2	
7:45	0	0	0	0	0	0	0	
7:50	2	0	2	0	0	0	2	
7:55	1	0	1	0	0	0	1	
8:00	1	0	1	0	0	0	1	
8:05	6	0	6	1	0	1	7	
8:10	3	0	3	1	0	1	4	
8:15	5	1	6	0	0	0	5	
8:20	2	1	3	0	0	0	2	
8:25	10	0	10	3	0	3	13	
8:30	4	1	5	0	0	0	4	42
8:35	4	1	5	8	1	9	12	53
8:40	11	0	11	0	0	0	11	62
8:45	10	0	10	4	0	4	14	76
8:50	11	1	12	3	0	3	14	88
8:55	13	0	13	7	0	7	20	107
9:00	15	0	15	6	0	6	21	127
9:05	8	0	8	9	0	9	17	137
9:10	8	0	8	8	0	8	16	149
9:15	9	0	9	3	0	3	12	156
9:20	6	0	6	3	0	3	9	163
9:25	17	0	17	7	0	7	24	174
9:30	6	0	6	2	0	2	8	178
9:35	10	0	10	5	1	6	15	181
9:40	8	0	8	8	0	8	16	186
9:45	9	1	10	4	0	4	13	185
9:50	10	1	11	6	0	6	16	187
9:55	10	0	10	4	0	4	14	181
10:00	3	0	3	6	0	6	9	169
10:05	8	0	8	5	1	6	13	165
10:10	9	0	9	5	0	5	14	163
10:15	9	0	9	7	0	7	16	167
10:20	10	0	10	4	0	4	14	172
10:25	8	0	8	9	0	9	17	165
10:30	14	0	14	7	0	7	21	178
Total	263	7	270	135	3	138	398	
Peak Hour 8:50-9:50	119	2	121	68	1	69	187	
Person Trip Gen			4.28			2.44	6.61	
16:05	22	1	23	10	2	12	32	
16:10	17	0	17	5	0	5	22	
16:15	20	2	22	8	0	8	28	
16:20	18	0	18	14	0	14	32	
16:25	15	2	17	8	0	8	23	
16:30	15	1	16	12	0	12	27	
16:35	17	0	17	13	3	16	30	
16:40	26	1	27	11	2	13	37	
16:45	15	0	15	11	1	12	26	
16:50	20	0	20	8	1	9	28	
16:55	13	2	15	11	2	13	24	
17:00	20	0	20	15	1	16	35	344
17:05	27	2	29	22	0	22	49	361
17:10	17	1	18	12	0	12	29	368
17:15	20	0	20	5	0	5	25	365
17:20	26	0	26	6	0	6	32	365
17:25	21	1	22	10	0	10	31	373
17:30	16	5	21	10	0	10	26	372
17:35	16	1	17	15	0	15	31	373
17:40	15	5	20	17	0	17	32	368
17:45	15	4	19	20	2	22	35	377
17:50	30	3	33	5	2	7	35	384
17:55	13	2	15	7	5	12	20	380
18:00	6	1	7	13	0	13	19	364
18:05	16	1	17	8	3	11	24	339
18:10	18	0	18	9	0	9	27	337
18:15	19	1	20	11	0	11	30	342
18:20	15	5	20	15	1	16	30	340
18:25	12	3	15	6	0	6	18	327
18:30	15	2	17	10	3	13	25	326
18:35	9	2	11	10	0	10	19	314
18:40	14	0	14	9	0	9	23	305
18:45	2	1	3	5	0	5	7	277
18:50	10	3	13	6	0	6	16	258
18:55	18	0	18	4	2	6	22	260
19:00	9	0	9	11	2	13	20	261
Total	597	52	649	372	32	404	969	
Peak Hour 16:50-17:50	236	24	260	148	7	155	384	
Person Trip Gen			9.19			5.48	13.57	

Note:
 Site GFA 2830 sqm <- measured from Google Earth building footprint

Project No: 6589.34
 Project: 2442-2454 Bloor St W
 Study Location: Fiesta Farms (Christie St / Essex St)
 Municipality: Toronto
 Study Date: Friday, September 28, 2018
 Study Time: 7:30-10:30 am, 4-7 pm

Site Traffic (Grocery Store only, exclude Garden Centre)

Period Ending	East Driveway				Centre Driveway				West Driveway				Christie St Parking		Site Total			
	Left In	Right In	Left Out	Right Out	Left In	Right In	Left Out	Right Out	Left In	Right In	Left Out	Right Out	In	Out	In	Out	2-Way	Hourly
7:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	
7:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	4	
8:05	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
8:10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:20	1	0	0	2	0	0	0	1	0	0	0	0	0	0	1	3	4	
8:25	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:35	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	2	3	15
8:40	4	0	1	0	2	0	0	0	0	0	0	0	0	0	6	1	7	22
8:45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	23
8:50	2	0	0	1	0	0	1	0	1	0	0	0	0	0	3	2	5	28
8:55	2	0	0	0	2	0	0	2	0	0	0	0	0	0	4	2	6	34
9:00	2	0	1	1	0	0	0	2	0	0	0	0	0	0	2	4	6	36
9:05	2	0	0	2	1	0	0	1	0	0	0	0	0	0	3	3	6	41
9:10	1	0	0	3	0	0	0	2	0	0	0	0	0	0	1	5	6	46
9:15	2	0	0	0	0	2	1	1	0	0	0	0	0	0	4	2	6	52
9:20	1	0	0	0	1	1	1	0	0	0	0	0	0	0	3	1	4	52
9:25	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	3	6	57
9:30	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3	60
9:35	4	0	0	0	1	0	0	2	0	0	0	0	0	0	5	2	7	64
9:40	1	0	0	1	0	1	0	2	0	0	0	0	0	0	2	3	5	62
9:45	2	0	1	0	3	0	0	1	0	0	0	0	0	0	5	2	7	67
9:50	3	0	0	0	1	0	0	1	0	0	0	0	0	0	4	1	5	67
9:55	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	3	64
10:00	3	0	0	2	2	0	0	2	0	0	0	0	0	0	5	4	9	67
10:05	2	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	3	64
10:10	3	0	1	1	2	0	1	2	0	0	0	0	1	0	6	5	11	69
10:15	2	0	0	0	6	0	0	0	0	0	0	0	0	0	8	0	8	71
10:20	3	0	0	3	0	0	0	1	0	0	0	0	0	0	3	4	7	74
10:25	2	0	0	1	2	0	1	1	0	0	0	0	0	1	4	4	8	76
10:30	3	0	0	1	0	1	0	0	0	0	0	0	0	0	4	1	5	78
Total	54	0	4	26	30	6	5	22	1	0	0	0	1	1	92	58	150	
Ped Peak 8:50-9:50	23	0	2	13	9	4	2	14	0	0	0	0	0	0	36	31	67	
Site Peak 9:30-10:30	29	0	2	10	19	2	2	12	0	0	0	0	1	1	51	27	78	
Trip Gen															1.80	0.95	2.76	
16:05	5	0	3	0	3	0	0	0	0	0	0	0	0	0	8	3	11	
16:10	1	0	0	3	1	0	0	0	0	0	0	0	0	0	2	3	5	
16:15	2	0	0	2	1	0	0	1	0	0	0	0	0	0	3	3	6	
16:20	1	0	0	4	1	0	2	4	0	0	0	0	0	0	2	10	12	
16:25	2	0	0	0	2	1	3	4	0	0	0	0	0	0	5	7	12	
16:30	3	0	1	2	3	0	0	1	0	0	0	0	0	0	6	4	10	
16:35	2	0	0	1	3	0	1	2	1	0	0	0	0	0	6	4	10	
16:40	2	1	1	1	4	0	1	2	0	0	0	0	0	0	7	5	12	
16:45	2	0	2	2	2	0	0	2	0	0	0	1	0	0	4	7	11	
16:50	3	0	0	3	4	0	2	2	0	0	0	0	0	0	7	7	14	
16:55	4	0	1	2	4	0	2	5	0	0	0	0	0	0	8	10	18	
17:00	1	0	1	4	0	1	0	5	0	0	0	0	0	0	2	10	12	133
17:05	5	1	2	2	0	0	1	2	0	0	0	0	0	0	6	7	13	135
17:10	3	0	1	5	1	1	2	3	0	0	0	0	0	0	5	11	16	146
17:15	6	0	2	0	2	0	0	0	0	0	0	0	0	0	8	2	10	150
17:20	3	0	1	2	6	1	0	0	0	0	0	0	0	0	10	3	13	151
17:25	2	0	2	2	4	0	4	1	0	0	0	0	0	0	6	9	15	154
17:30	2	0	2	1	0	0	2	0	0	0	0	0	0	0	2	5	7	151
17:35	2	0	0	4	2	0	0	1	0	0	0	0	0	0	4	5	9	150
17:40	3	0	0	0	0	0	1	5	0	0	0	0	0	0	3	6	9	147
17:45	1	0	0	1	3	0	0	2	0	0	0	0	0	0	4	3	7	143
17:50	3	1	2	1	4	0	0	1	0	0	0	0	0	0	8	4	12	141
17:55	2	0	2	3	1	0	1	4	0	0	0	0	0	0	3	10	13	136
18:00	1	0	0	5	1	0	1	0	0	0	0	0	0	0	2	6	8	132
18:05	6	0	1	5	1	0	1	2	0	0	0	0	0	0	7	9	16	135
18:10	5	0	0	2	1	0	0	1	0	0	0	0	0	0	6	3	9	128
18:15	2	0	0	0	2	0	0	2	0	0	0	0	0	0	4	2	6	124
18:20	6	0	0	1	2	0	0	0	0	0	0	0	0	0	8	1	9	120
18:25	3	0	0	2	2	0	1	4	0	0	0	0	0	0	5	7	12	117
18:30	3	0	0	2	1	0	0	0	0	0	0	0	0	0	4	2	6	116
18:35	1	0	0	1	3	0	0	3	0	0	0	0	0	0	4	4	8	115
18:40	1	0	1	2	3	0	0	3	0	0	0	0	0	0	4	6	10	116
18:45	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	4	4	113
18:50	2	0	2	0	4	1	0	3	0	0	0	0	0	0	7	5	12	113
18:55	3	0	1	5	1	1	0	0	0	0	0	0	0	0	5	6	11	111
19:00	3	0	0	0	1	1	1	1	0	0	0	0	0	0	5	2	7	110
Total	96	3	30	71	73	7	26	67	1	0	0	1	0	0	180	195	375	
Ped Peak 16:25-17:25	36	2	14	26	33	3	13	25	1	0	0	1	0	0	75	79	154	
Site Peak 16:30-17:30	35	2	15	25	30	3	15	24	1	0	0	1	0	0	71	80	151	
Trip Gen															2.51	2.83	5.34	

Note:
 Site GFA 2830 sqm <- measured from Google Earth building footprint

Appendix F: Existing Turning Movement Counts



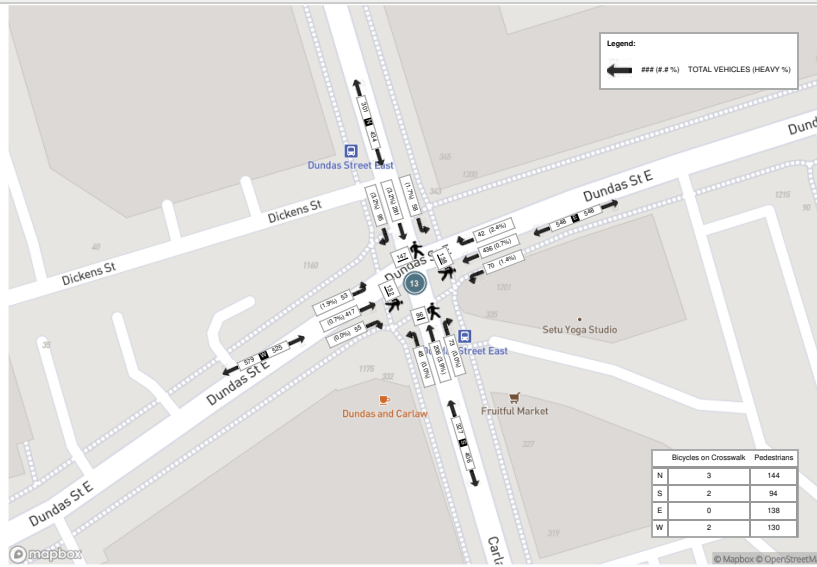


Turning Movement Count (13 . CARLAW AVE & DUNDAS ST E)																										
Start Time	N Approach CARLAW AVE						E Approach DUNDAS ST E						S Approach CARLAW AVE						W Approach DUNDAS ST E						Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total		
11:00:00	25	69	10	0	22	104	11	103	17	0	32	131	17	44	15	0	13	76	10	75	13	0	56	98	409	
11:15:00	22	72	12	0	17	106	18	100	17	0	29	135	16	52	14	0	27	82	7	91	11	0	22	109	432	
11:30:00	19	66	11	0	18	96	8	109	15	0	21	132	16	41	10	0	12	67	7	89	7	0	21	103	398	
11:45:00	16	68	12	0	24	96	10	107	28	0	21	145	21	49	11	0	17	81	12	81	8	0	22	101	423	1662
12:00:00	22	71	15	0	38	108	8	103	23	0	32	134	14	38	12	0	26	64	8	100	10	0	42	118	424	1677
12:15:00	13	75	9	0	24	97	6	108	20	0	29	134	30	59	12	0	21	101	8	75	12	0	13	95	427	1672
12:30:00	21	57	14	0	18	92	13	130	23	0	28	166	21	45	11	0	19	77	8	102	11	0	22	121	456	1730
12:45:00	13	62	21	0	30	96	15	87	23	0	38	125	21	53	12	0	40	86	19	95	14	0	36	128	435	1742
13:00:00	25	79	16	0	38	120	8	120	21	0	37	149	13	47	11	0	24	71	12	86	17	0	40	115	455	1773
13:15:00	30	70	10	0	45	110	9	106	18	0	29	133	18	66	10	0	25	94	12	114	14	0	38	140	477	1823
13:30:00	16	62	19	0	35	97	11	107	17	0	39	135	26	50	19	0	23	95	15	102	5	0	27	122	449	1816
13:45:00	24	70	13	0	29	107	14	103	14	0	33	131	16	43	8	1	24	68	16	115	17	0	27	148	454	1835
14:00:00	15	81	12	0	41	108	6	103	25	0	51	134	19	47	13	0	28	79	11	91	12	0	24	114	435	1815
14:15:00	18	71	11	0	27	100	10	105	14	0	41	129	20	57	24	0	30	101	7	84	14	0	32	105	435	1773
14:30:00	22	66	15	0	18	103	17	103	13	0	37	133	22	54	13	0	22	89	17	90	14	0	19	121	446	1770
14:45:00	24	52	19	0	27	95	11	125	15	0	36	151	12	41	11	0	23	64	13	111	8	0	26	132	442	1758
Grand Total	325	1051	219	0	451	1635	175	1719	303	0	533	2197	302	786	206	1	374	1295	182	1501	187	0	467	1870	6997	-
Approach%	19.9%	66.7%	13.4%	0%	-	-	8%	78.2%	13.8%	0%	-	-	23.3%	60.7%	15.9%	0.1%	-	-	9.7%	80.3%	10%	0%	-	-	-	-
Totals %	4.6%	15.6%	3.1%	0%	23.4%	2.5%	24.6%	4.3%	0%	-	31.4%	4.3%	11.2%	2.9%	0%	-	18.5%	2.6%	21.5%	2.7%	0%	26.7%	-	-	-	
Heavy	8	39	2	0	-	1	14	4	0	-	4	37	2	0	-	-	-	1	12	3	0	-	-	-	-	
Heavy %	2.5%	3.6%	0.9%	0%	-	0.6%	0.8%	1.3%	0%	-	1.3%	4.7%	1%	0%	-	-	0.5%	0.8%	1.6%	0%	-	-	-	-		
Bicycles	10	23	2	0	-	8	123	2	0	-	8	21	2	0	-	-	7	91	2	0	-	-	-	-		
Bicycle %	3.1%	2.1%	0.9%	0%	-	4.6%	7.2%	0.7%	0%	-	2.6%	2.7%	1%	0%	-	-	3.8%	6.1%	1.1%	0%	-	-	-	-		



Peak Hour: 01:00 PM - 02:00 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach CARLAW AVE						E Approach DUNDAS ST E						S Approach CARLAW AVE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
13:00:00	25	79	16	0	38	120	8	120	21	0	29	149	13	47	11	0	24	71	12	86	17	0	40	115	455
13:15:00	30	70	10	0	45	110	9	106	18	0	37	133	18	66	10	0	25	94	12	114	14	0	38	140	477
13:30:00	16	62	19	0	35	97	11	107	17	0	39	135	26	50	19	0	23	95	15	102	5	0	27	122	449
13:45:00	24	70	13	0	29	107	14	103	14	0	33	131	16	43	8	1	24	68	16	115	17	0	27	148	454
Grand Total	95	281	58	0	147	434	42	436	70	0	138	548	73	206	48	1	96	328	55	417	53	0	132	525	1835
Approach%	21.9%	64.7%	13.4%	0%	-	-	7.7%	79.6%	12.8%	0%	-	-	22.3%	62.8%	14.6%	0.3%	-	-	10.5%	79.4%	10.1%	0%	-	-	-
Totals %	5.2%	15.3%	3.2%	0%	23.7%	2.3%	23.8%	3.8%	0%	-	29.9%	4%	11.2%	2.6%	0.1%	-	17.9%	3%	22.7%	2.9%	0%	-	-	28.6%	-
PHF	0.79	0.89	0.76	0	0.9	0.75	0.91	0.83	0	0.92	0.7	0.78	0.63	0.25	0.86	0.86	0.91	0.78	0	0.89	-	-	-	-	-
Heavy	3	9	1	0	-	13	1	3	1	0	-	5	0	8	0	0	-	8	0	3	1	0	-	4	-
Heavy %	3.2%	3.2%	1.7%	0%	3%	2.4%	0.7%	1.4%	0%	-	0.9%	0%	3.9%	0%	0%	-	2.4%	0%	0.7%	1.9%	0%	-	-	0.8%	-
Lights	92	272	57	0	421	41	433	69	0	-	543	73	198	48	1	320	55	414	52	0	-	-	-	521	-
Lights %	96.8%	96.8%	98.3%	0%	97%	97.6%	99.3%	98.6%	0%	-	99.1%	100%	96.1%	100%	100%	97.6%	100%	99.3%	98.1%	0%	-	-	-	99.2%	-
Single-Unit Trucks	2	1	1	0	4	1	3	1	0	-	5	0	1	0	0	-	1	0	2	1	0	-	-	3	-
Single-Unit Trucks %	2.1%	0.4%	1.7%	0%	0.9%	2.4%	0.7%	1.4%	0%	-	0.9%	0%	0.5%	0%	0%	-	0.3%	0%	0.5%	1.9%	0%	-	-	0.6%	-
Buses	1	7	0	0	8	0	0	0	0	-	0	0	7	0	0	-	7	0	1	0	0	-	-	1	-
Buses %	1.1%	2.5%	0%	0%	1.8%	0%	0%	0%	0%	-	0%	0%	3.4%	0%	0%	-	2.1%	0%	0.2%	0%	0%	-	-	0.2%	-
Articulated Trucks	0	1	0	0	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-	0	-
Articulated Trucks %	0%	0.4%	0%	0%	0.2%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0%	-
Pedestrians	-	-	-	-	144	-	-	-	-	-	138	-	-	-	-	-	94	-	-	-	-	-	130	-	-
Pedestrians %	-	-	-	-	28.1%	-	-	-	-	-	26.9%	-	-	-	-	-	18.3%	-	-	-	-	-	25.3%	-	-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-
Bicycles on Crosswalk %	-	-	-	-	0.6%	-	-	-	-	-	0%	-	-	-	-	-	0.4%	-	-	-	-	-	0.4%	-	-
Bicycles on Road	4	6	0	0	0	-	2	33	0	0	0	-	2	5	1	0	0	-	2	23	0	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 01:00 PM - 02:00 PM Weather: Scattered Clouds (3.45 °C)

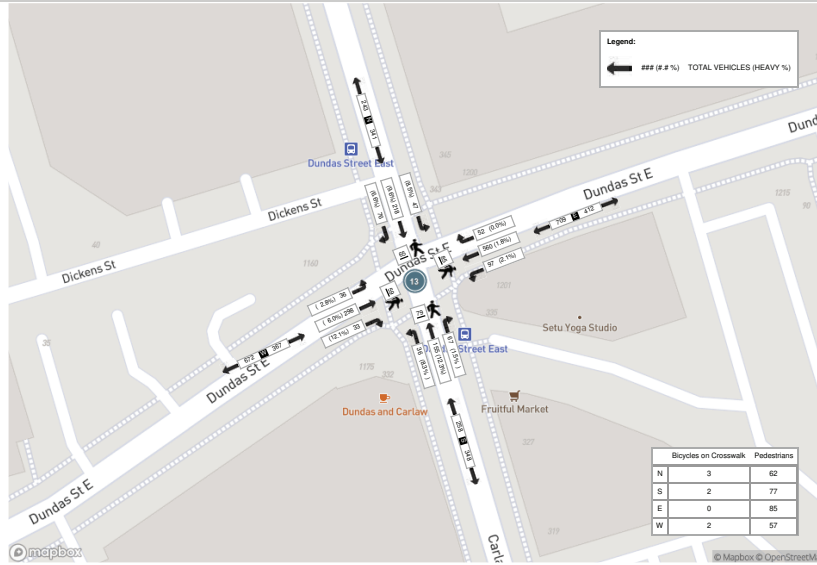


Turning Movement Count (13 . CARLAW AVE & DUNDAS ST E)																										
Start Time	N Approach CARLAW AVE						E Approach DUNDAS ST E						S Approach CARLAW AVE						W Approach DUNDAS ST E						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S	Approach Total	Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W	Approach Total		
07:30:00	12	37	4	0	6	53	11	128	16	0	12	155	12	18	14	0	6	44	6	33	3	0	7	42	294	
07:45:00	23	43	6	0	9	72	16	135	19	0	17	170	8	28	9	0	11	45	5	61	3	0	10	69	356	
08:00:00	22	57	9	0	21	88	21	132	19	0	18	172	12	42	8	0	16	62	2	67	7	0	18	76	398	
08:15:00	20	44	12	0	11	76	16	143	21	0	21	180	14	39	7	0	16	60	3	81	7	0	12	91	407	1455
08:30:00	15	52	12	0	22	79	10	139	33	0	21	182	14	32	11	0	33	57	4	76	8	0	16	88	406	1567
08:45:00	21	54	9	0	19	84	17	141	23	0	30	181	29	42	8	0	12	79	12	69	10	0	15	91	435	1646
09:00:00	20	68	14	0	13	102	9	137	20	0	13	166	10	42	10	0	18	62	14	72	11	0	16	97	427	1675
09:15:00	20	42	7	0	10	69	14	133	28	0	23	175	14	44	11	0	7	69	6	52	4	0	6	62	375	1643
BREAK																										
15:00:00	19	40	13	0	21	72	12	92	12	0	26	116	22	62	9	0	23	93	18	129	11	0	16	158	439	
15:15:00	11	57	22	0	21	90	14	81	13	0	28	108	22	59	6	0	19	87	6	148	14	0	20	168	453	
16:30:00	13	55	15	0	12	83	12	84	16	0	20	112	22	62	11	0	16	95	9	147	10	0	24	166	456	
16:45:00	20	70	14	0	29	104	13	82	13	0	28	108	29	63	13	0	20	105	9	137	12	0	34	158	475	1823
17:00:00	21	57	15	0	25	93	14	88	15	0	29	117	21	58	7	0	22	86	12	141	20	0	24	173	469	1853
17:15:00	13	44	13	0	29	70	12	121	7	0	56	140	21	69	4	0	26	94	8	142	19	0	25	169	473	1873
17:30:00	20	71	20	0	33	111	12	99	15	0	27	126	27	62	10	0	21	99	3	146	22	0	28	171	507	1924
17:45:00	22	57	23	0	36	102	14	96	10	0	44	120	18	61	9	0	28	88	11	125	22	0	37	158	468	1917
Grand Total	292	848	208	0	317	1348	217	1831	280	0	413	2328	295	783	147	0	294	1225	128	1626	183	0	308	1937	6838	-
Approach%	21.7%	62.9%	15.4%	0%	-	-	9.3%	78.7%	12%	0%	-	-	24.1%	63.9%	12%	0%	-	-	6.6%	83.9%	9.4%	0%	-	-	-	-
Totals %	4.3%	12.4%	3%	0%	-	19.7%	3.2%	26.8%	4.1%	0%	-	34%	4.3%	11.5%	2.1%	0%	-	17.9%	1.9%	23.8%	2.7%	0%	-	28.3%	-	-
Heavy	15	66	8	0	-	-	4	33	6	0	-	-	3	68	4	0	-	-	7	38	3	0	-	-	-	-
Heavy %	5.1%	7.8%	3.8%	0%	-	-	1.8%	1.8%	2.1%	0%	-	-	1%	8.7%	2.7%	0%	-	-	5.5%	2.3%	1.6%	0%	-	-	-	-
Bicycles	15	11	1	0	-	-	6	148	1	0	-	-	11	12	2	0	-	-	2	106	5	0	-	-	-	-
Bicycle %	5.1%	1.3%	0.5%	0%	-	-	2.8%	8.1%	0.4%	0%	-	-	3.7%	1.5%	1.4%	0%	-	-	1.6%	6.5%	2.7%	0%	-	-	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach CARLAW AVE					E Approach DUNDAS ST E					S Approach CARLAW AVE					W Approach DUNDAS ST E					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
08:15:00	20	44	12	0	11	76	16	143	21	0	21	180	14	39	7	0	16	60	3	81	7	0	12	91	407
08:30:00	15	52	12	0	22	79	10	139	33	0	21	182	14	32	11	0	33	57	4	76	8	0	16	88	406
08:45:00	21	54	9	0	19	84	17	141	23	0	30	181	29	42	8	0	12	79	12	69	10	0	15	91	435
09:00:00	20	68	14	0	13	102	9	137	20	0	13	166	10	42	10	0	18	62	14	72	11	0	16	97	427
Grand Total	76	218	47	0	65	341	52	560	97	0	85	709	67	155	36	0	79	258	33	298	36	0	59	367	1675
Approach%	22.3%	63.9%	13.8%	0%	-	-	7.3%	79%	13.7%	0%	-	-	26%	60.1%	14%	0%	-	15.4%	9%	81.2%	9.8%	0%	-	-	-
Totals %	4.5%	13%	2.8%	0%	-	20.4%	3.1%	33.4%	5.8%	0%	-	42.3%	4%	9.3%	2.1%	0%	-	15.4%	2%	17.6%	2.1%	0%	-	21.9%	-
PHF	0.9	0.8	0.84	0	-	0.84	0.76	0.98	0.73	0	-	0.97	0.58	0.92	0.82	0	-	0.82	0.59	0.92	0.82	0	-	0.95	-
Heavy	5	21	4	0	-	30	0	10	2	0	-	12	1	19	3	0	-	23	4	18	1	0	-	23	-
Heavy %	6.6%	9.6%	8.5%	0%	-	8.8%	0%	1.8%	2.1%	0%	-	1.7%	1.5%	12.3%	8.3%	0%	-	8.9%	12.1%	6%	2.8%	0%	-	6.3%	-
Lights	71	197	43	0	-	311	52	550	95	0	-	697	66	136	33	0	-	235	29	280	35	0	-	344	-
Lights %	93.4%	90.4%	91.5%	0%	-	91.2%	100%	98.2%	97.9%	0%	-	98.3%	98.5%	87.7%	91.7%	0%	-	91.1%	87.9%	94%	97.2%	0%	-	93.7%	-
Single-Unit Trucks	3	5	3	0	-	11	0	2	0	0	-	2	0	4	1	0	-	5	3	8	1	0	-	12	-
Single-Unit Trucks %	3.9%	2.3%	6.4%	0%	-	3.2%	0%	0.4%	0%	0%	-	0.3%	0%	2.6%	2.8%	0%	-	1.9%	9.1%	2.7%	2.8%	0%	-	3.3%	-
Buses	2	15	1	0	-	18	0	8	2	0	-	10	1	15	2	0	-	18	1	10	0	0	-	11	-
Buses %	2.6%	6.9%	2.1%	0%	-	5.3%	0%	1.4%	2.1%	0%	-	1.4%	1.5%	9.7%	5.6%	0%	-	7%	3%	3.4%	0%	0%	-	3%	-
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	-
Articulated Trucks %	0%	0.5%	0%	0%	-	0.3%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	-	62	-	-	-	-	-	85	-	-	-	-	-	77	-	-	-	-	-	57	-	-
Pedestrians %	-	-	-	-	21.5%	-	-	-	-	-	29.5%	-	-	-	-	-	26.7%	-	-	-	-	-	19.8%	-	-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-
Bicycles on Crosswalk %	-	-	-	-	1%	-	-	-	-	-	0%	-	-	-	-	-	0.7%	-	-	-	-	-	0.7%	-	-
Bicycles on Road	5	3	0	0	0	-	1	64	0	0	0	-	2	0	0	0	0	-	0	11	1	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)																									
Start Time	N Approach CARLAW AVE						E Approach DUNDAS ST E						S Approach CARLAW AVE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	20	70	14	0	29	104	13	82	13	0	29	108	29	63	13	0	20	105	9	137	12	0	34	158	475
17:00:00	21	57	15	0	25	93	14	88	15	0	29	117	21	58	7	0	22	86	12	141	20	0	24	173	469
17:15:00	13	44	13	0	29	70	12	121	7	0	56	140	21	69	4	0	26	94	8	142	19	0	25	169	473
17:30:00	20	71	20	0	33	111	12	99	15	0	27	126	27	62	10	0	21	99	3	146	22	0	28	171	507
Grand Total	74	242	62	0	116	378	51	390	50	0	140	491	98	252	34	0	89	384	32	566	73	0	111	671	1924
Approach%	19.6%	64%	16.4%	0%	-	-	10.4%	79.4%	10.2%	0%	-	-	25.5%	65.6%	8.9%	0%	-	4.8%	84.4%	10.9%	0%	-	-	-	-
Totals %	3.8%	12.6%	3.2%	0%	-	19.6%	2.7%	20.3%	2.6%	0%	-	25.5%	5.1%	13.1%	1.8%	0%	-	20%	1.7%	29.4%	3.8%	0%	-	34.9%	-
PHF	0.88	0.85	0.78	0	-	0.85	0.85	0.81	0.83	0	-	0.88	0.84	0.91	0.65	0	-	0.91	0.67	0.97	0.83	0	-	0.97	-
Heavy	3	14	3	0	-	20	0	3	0	0	-	3	1	17	0	0	-	18	1	7	0	0	-	8	-
Heavy %	4.1%	5.8%	4.8%	0%	-	5.3%	0%	0.8%	0%	0%	-	0.6%	1%	6.7%	0%	0%	-	4.7%	3.1%	1.2%	0%	0%	-	1.2%	-
Lights	71	229	59	0	-	358	51	387	50	0	-	488	97	225	34	0	-	366	31	559	73	0	-	663	-
Lights %	95.9%	94.2%	95.2%	0%	-	94.7%	100%	99.2%	100%	0%	-	99.4%	99%	93.3%	100%	0%	-	95.3%	96.9%	98.8%	100%	0%	-	98.8%	-
Single-Unit Trucks	2	3	3	0	-	8	0	2	0	0	-	2	0	8	0	0	-	8	1	6	0	0	-	7	-
Single-Unit Trucks %	2.7%	1.2%	4.8%	0%	-	2.1%	0%	0.5%	0%	0%	-	0.4%	0%	3.2%	0%	0%	-	2.1%	3.1%	1.1%	0%	0%	-	1%	-
Buses	1	10	0	0	-	11	0	1	0	0	-	1	1	9	0	0	-	10	0	1	0	0	-	1	-
Buses %	1.4%	4.1%	0%	0%	-	2.9%	0%	0.3%	0%	0%	-	0.2%	1%	3.6%	0%	0%	-	2.6%	0%	0.2%	0%	0%	-	0.1%	-
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	-
Articulated Trucks %	0%	0.4%	0%	0%	-	0.3%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	-	115	-	-	-	-	-	135	-	-	-	-	-	89	-	-	-	-	-	109	-	-
Pedestrians %	-	-	-	-	25.2%	-	-	-	-	-	29.6%	-	-	-	-	-	19.5%	-	-	-	-	-	23.9%	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	2	-	-
Bicycles on Crosswalk %	-	-	-	-	0.2%	-	-	-	-	-	1.1%	-	-	-	-	-	0%	-	-	-	-	-	0.4%	-	-
Bicycles on Road	2	6	0	0	0	-	2	19	0	0	0	-	6	6	2	0	0	-	2	52	3	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (12 . CARLAW AVE & GERRARD ST E)																									
Start Time	N Approach CARLAW AVE					E Approach GERRARD ST E					S Approach CARLAW AVE					W Approach GERRARD ST E					Int. Total (15 min)	Int. Total (1 hr)			
	Right N/W	Thru N/S	Left N/E	U/Turn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	U/Turn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	U/Turn S/S	Peds S	Approach Total	Right W/S	Thru W/E			Left W/N	U/Turn W/W	Peds W
11:00:00	14	65	24	0	42	103	26	58	20	0	20	104	14	45	8	0	20	67	12	85	26	0	27	123	397
11:15:00	24	79	29	0	46	132	26	75	12	0	23	113	9	60	7	0	20	76	11	66	12	0	23	89	410
11:30:00	28	70	32	0	55	130	34	92	19	0	23	145	14	36	16	0	22	66	4	76	13	0	31	93	434
11:45:00	15	73	24	0	48	112	23	75	14	0	18	112	12	40	14	0	23	66	14	64	14	0	28	92	382
12:00:00	17	72	23	0	36	112	36	89	17	0	20	142	10	43	6	0	27	59	11	78	17	0	16	106	419
12:15:00	22	74	28	0	68	124	37	93	9	0	24	139	19	54	7	0	22	80	6	74	25	0	15	105	448
12:30:00	20	65	23	0	46	108	34	73	11	0	21	118	10	46	10	0	21	66	16	70	12	0	17	98	390
12:45:00	19	82	28	0	57	129	41	101	10	0	25	152	18	52	14	0	36	84	14	70	11	0	25	95	460
13:00:00	29	67	17	0	57	113	28	99	27	0	26	154	16	41	10	0	32	67	18	70	23	0	25	111	445
13:15:00	21	77	34	0	29	132	38	76	17	0	38	131	19	50	9	0	34	78	12	81	15	0	32	108	449
13:30:00	16	73	31	0	26	120	43	79	10	0	32	132	15	44	12	0	35	71	21	75	14	0	21	110	433
13:45:00	23	80	38	0	72	141	24	80	18	0	26	122	17	45	6	0	30	68	16	59	16	0	34	91	422
14:00:00	22	76	21	0	27	119	47	91	22	0	54	160	19	36	12	0	49	67	12	76	17	0	27	105	451
14:15:00	17	76	25	0	55	118	35	77	23	0	35	135	15	53	13	0	41	81	9	89	15	0	23	113	447
14:30:00	15	72	30	0	65	117	29	98	17	0	25	144	12	58	9	0	38	79	17	101	9	0	20	127	467
14:45:00	14	67	28	0	66	109	36	74	26	0	31	136	13	45	11	0	43	69	5	72	15	0	30	92	406
Grand Total	316	1168	435	0	795	1919	537	1330	272	0	441	2139	232	748	164	0	493	1144	198	1206	254	0	394	1658	6860
Approach%	16.5%	60.9%	22.7%	0%	-	-	25.1%	62.2%	12.7%	0%	-	20.3%	65.4%	14.3%	0%	-	11.9%	72.7%	15.3%	0%	-	-	-	-	-
Totals %	4.6%	17%	6.3%	0%	28%	7.8%	19.4%	4%	0%	31.2%	3.4%	10.9%	2.4%	0%	16.7%	2.9%	17.6%	3.7%	0%	24.2%	-	-	-	-	-
Heavy	4	38	7	0	-	4	39	3	0	-	2	34	2	0	-	3	36	6	0	-	-	-	-	-	-
Heavy %	1.3%	3.3%	1.6%	0%	-	0.7%	2.9%	1.1%	0%	-	0.9%	4.5%	1.2%	0%	-	1.5%	3%	2.4%	0%	-	-	-	-	-	-
Bicycles	8	38	3	0	-	16	50	0	0	-	5	20	3	0	-	8	48	3	0	-	-	-	-	-	-
Bicycle %	2.5%	3.3%	0.7%	0%	-	3%	3.8%	0%	0%	-	2.2%	2.7%	1.8%	0%	-	4%	4%	1.2%	0%	-	-	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

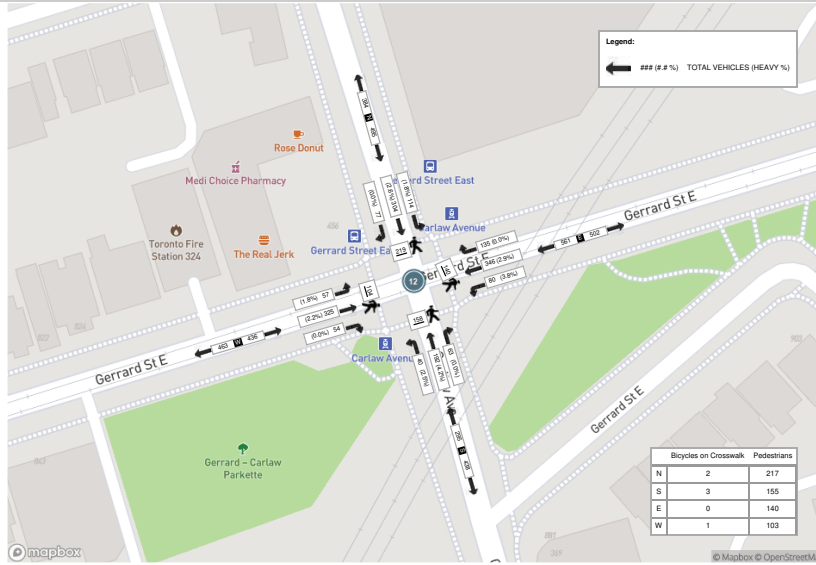
Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach CARLAW AVE					E Approach GERRARD ST E					S Approach CARLAW AVE					W Approach GERRARD ST E					Int. Total (15 min)				
	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru		Left	U/Turn	Peds	Approach Total
13:45:00	23	80	38	0	72	141	24	80	18	0	26	122	17	45	6	0	30	68	16	59	16	0	34	91	422
14:00:00	22	76	21	0	27	119	47	91	22	0	54	160	19	36	12	0	49	67	12	76	17	0	27	105	451
14:15:00	17	76	25	0	55	118	35	77	23	0	35	135	15	53	13	0	41	81	9	89	15	0	23	113	447
14:30:00	15	72	30	0	65	117	29	98	17	0	25	144	12	58	9	0	38	79	17	101	9	0	20	127	467
Grand Total	77	304	114	0	219	495	135	346	80	0	140	561	63	192	40	0	158	295	54	325	57	0	104	436	1787
Approach%	15.6%	61.4%	23%	0%	-	27.7%	24.1%	61.7%	14.3%	0%	-	31.4%	21.4%	65.1%	13.6%	0%	-	16.5%	12.4%	74.9%	13.1%	0%	-	-	-
PHF	0.84	0.95	0.75	0	0	0.88	0.88	0.72	0.88	0.87	0	0.88	0.83	0.83	0.77	0	0	0.91	0.79	0.8	0.84	0	0	0.86	-
Heavy	0	8	2	0	0	10	0	10	3	0	0	13	0	8	1	0	0	9	0	7	1	0	8	0	-
Heavy %	0%	2.6%	1.5%	0%	0%	2%	0%	2.9%	3.8%	0%	0%	2.3%	0%	4.2%	2.5%	0%	0%	3.1%	0%	2.2%	1.8%	0%	1.8%	0%	-
Lights	77	296	112	0	485	135	336	77	0	548	63	184	39	0	286	54	318	56	0	425	57	0	104	436	-
Lights %	100%	97.4%	98.2%	0%	98%	100%	100%	97.1%	96.3%	0%	97.7%	100%	95.8%	97.5%	0%	96.9%	100%	97.8%	98.2%	0%	98.2%	0%	100%	98.2%	-
Single-Unit Trucks	0	1	1	0	2	0	2	0	0	0	0	1	0	1	1	0	0	2	0	0	1	0	1	0	-
Single-Unit Trucks %	0%	0.3%	0.9%	0%	0.4%	0%	0.3%	0%	0%	0%	0%	0.2%	0%	0.5%	2.5%	0%	0%	0.7%	0%	0%	1.8%	0%	0.2%	0%	-
Buses	0	7	1	0	8	0	9	0	0	0	0	9	0	7	0	0	0	7	0	7	0	0	7	0	-
Buses %	0%	2.3%	0.9%	0%	1.6%	0%	2.6%	0%	0%	0%	0%	1.6%	0%	3.6%	0%	0%	0%	2.4%	0%	2.2%	0%	0%	1.6%	0%	-
Articulated Trucks	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	3.8%	0%	0.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	217	-	-	-	-	-	140	-	-	-	-	155	-	-	-	-	-	-	103	-	-
Pedestrians %	-	-	-	-	34.9%	-	-	-	-	-	22.5%	-	-	-	-	25%	-	-	-	-	-	-	16.6%	-	-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-
Bicycles on Crosswalk %	-	-	-	-	0.3%	-	-	-	-	-	0%	-	-	-	-	-	0.5%	-	-	-	-	-	0.2%	-	-
Bicycles on Road	3	6	1	0	0	-	5	17	0	0	0	-	3	6	0	0	0	-	2	12	1	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)



Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (12 . CARLAW AVE & GERRARD ST E)

Turning Movement Count (12 - CARLAW AVE & GERRARD ST E)																										
Start Time	N Approach CARLAW AVE						E Approach GERRARD ST E						S Approach CARLAW AVE						W Approach GERRARD ST E						Int. Total (15 min)	Int. Total (1 hr)
	Right N-W	Thru N-S	Left N-E	U/L N-N	Peds N	Approach Total	Right E-N	Thru E-W	Left E-S	U/L E-E	Peds E	Approach Total	Right S-E	Thru S-W	Left S-S	U/L S-S	Peds S	Approach Total	Right W-S	Thru W-E	Left W-N	U/L W-W	Peds W	Approach Total		
07:30:00	7	37	8	0	15	52	6	97	9	0	6	112	8	19	4	0	7	31	0	27	4	1	5	32	227	
07:45:00	15	53	11	0	16	79	26	95	16	0	14	137	7	25	15	0	10	47	8	33	7	0	11	48	311	
08:00:00	25	69	17	0	17	111	12	91	10	0	12	113	10	47	10	0	4	67	5	41	2	0	13	48	339	
08:15:00	18	55	17	0	13	90	25	109	15	0	19	149	6	53	13	0	22	72	9	40	8	0	19	57	368 1245	
08:30:00	19	58	20	0	76	97	24	105	17	0	45	146	9	46	4	0	25	59	3	62	14	0	25	79	381 1399	
08:45:00	21	87	31	0	62	139	38	119	10	0	29	167	18	40	11	0	28	69	6	56	10	0	29	72	447 1535	
09:00:00	18	79	27	0	27	124	40	101	14	0	17	155	17	35	10	0	10	62	9	48	11	0	13	68	409 1605	
09:15:00	15	46	27	0	28	88	29	88	12	0	21	129	15	28	12	0	14	55	12	55	10	0	12	77	349 1586	
BREAK																										
16:00:00	16	52	30	0	61	98	49	58	17	0	18	124	13	55	14	0	26	82	12	88	28	0	26	128	432	
16:15:00	16	58	31	0	49	105	26	67	14	0	26	117	17	50	13	0	19	80	14	127	22	0	36	163	465	
16:30:00	22	68	26	0	74	116	29	74	9	0	29	112	16	61	10	0	27	87	11	109	29	0	32	149	464	
16:45:00	25	81	36	0	57	142	35	54	16	0	29	105	12	64	8	0	26	84	11	95	13	0	30	119	450 1811	
17:00:00	25	69	25	0	60	119	34	82	10	0	40	126	10	67	11	0	33	88	15	113	19	0	31	147	480 1859	
17:15:00	19	62	26	0	60	107	27	69	7	0	39	103	18	64	12	0	37	94	15	103	12	0	29	130	434 1828	
17:30:00	15	83	29	0	52	127	30	66	12	0	25	108	14	76	15	0	43	105	24	100	13	0	27	137	477 1841	
17:45:00	16	83	31	0	60	130	31	79	17	0	36	127	13	53	16	0	43	82	13	71	17	0	43	101	440 1831	
Grand Total	292	1040	392	0	727	1724	471	1354	205	0	405	2030	203	783	178	0	374	1164	167	1168	219	1	381	1555	6473	
Approach%	16.9%	60.3%	22.7%	0%	-	-	23.2%	66.7%	10.1%	0%	-	-	17.4%	67.3%	15.3%	0%	-	-	10.7%	75.1%	14.1%	0.1%	-	-	-	
Totals %	4.5%	16.1%	6.1%	0%	-	26.6%	7.3%	20.9%	3.2%	0%	-	31.4%	3.1%	12.1%	2.7%	0%	-	18%	2.6%	18%	3.4%	0%	24%	-	-	
Heavy	13	68	6	0	-	-	10	53	9	0	-	-	6	60	8	0	-	-	8	53	4	1	-	-	-	
Heavy %	4.5%	6.5%	1.5%	0%	-	-	2.1%	3.9%	4.4%	0%	-	-	3%	7.7%	4.5%	0%	-	-	4.8%	4.5%	1.8%	100%	-	-	-	
Bicycles	9	35	4	0	-	-	11	39	0	0	-	-	1	16	0	0	-	-	4	27	3	0	-	-	-	
Bicycle %	3.1%	3.4%	1%	0%	-	-	2.3%	2.9%	0%	0%	-	-	0.5%	2%	0%	0%	-	-	2.4%	2.3%	1.4%	0%	-	-	-	

Turning Movement
Count

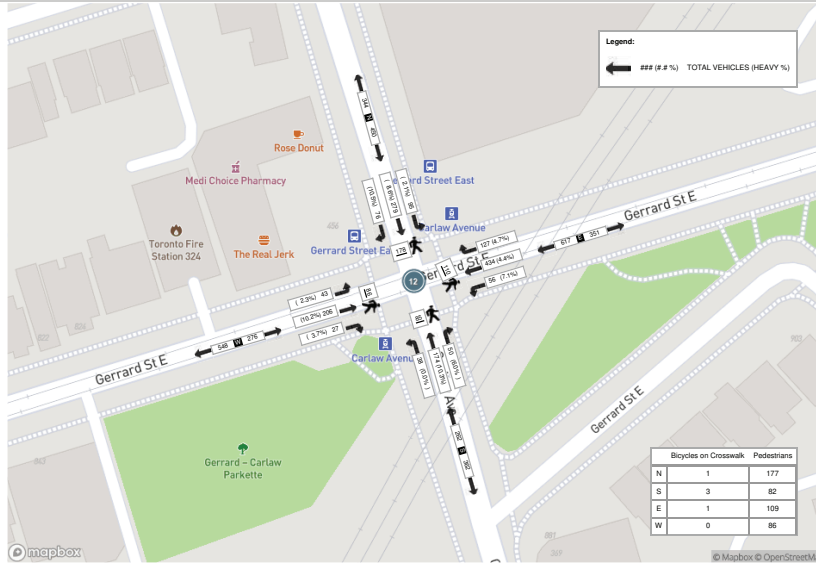
Page 1 of 5

BAC22Y8Z

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																								
Start Time	N Approach CARLAW AVE						E Approach GERRARD ST E						S Approach CARLAW AVE						W Approach GERRARD ST E					
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total
08:15:00	18	55	17	0	13	90	25	109	15	0	19	149	6	53	13	0	22	72	9	40	8	0	19	57
08:30:00	19	58	20	0	76	97	24	105	17	0	45	146	9	46	4	0	25	59	3	62	14	0	25	79
08:45:00	21	87	31	0	62	139	38	119	10	0	29	167	18	40	11	0	28	69	6	56	10	0	29	72
09:00:00	18	79	27	0	27	124	40	101	14	0	17	155	17	35	10	0	10	62	9	48	11	0	13	68
Grand Total	76	279	95	0	178	450	127	434	56	0	110	617	50	174	38	0	85	262	27	206	43	0	86	276
Approach%	16.9%	62%	21.1%	0%	-	-	20.6%	70.3%	9.1%	0%	-	-	19.1%	66.4%	14.5%	0%	-	-	9.8%	74.6%	15.6%	0%	-	-
Totals %	4.7%	17.4%	5.9%	0%	28%	7.9%	27%	3.5%	0%	38.4%	3.1%	10.8%	2.4%	0%	16.3%	1.7%	12.8%	2.7%	0%	17.2%	-	-	-	-
PHF	0.9	0.8	0.77	0	0.81	0.79	0.91	0.82	0	0.92	0.69	0.82	0.73	0	0.91	0.75	0.83	0.77	0	0.87	-	-	-	-
Heavy %	8	24	2	0	34	6	19	4	0	29	3	18	0	0	21	1	21	1	0	23	-	-	-	-
Heavy %	10.5%	8.6%	2.1%	0%	7.6%	4.7%	4.4%	7.1%	0%	4.7%	6%	10.3%	0%	0%	8%	3.7%	10.2%	2.3%	0%	8.3%	-	-	-	-
Lights	68	255	93	0	416	121	415	52	0	588	47	156	38	0	241	26	185	42	0	253	-	-	-	-
Lights %	89.5%	91.4%	97.9%	0%	92.4%	95.3%	95.6%	92.9%	0%	95.3%	94%	89.7%	100%	0%	92%	96.3%	89.8%	97.7%	0%	91.7%	-	-	-	-
Single-Unit Trucks	3	7	2	0	12	3	4	3	0	10	1	5	0	0	6	1	5	0	0	6	-	-	-	-
Single-Unit Trucks %	3.9%	2.5%	2.1%	0%	2.7%	2.4%	0.9%	5.4%	0%	1.6%	2%	2.9%	0%	0%	2.3%	3.7%	2.4%	0%	0%	2.2%	-	-	-	-
Buses	4	17	0	0	21	2	15	0	0	17	2	13	0	0	15	0	16	1	0	17	-	-	-	-
Buses %	5.3%	6.1%	0%	0%	4.7%	1.6%	3.5%	0%	0%	2.8%	4%	7.5%	0%	0%	5.7%	0%	7.8%	2.3%	0%	6.2%	-	-	-	-
Articulated Trucks	1	0	0	0	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Articulated Trucks %	1.3%	0%	0%	0%	0.2%	0.8%	0%	1.8%	0%	0.3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	-	177	-	-	-	-	109	-	-	-	-	82	-	-	-	-	86	-	-	-	-
Pedestrians %	-	-	-	-	38.6%	-	-	-	-	23.7%	-	-	-	-	17.9%	-	-	-	-	18.7%	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	1	-	-	-	-	3	-	-	-	-	0	-	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0.2%	-	-	-	-	0.2%	-	-	-	-	0.7%	-	-	-	-	0%	-	-	-	-
Bicycles on Road	1	10	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	1	2	1	0	0	0
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																								
Start Time	N Approach CARLAW AVE						E Approach GERRARD ST E						S Approach CARLAW AVE						W Approach GERRARD ST E					
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total
16:15:00	16	58	31	0	49	105	36	67	14	0	26	117	17	50	13	0	19	80	14	127	22	0	36	163
16:30:00	22	68	26	0	74	116	29	74	9	0	29	112	16	61	10	0	27	87	11	109	29	0	32	149
16:45:00	25	81	36	0	57	142	35	54	16	0	29	105	12	64	8	0	26	84	11	95	13	0	30	119
17:00:00	25	69	25	0	60	119	34	82	10	0	40	126	10	67	11	0	33	88	15	113	19	0	31	147
Grand Total	88	276	118	0	240	482	134	277	49	0	124	460	55	242	42	0	105	339	51	444	83	0	129	578
Approach%	18.3%	57.3%	24.5%	0%	-	-	29.1%	60.2%	10.7%	0%	-	-	16.2%	71.4%	12.4%	0%	-	-	8.8%	76.8%	14.4%	0%	-	-
Totals %	4.7%	14.8%	6.3%	0%	25.9%	7.2%	14.9%	2.6%	0%	24.7%	3%	13%	2.3%	0%	18.2%	2.7%	23.9%	4.5%	0%	31.1%	-	-	-	-
PHF	0.88	0.85	0.82	0	0.85	0.85	0.93	0.84	0.77	0	0.91	0.81	0.9	0.81	0	0.96	0.85	0.87	0.72	0	0.89	-	-	-
Heavy %	3	11	1	0	15	0	14	0	0	14	0	12	2	0	14	2	12	1	0	15	-	-	-	-
Heavy %	3.4%	4%	0.8%	0%	3.1%	0%	5.1%	0%	0%	3%	0%	5%	4.8%	0%	4.1%	3.9%	2.7%	1.2%	0%	2.6%	-	-	-	-
Lights	85	265	117	0	467	134	263	49	0	446	55	230	40	0	325	49	432	82	0	563	-	-	-	-
Lights %	96.6%	96%	99.2%	0%	96.9%	100%	94.9%	100%	0%	97%	100%	95%	95.2%	0%	95.9%	96.1%	97.3%	98.8%	0%	97.4%	-	-	-	-
Single-Unit Trucks	2	1	1	0	4	0	5	0	0	5	0	1	2	0	3	2	2	0	0	4	-	-	-	-
Single-Unit Trucks %	2.3%	0.4%	0.8%	0%	0.8%	0%	1.8%	0%	0%	1.1%	0%	0.4%	4.8%	0%	0.9%	3.9%	0.5%	0%	0%	0.7%	-	-	-	-
Buses	1	10	0	0	11	0	9	0	0	9	0	11	0	0	11	0	10	1	0	11	-	-	-	-
Buses %	1.1%	3.6%	0%	0%	2.3%	0%	3.2%	0%	0%	2%	0%	4.5%	0%	0%	3.2%	0%	2.3%	1.2%	0%	1.9%	-	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	-	239	-	-	-	-	120	-	-	-	-	103	-	-	-	-	129	-	-	-	-
Pedestrians %	-	-	-	-	40%	-	-	-	-	20.1%	-	-	-	-	17.2%	-	-	-	-	21.6%	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	4	-	-	-	-	2	-	-	-	-	0	-	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0.2%	-	-	-	-	0.7%	-	-	-	-	0.3%	-	-	-	-	0%	-	-	-	-
Bicycles on Road	3	6	2	0	0	0	4	6	0	0	0	0	1	4	0	0	0	0	2	10	1	0	0	0
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (7 . CARLAW AVE & LANGLEY AVE)																										
Start Time	N Approach CARLAW AVE						E Approach LANGLEY AVE						S Approach CARLAW AVE						W Approach LANGLEY AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NS	Left NE	U/Turn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	U/Turn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	U/Turn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	U/Turn WW	Peds W	Approach Total		
11:00:00	2	92	2	1	21	97	0	0	2	0	27	2	0	54	13	0	0	67	0	0	0	0	16	0	166	
11:15:00	12	109	1	0	22	122	0	0	0	0	31	0	4	63	13	0	1	80	0	0	0	0	21	0	202	
11:30:00	7	106	0	0	11	113	1	0	2	0	15	3	3	40	11	0	0	54	0	0	0	0	13	0	170	
11:45:00	7	100	0	0	22	107	0	0	2	0	28	2	3	42	10	0	0	55	0	0	0	0	13	0	164	
12:00:00	9	96	0	0	9	105	1	1	4	0	13	6	3	51	16	0	0	70	0	0	0	0	16	0	181	
12:15:00	11	99	0	0	9	110	0	0	1	0	12	1	5	73	17	0	0	95	0	0	0	0	9	0	206	
12:30:00	14	95	0	0	12	109	0	0	2	0	25	2	6	65	13	0	2	84	0	0	0	0	14	0	195	
12:45:00	14	115	1	0	13	130	0	0	3	0	18	3	3	61	18	0	0	82	0	0	0	0	12	0	215	
13:00:00	8	106	0	0	5	114	0	0	1	0	16	1	4	55	10	0	0	69	0	0	0	0	19	0	184	
13:15:00	8	110	2	0	8	120	0	0	1	0	17	1	3	54	11	0	0	68	0	0	0	0	16	0	189	
13:30:00	11	89	0	0	10	100	0	0	0	0	27	0	3	57	14	0	0	74	0	0	0	0	19	0	174	
13:45:00	12	125	2	0	9	139	0	1	2	0	19	3	0	57	17	0	0	74	0	0	0	0	15	0	216	
14:00:00	7	98	1	0	11	106	0	0	3	0	25	3	1	57	13	0	0	71	0	0	0	0	17	0	180	
14:15:00	6	109	0	0	14	115	0	1	0	0	21	1	0	68	11	0	0	79	0	0	0	0	17	0	195	
14:30:00	10	101	0	0	11	111	0	0	2	0	17	2	3	62	6	0	4	71	0	0	0	0	11	0	184	
14:45:00	18	97	1	0	11	116	0	1	1	0	10	2	3	59	15	0	1	77	0	0	0	0	10	0	195	
Grand Total	156	1647	10	1	198	1814	2	4	26	0	321	32	44	918	208	0	8	1170	0	0	0	0	238	0	3016	
Approach%	8.6%	90.8%	0.6%	0.1%	-	-	6.3%	12.5%	81.3%	0%	-	-	3.8%	78.5%	17.8%	0%	-	-	0%	0%	0%	0%	-	-	-	
Totals %	5.2%	54.6%	0.3%	0%	60.1%	0.1%	0.1%	0.9%	0%	1.1%	1.5%	30.4%	6.9%	0%	38.8%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
Heavy	1	42	0	0	-	-	0	0	0	0	-	0	39	0	0	-	-	0	0	0	0	0	-	-	-	
Heavy %	0.6%	2.6%	0%	0%	-	-	0%	0%	0%	0%	-	0%	4.2%	0%	0%	-	-	0%	0%	0%	0%	-	-	-	-	
Bicycles	11	47	0	0	-	-	1	0	4	0	-	0	15	1	0	-	-	0	0	1	0	-	-	-	-	
Bicycle %	7.1%	2.9%	0%	0%	-	-	50%	0%	15.4%	0%	-	0%	1.6%	0.5%	0%	-	-	0%	0%	0%	0%	-	-	-	-	

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

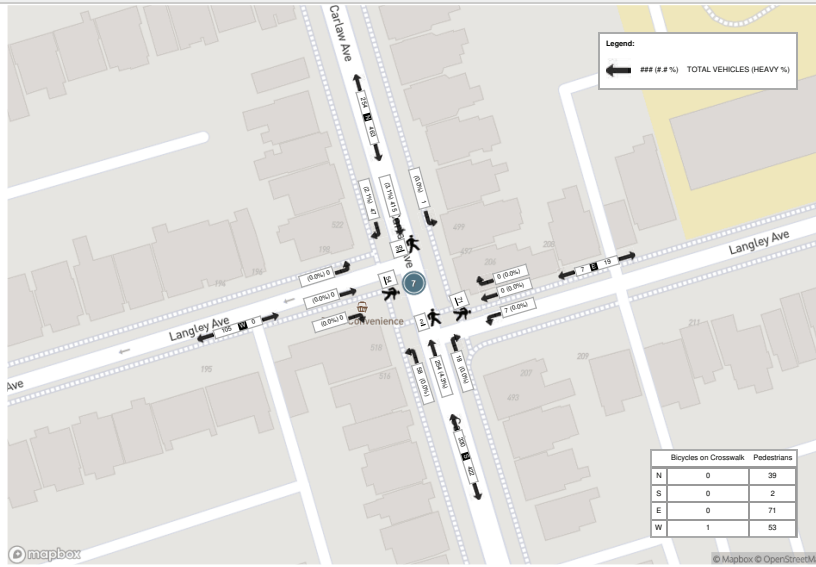
Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach CARLAW AVE						E Approach LANGLEY AVE						S Approach CARLAW AVE						W Approach LANGLEY AVE						Int. Total (15 min)
	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	
12:15:00	11	99	0	0	9	110	0	0	1	0	12	1	5	73	17	0	0	95	0	0	0	0	9	0	206
12:30:00	14	95	0	0	12	109	0	0	2	0	25	2	6	65	13	0	2	84	0	0	0	0	14	0	195
12:45:00	14	115	1	0	13	130	0	0	3	0	18	3	3	61	18	0	0	82	0	0	0	0	12	0	215
13:00:00	8	106	0	0	5	114	0	0	1	0	16	1	4	55	10	0	0	69	0	0	0	0	19	0	184
Grand Total	47	415	1	0	39	463	0	0	7	0	71	7	18	254	58	0	2	330	0	0	0	0	54	0	800
Approach%	10.2%	89.6%	0.2%	0%	-	-	0%	0%	100%	0%	-	-	5.5%	77%	17.6%	0%	-	-	0%	0%	0%	0%	-	-	-
Totals %	5.9%	51.9%	0.1%	0%	-	-	57.9%	0%	0%	0.9%	0%	0.9%	2.3%	31.8%	7.3%	0%	41.3%	0%	0%	0%	0%	0%	-	-	-
PHF	0.84	0.9	0.25	0	-	-	0.89	0	0	0.58	0	0.58	0.75	0.87	0.81	0	0.87	0	0	0	0	0	0	0	-
Heavy	1	13	0	0	-	-	14	0	0	0	0	-	0	11	0	0	-	11	0	0	0	0	0	0	-
Heavy %	2.1%	3.1%	0%	0%	-	-	3%	0%	0%	0%	0%	0%	0%	4.3%	0%	0%	3.3%	0%	0%	0%	0%	0%	-	-	-
Lights	46	402	1	0	-	-	449	0	0	7	0	-	48	243	58	0	2	319	0	0	0	0	0	0	-
Lights %	97.9%	96.9%	100%	0%	-	-	97%	0%	0%	100%	0%	100%	100%	95.7%	100%	0%	96.7%	0%	0%	0%	0%	0%	-	-	-
Single-Unit Trucks	1	6	0	0	-	-	7	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	-
Single-Unit Trucks %	2.1%	1.4%	0%	0%	-	-	1.5%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1.5%	0%	0%	0%	0%	0%	-	-	-
Buses	0	7	0	0	-	-	7	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	-
Buses %	0%	1.7%	0%	0%	-	-	1.5%	0%	0%	0%	0%	0%	0%	2.4%	0%	0%	1.8%	0%	0%	0%	0%	0%	-	-	-
Articulated Trucks	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-
Pedestrians	-	-	-	-	39	-	-	-	-	-	71	-	-	-	-	-	2	-	-	-	-	-	53	-	-
Pedestrians %	-	-	-	-	23.5%	-	-	-	-	-	42.8%	-	-	-	-	-	1.2%	-	-	-	-	-	31.9%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0.6%	-	-
Bicycles on Road	2	15	0	0	0	-	0	0	1	0	0	-	0	5	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (7 . CARLAW AVE & LANGLEY AVE)

Turning Movement Count (7 - CARLAW AVE & LANGLEY AVE)																											
Start Time	N Approach CARLAW AVE					Approach Total	E Approach LANGLEY AVE					Approach Total	S Approach CARLAW AVE					Approach Total	W Approach LANGLEY AVE					Approach Total	Int. Total (15 min)	Int. Total (1 hr)	
	Right N-W	Thru N-S	Left N-E	UTurn N-N	Peds N:		Right E-N	Thru E-W	Left E-S	UTurn E-E	Peds E:		Right S-E	Thru S-N	Left S-W	UTurn S-S	Peds S:		Right W-S	Thru W-E	Left W-N	UTurn W-W	Peds W:				
07:30:00	2	50	1	0	4	53	0	0	2	0	5	2	2	20	2	0	0	24	0	0	0	0	3	0	79		
07:45:00	4	84	1	0	9	89	0	0	3	0	5	3	2	31	7	0	0	40	0	0	0	0	8	0	132		
08:00:00	5	94	0	0	14	99	0	1	0	0	13	1	4	27	5	0	0	36	0	0	0	0	9	0	136		
08:15:00	14	91	0	0	13	105	0	1	1	0	9	2	4	36	12	0	0	52	0	0	0	0	10	0	159	506	
08:30:00	13	114	1	0	29	128	3	2	2	0	37	7	10	40	13	0	0	63	0	0	0	0	27	0	198	625	
08:45:00	15	127	2	0	48	144	2	1	4	0	34	7	5	45	13	0	0	63	0	0	0	0	13	0	214	707	
09:00:00	13	116	2	0	10	131	1	1	1	0	9	3	0	34	12	0	0	46	0	0	0	0	8	0	180	751	
09:15:00	3	74	0	0	6	77	0	0	0	0	6	0	4	42	10	0	0	56	0	0	0	0	9	0	133	725	
BREAK																											
16:00:00	7	90	1	0	12	98	0	0	1	0	14	1	9	88	2	0	0	99	0	0	0	0	14	0	198		
16:15:00	4	103	0	0	5	107	0	0	1	0	18	1	6	77	3	0	0	86	0	0	0	0	14	0	194		
16:30:00	12	102	1	0	11	115	0	1	1	0	15	2	7	82	4	0	0	93	0	0	0	0	15	0	210		
16:45:00	14	103	0	0	13	117	0	0	2	0	16	2	4	67	2	0	1	73	0	0	0	0	12	0	192	794	
17:00:00	9	94	1	0	16	104	0	0	1	0	14	1	4	86	8	0	2	98	0	0	0	0	18	0	203	799	
17:15:00	5	89	0	0	26	94	2	0	4	0	41	6	8	65	4	0	0	77	0	0	0	0	18	0	177	782	
17:30:00	5	96	0	0	8	101	0	0	2	0	18	2	4	74	4	0	0	82	0	0	0	0	9	0	185	757	
17:45:00	11	92	1	0	18	104	0	1	2	0	24	3	4	65	0	0	0	69	0	0	0	0	28	0	176	741	
Grand Total	136	1519	11	0	242	1666	8	8	27	0	278	43	77	879	101	0	3	1057	0	0	0	0	215	0	2766	-	
Approach%	8.2%	91.2%	0.7%	0%	-	-	18.6%	18.6%	62.8%	0%	-	-	7.3%	83.2%	9.6%	0%	-	-	0%	0%	0%	0%	-	-	-	-	
Totals %	4.9%	54.9%	0.4%	0%	-	60.2%	0.3%	0.3%	1%	0%	1.6%	-	2.8%	31.8%	3.7%	0%	38.2%	-	0%	0%	0%	0%	-	-	-		
Heavy	5	78	0	0	-	-	0	0	0	0	-	-	3	59	1	0	-	-	0	0	0	0	-	-	-		
Heavy %	3.7%	5.1%	0%	0%	-	-	0%	0%	0%	0%	-	-	3.9%	6.7%	1%	0%	-	-	0%	0%	0%	0%	-	-	-		
Bicycles	10	51	0	0	-	-	0	1	0	0	-	-	8	9	2	0	-	-	0	0	0	0	-	-	-		
Bicycle %	7.4%	3.4%	0%	0%	-	-	0%	12.5%	0%	0%	-	-	10.4%	1%	2%	0%	-	-	0%	0%	0%	0%	-	-	-		

Turning Movement
Count

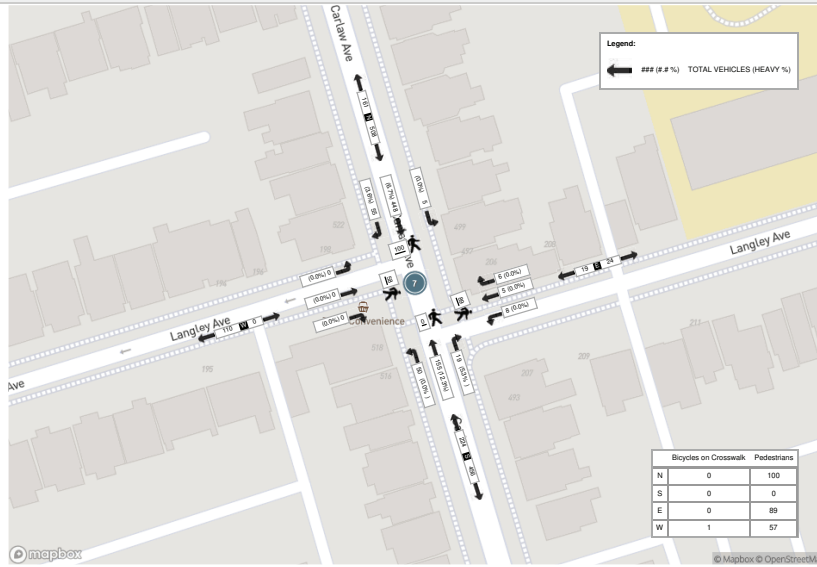
Page 1 of 5

BAC22Y8Z

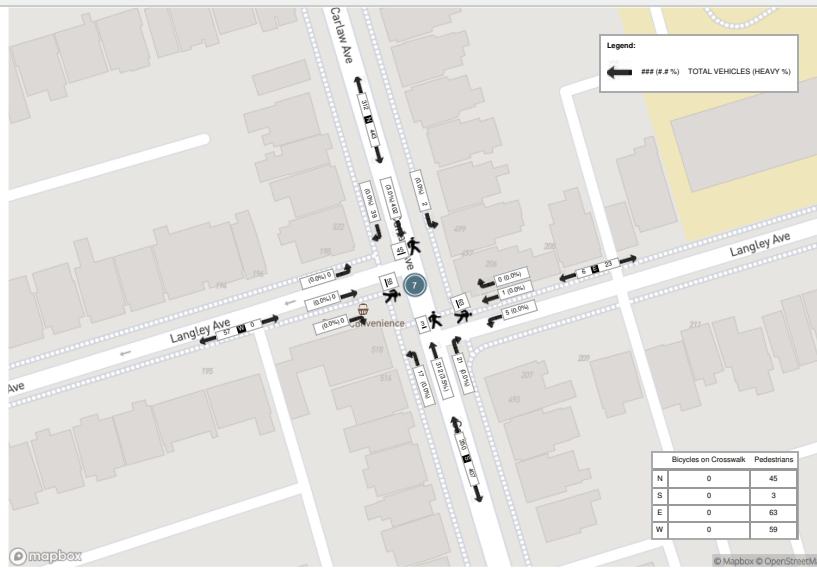
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																								
Start Time	N Approach CARLAW AVE						E Approach LANGLEY AVE						S Approach CARLAW AVE						W Approach LANGLEY AVE					
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total
08:15:00	14	91	0	0	13	105	0	1	1	0	9	2	4	36	12	0	0	52	0	0	0	0	10	0
08:30:00	13	114	1	0	29	128	3	2	2	0	37	7	10	40	13	0	0	63	0	0	0	0	27	0
08:45:00	15	127	2	0	48	144	2	1	4	0	34	7	5	45	13	0	0	63	0	0	0	0	13	0
09:00:00	13	116	2	0	10	131	1	1	1	0	9	3	0	34	12	0	0	46	0	0	0	0	8	0
Grand Total	55	448	5	0	100	508	6	5	8	0	89	19	19	155	50	0	0	224	0	0	0	0	58	0
Approach%	10.8%	88.2%	1%	0%	-	-	31.6%	26.3%	42.1%	0%	-	-	8.5%	69.2%	22.3%	0%	-	-	0%	0%	0%	0%	-	-
Totals %	7.3%	59.7%	0.7%	0%	-	67.6%	0.8%	0.7%	1.1%	0%	-	2.5%	2.5%	20.6%	6.7%	0%	-	29.8%	0%	0%	0%	0%	0%	-
PHF	0.92	0.88	0.63	0	-	0.88	0.5	0.63	0.5	0	-	0.68	0.48	0.86	0.96	0	-	0.89	0	0	0	0	0	-
Heavy	2	30	0	0	-	32	0	0	0	0	-	0	1	19	0	0	-	20	0	0	0	0	0	-
Heavy %	3.6%	6.7%	0%	0%	-	6.3%	0%	0%	0%	0%	-	0%	5.3%	12.3%	0%	0%	-	8.9%	0%	0%	0%	0%	0%	-
Lights	53	418	5	0	-	476	6	5	8	0	-	19	18	136	50	0	-	204	0	0	0	0	0	-
Lights %	96.4%	93.3%	100%	0%	-	93.7%	100%	100%	100%	0%	-	100%	94.7%	87.7%	100%	0%	-	91.1%	0%	0%	0%	0%	0%	-
Single-Unit Trucks	0	7	0	0	-	7	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	0	-
Single-Unit Trucks %	0%	1.6%	0%	0%	-	1.4%	0%	0%	0%	0%	-	0%	0%	1.9%	0%	0%	-	1.3%	0%	0%	0%	0%	0%	-
Buses	2	23	0	0	-	25	0	0	0	0	-	0	1	15	0	0	-	16	0	0	0	0	0	-
Buses %	3.6%	5.1%	0%	0%	-	4.9%	0%	0%	0%	0%	-	0%	5.3%	9.7%	0%	0%	-	7.1%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0.6%	0%	0%	-	0.4%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	100	-	-	-	-	-	89	-	-	-	-	-	0	-	-	-	-	-	57	-
Pedestrians %	-	-	-	-	40.5%	-	-	-	-	-	36%	-	-	-	-	-	0%	-	-	-	-	-	23.1%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0.4%	-
Bicycles on Road	5	19	0	0	0	-	0	0	0	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																								
Start Time	N Approach CARLAW AVE						E Approach LANGLEY AVE						S Approach CARLAW AVE						W Approach LANGLEY AVE					
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total
16:15:00	4	103	0	0	5	107	0	0	1	0	18	1	6	77	3	0	0	86	0	0	0	0	14	0
16:30:00	12	102	1	0	11	115	0	1	1	0	15	2	7	82	4	0	0	93	0	0	0	0	15	0
16:45:00	14	103	0	0	13	117	0	0	2	0	16	2	4	67	2	0	1	73	0	0	0	0	12	0
17:00:00	9	94	1	0	16	104	0	0	1	0	14	1	4	86	8	0	2	98	0	0	0	0	18	0
Grand Total	39	402	2	0	45	443	0	1	5	0	63	6	21	312	17	0	3	350	0	0	0	0	59	0
Approach%	8.8%	90.7%	0.5%	0%	-	-	0%	16.7%	83.3%	0%	-	-	6%	89.1%	4.9%	0%	-	-	0%	0%	0%	0%	-	-
Totals %	4.9%	50.3%	0.3%	0%	-	55.4%	0%	0.1%	0.6%	0%	-	0.8%	2.6%	39%	2.1%	0%	-	43.8%	0%	0%	0%	0%	0%	-
PHF	0.7	0.98	0.5	0	-	0.95	0	0.25	0.63	0	-	0.75	0.75	0.91	0.53	0	-	0.89	0	0	0	0	0	-
Heavy	0	12	0	0	-	12	0	0	0	0	-	0	0	11	0	0	-	11	0	0	0	0	0	-
Heavy %	0%	3%	0%	0%	-	2.7%	0%	0%	0%	0%	-	0%	0%	3.5%	0%	0%	-	3.1%	0%	0%	0%	0%	0%	-
Lights	39	390	2	0	-	431	0	1	5	0	-	6	21	301	17	0	-	339	0	0	0	0	0	-
Lights %	100%	97%	100%	0%	-	97.3%	0%	100%	100%	0%	-	100%	100%	96.5%	100%	0%	-	96.9%	0%	0%	0%	0%	0%	-
Single-Unit Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	0	-
Single-Unit Trucks %	0%	0.5%	0%	0%	-	0.5%	0%	0%	0%	0%	-	0%	0%	0.3%	0%	0%	-	0.3%	0%	0%	0%	0%	0%	-
Buses	0	10	0	0	-	10	0	0	0	0	-	0	0	10	0	0	-	10	0	0	0	0	0	-
Buses %	0%	2.5%	0%	0%	-	2.3%	0%	0%	0%	0%	-	0%	0%	3.2%	0%	0%	-	2.9%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	45	-	-	-	-	-	63	-	-	-	-	-	3	-	-	-	-	-	59	-
Pedestrians %	-	-	-	-	25.5%	-	-	-	-	-	37.1%	-	-	-	-	-	1.8%	-	-	-	-	-	34.7%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-
Bicycles on Road	0	8	0	0	0	-	0	0	0	0	0	-	2	2	1	0	0	-	0	0	0	0	0	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



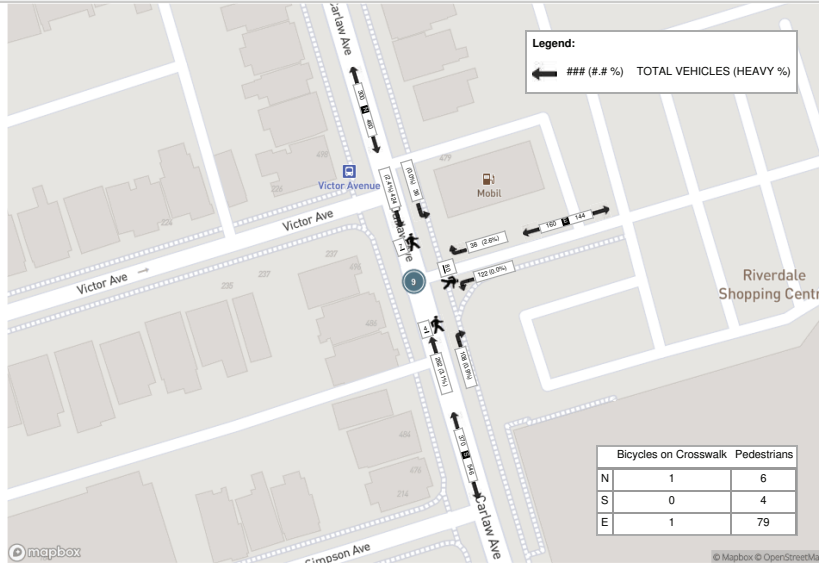
Turning Movement Count (9 - CARLAW AVE & NO FRILLS ACCESS)

Start Time	N Approach CARLAW AVE					E Approach NO FRILLS ACCESS					S Approach CARLAW AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
11:00:00	87	6	0	1	93	11	23	0	20	34	34	30	0	0	64	191	
11:15:00	107	7	0	4	114	11	38	0	25	49	18	72	1	0	91	254	
11:30:00	105	10	0	3	115	3	31	0	10	34	20	51	0	0	71	220	
11:45:00	101	10	0	3	111	7	29	0	22	36	16	56	0	1	72	219	884
12:00:00	104	8	0	3	112	9	28	0	10	37	23	64	0	2	87	236	929
12:15:00	99	5	0	2	104	11	28	0	14	39	26	85	0	0	111	254	929
12:30:00	100	6	0	1	106	15	21	0	23	36	19	70	0	0	89	231	940
12:45:00	118	8	0	3	126	12	29	0	21	41	27	75	0	0	102	269	990
13:00:00	91	13	0	2	104	6	34	0	16	40	30	58	0	0	88	232	986
13:15:00	114	6	0	1	120	6	35	0	19	41	25	69	0	1	94	255	987
13:30:00	89	8	0	5	97	14	30	0	21	44	27	65	0	2	92	233	989
13:45:00	126	7	0	1	133	8	32	0	15	40	17	65	0	1	82	255	975
14:00:00	93	9	0	1	102	9	31	0	22	40	39	60	0	1	99	241	984
14:15:00	107	8	0	4	115	13	27	0	24	40	23	70	0	0	93	248	977
14:30:00	98	12	0	1	110	8	32	0	19	40	29	67	0	2	96	246	990
14:45:00	97	10	0	2	107	8	27	0	11	35	23	66	0	0	89	231	966
Grand Total	1636	133	0	37	1769	151	475	0	292	626	396	1023	1	10	1420	3815	-
Approach%	92.5%	7.5%	0%	-	-	24.1%	75.9%	0%	-	-	27.9%	72%	0.1%	-	-	-	-
Totals %	42.9%	3.5%	0%	-	46.4%	4%	12.5%	0%	-	16.4%	10.4%	26.8%	0%	-	37.2%	-	-
Heavy	44	0	0	-	-	2	7	0	-	-	6	37	0	-	-	-	-
Heavy %	2.7%	0%	0%	-	-	1.3%	1.5%	0%	-	-	1.5%	3.6%	0%	-	-	-	-
Bicycles	54	2	0	-	-	1	7	0	-	-	5	17	0	-	-	-	-
Bicycle %	3.3%	1.5%	0%	-	-	0.7%	1.5%	0%	-	-	1.3%	1.7%	0%	-	-	-	-

Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach CARLAW AVE					E Approach NO FRILLS ACCESS					S Approach CARLAW AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
13:45:00	126	7	0	1	133	8	32	0	15	40	17	65	0	1	82	255
14:00:00	93	9	0	1	102	9	31	0	22	40	39	60	0	1	99	241
14:15:00	107	8	0	4	115	13	27	0	24	40	23	70	0	0	93	248
14:30:00	98	12	0	1	110	8	32	0	19	40	29	67	0	2	96	246
Grand Total	424	36	0	7	460	38	122	0	80	160	108	262	0	4	370	990
Approach%	92.2%	7.8%	0%	-	-	23.8%	76.3%	0%	-	-	29.2%	70.8%	0%	-	-	-
Totals %	42.8%	3.6%	0%	-	46.5%	3.8%	12.3%	0%	-	16.2%	10.9%	26.5%	0%	-	37.4%	-
PHF	0.84	0.75	0	-	0.86	0.73	0.95	0	-	1	0.69	0.94	0	-	0.93	-
Heavy	10	0	0	-	10	1	0	0	-	1	1	8	0	-	9	-
Heavy %	2.4%	0%	0%	-	2.2%	2.6%	0%	0%	-	0.6%	0.9%	3.1%	0%	-	2.4%	-
Lights	414	36	0	-	450	37	122	0	-	159	107	254	0	-	361	-
Lights %	97.6%	100%	0%	-	97.8%	97.4%	100%	0%	-	99.4%	99.1%	96.9%	0%	-	97.6%	-
Single-Unit Trucks	2	0	0	-	2	1	0	0	-	1	1	1	0	-	2	-
Single-Unit Trucks %	0.5%	0%	0%	-	0.4%	2.6%	0%	0%	-	0.6%	0.9%	0.4%	0%	-	0.5%	-
Buses	8	0	0	-	8	0	0	0	-	0	0	7	0	-	7	-
Buses %	1.9%	0%	0%	-	1.7%	0%	0%	0%	-	0%	0%	2.7%	0%	-	1.9%	-
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	6	-	-	-	-	79	-	-	-	-	4	-	-
Pedestrians %	-	-	-	6.6%	-	-	-	-	86.8%	-	-	-	-	4.4%	-	-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	1	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	1.1%	-	-	-	-	1.1%	-	-	-	-	0%	-	-
Bicycles on Road	8	2	0	0	-	0	2	0	0	-	1	5	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)



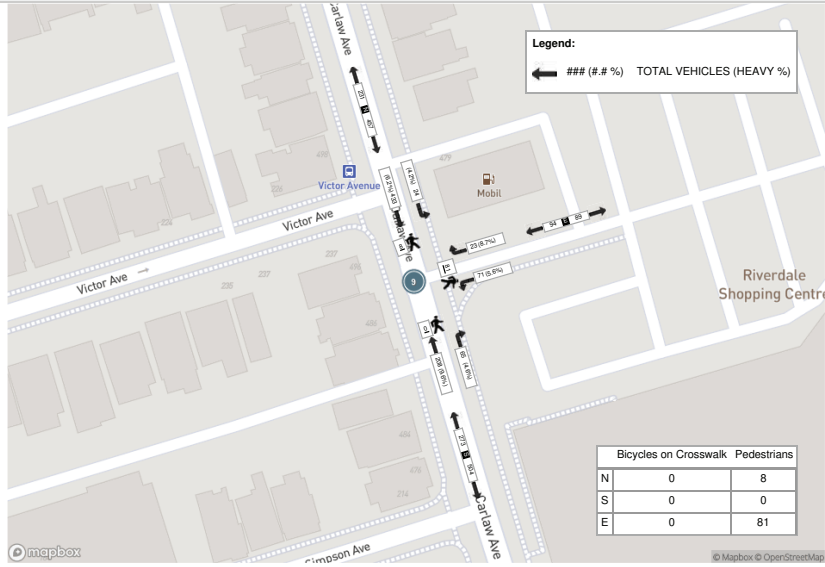
Turning Movement Count (9 . CARLAW AVE & NO FRILLS ACCESS)

Start Time	N Approach CARLAW AVE					E Approach NO FRILLS ACCESS					S Approach CARLAW AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:30:00	54	2	0	2	56	0	5	0	4	5	3	23	0	0	26	87	
07:45:00	86	1	0	2	87	0	7	0	3	7	8	40	0	0	48	142	
08:00:00	97	3	0	1	100	0	17	0	4	17	15	36	0	0	51	168	
08:15:00	95	3	0	1	98	2	6	0	8	8	14	50	0	0	64	170	567
08:30:00	115	5	0	1	120	4	9	0	40	13	9	59	0	0	68	201	681
08:45:00	130	6	0	0	136	5	24	0	30	29	15	57	0	0	72	237	776
09:00:00	112	9	0	5	121	5	19	0	5	24	24	42	0	0	66	211	819
09:15:00	76	4	0	2	80	9	19	0	6	28	17	50	0	0	67	175	824
BREAK																	
16:00:00	89	7	0	3	96	7	24	0	11	31	29	90	0	0	119	246	
16:15:00	95	13	0	3	108	18	26	0	14	44	26	68	0	2	94	246	
16:30:00	99	9	0	3	108	10	32	0	10	42	29	83	0	0	112	262	
16:45:00	110	7	0	4	117	9	38	0	14	47	31	72	0	1	103	267	1021
17:00:00	95	7	0	1	102	10	36	0	16	46	23	87	0	0	110	258	1033
17:15:00	94	5	1	5	100	8	26	0	34	34	29	70	0	0	99	233	1020
17:30:00	107	4	0	2	111	14	33	0	17	47	22	81	0	0	103	261	1019
17:45:00	100	10	0	3	110	6	42	0	13	48	22	66	0	0	88	246	998
Grand Total	1554	95	1	38	1650	107	363	0	229	470	316	974	0	3	1290	3410	-
Approach%	94.2%	5.8%	0.1%	-	-	22.8%	77.2%	0%	-	-	24.5%	75.5%	0%	-	-	-	-
Totals %	45.6%	2.8%	0%	-	48.4%	3.1%	10.6%	0%	-	13.8%	9.3%	28.6%	0%	-	37.8%	-	-
Heavy	79	1	0	-	-	2	9	0	-	-	7	61	0	-	-	-	-
Heavy %	5.1%	1.1%	0%	-	-	1.9%	2.5%	0%	-	-	2.2%	6.3%	0%	-	-	-	-
Bicycles	59	2	0	-	-	1	9	0	-	-	9	17	0	-	-	-	-
Bicycle %	3.8%	2.1%	0%	-	-	0.9%	2.5%	0%	-	-	2.8%	1.7%	0%	-	-	-	-

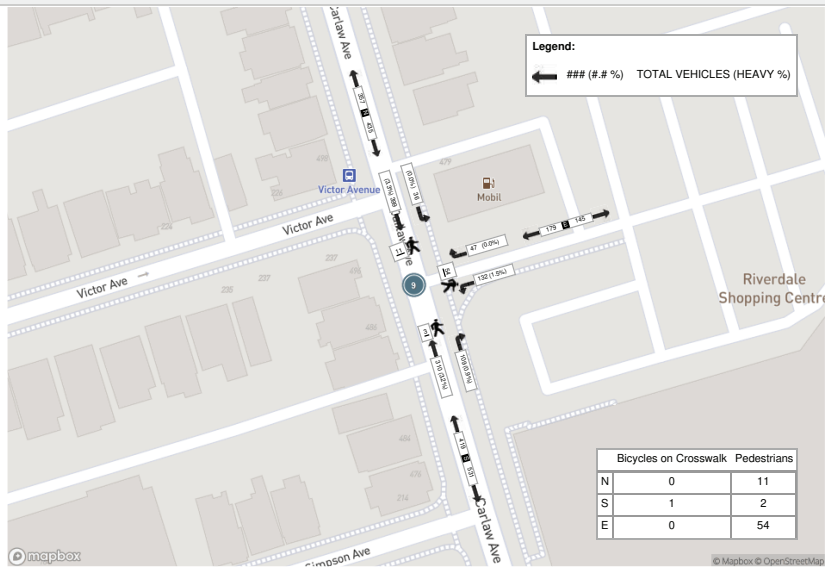
Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach CARLAW AVE					E Approach NO FRILLS ACCESS					S Approach CARLAW AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:30:00	115	5	0	1	120	4	9	0	40	13	9	59	0	0	68	201
08:45:00	130	6	0	0	136	5	24	0	30	29	15	57	0	0	72	237
09:00:00	112	9	0	5	121	5	19	0	5	24	24	42	0	0	66	211
09:15:00	76	4	0	2	80	9	19	0	6	28	17	50	0	0	67	175
Grand Total	433	24	0	8	457	23	71	0	81	94	65	208	0	0	273	824
Approach%	94.7%	5.3%	0%	-	-	24.5%	75.5%	0%	-	-	23.8%	76.2%	0%	-	-	-
Totals %	52.5%	2.9%	0%	-	55.5%	2.8%	8.6%	0%	-	11.4%	7.9%	25.2%	0%	-	33.1%	-
PHF	0.83	0.67	0	-	0.84	0.64	0.74	0	-	0.81	0.68	0.88	0	-	0.95	-
Heavy	27	1	0	-	28	2	4	0	-	6	3	20	0	-	23	-
Heavy %	6.2%	4.2%	0%	-	6.1%	8.7%	5.6%	0%	-	6.4%	4.8%	9.6%	0%	-	8.4%	-
Lights	406	23	0	-	429	21	67	0	-	88	62	188	0	-	250	-
Lights %	93.8%	95.8%	0%	-	93.9%	91.3%	94.4%	0%	-	93.6%	95.4%	90.4%	0%	-	91.6%	-
Single-Unit Trucks	9	0	0	-	9	1	3	0	-	4	2	4	0	-	6	-
Single-Unit Trucks %	2.1%	0%	0%	-	2%	4.3%	4.2%	0%	-	4.3%	3.1%	1.9%	0%	-	2.2%	-
Buses	18	1	0	-	19	1	0	0	-	1	1	14	0	-	15	-
Buses %	4.2%	4.2%	0%	-	4.2%	4.3%	0%	0%	-	1.1%	1.5%	6.7%	0%	-	5.5%	-
Articulated Trucks	0	0	0	-	0	0	1	0	-	1	0	2	0	-	2	-
Articulated Trucks %	0%	0%	0%	-	0%	0%	1.4%	0%	-	1.1%	0%	1%	0%	-	0.7%	-
Pedestrians	-	-	-	8	-	-	-	-	81	-	-	-	-	0	-	-
Pedestrians %	-	-	-	9%	-	-	-	-	91%	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	22	0	0	0	-	0	1	0	0	-	0	1	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach CARLAW AVE					E Approach NO FRILLS ACCESS					S Approach CARLAW AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:15:00	95	13	0	3	108	18	26	0	14	44	26	68	0	2	94	246
16:30:00	99	9	0	3	108	10	32	0	10	42	29	83	0	0	112	262
16:45:00	110	7	0	4	117	9	38	0	14	47	31	72	0	1	103	267
17:00:00	95	7	0	1	102	10	36	0	16	46	23	87	0	0	110	258
Grand Total	399	36	0	11	435	47	132	0	54	179	109	310	0	3	419	1033
Approach%	91.7%	8.3%	0%	-	-	26.3%	73.7%	0%	-	-	26%	74%	0%	-	-	-
Totals %	38.6%	3.5%	0%	-	42.1%	4.5%	12.8%	0%	-	17.3%	10.6%	30%	0%	-	40.6%	-
PHF	0.91	0.69	0	-	0.93	0.65	0.87	0	-	0.95	0.88	0.89	0	-	0.94	-
Heavy	13	0	0	-	13	0	2	0	-	2	1	10	0	-	11	-
Heavy %	3.3%	0%	0%	-	3%	0%	1.5%	0%	-	1.1%	0.9%	3.2%	0%	-	2.6%	-
Lights	386	36	0	-	422	47	130	0	-	177	108	300	0	-	408	-
Lights %	96.7%	100%	0%	-	97%	100%	98.5%	0%	-	98.9%	99.1%	96.8%	0%	-	97.4%	-
Single-Unit Trucks	3	0	0	-	3	0	1	0	-	1	0	0	0	-	0	-
Single-Unit Trucks %	0.8%	0%	0%	-	0.7%	0%	0.8%	0%	-	0.6%	0%	0%	0%	-	0%	-
Buses	10	0	0	-	10	0	1	0	-	1	1	10	0	-	11	-
Buses %	2.5%	0%	0%	-	2.3%	0%	0.8%	0%	-	0.6%	0.9%	3.2%	0%	-	2.6%	-
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	11	-	-	-	-	54	-	-	-	-	2	-	-
Pedestrians %	-	-	-	16.2%	-	-	-	-	79.4%	-	-	-	-	2.9%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	1.5%	-	-
Bicycles on Road	9	1	0	0	-	1	5	0	0	-	4	5	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (6 - CARLAW AVE & RIVERDALE AVE)																										
Start Time	N Approach CARLAW AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach CARLAW AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N:		Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E:		Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S:		Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W:			
11:00:00	0	34	2	0	3	36	0	0	58	0	10	58	56	0	0	0	0	56	6	4	0	0	13	10	160	-
11:15:00	0	41	3	0	0	44	0	0	68	0	13	68	60	0	0	0	9	60	11	10	0	0	21	21	193	-
11:30:00	0	47	2	0	1	49	0	0	58	0	4	58	45	0	0	0	4	45	8	12	0	0	13	20	172	-
11:45:00	0	29	2	0	9	31	0	0	66	0	9	66	39	0	0	0	5	39	10	10	0	0	14	20	156	681
12:00:00	0	38	1	0	4	39	0	0	62	0	8	62	54	0	0	0	3	54	5	4	0	0	19	9	164	685
12:15:00	0	37	1	0	5	38	0	0	60	0	9	60	71	0	0	0	4	71	11	11	0	0	19	22	191	683
12:30:00	0	35	6	0	1	41	0	0	67	0	14	67	65	0	0	0	0	65	6	6	0	0	14	12	185	696
12:45:00	0	44	4	0	6	48	0	0	78	0	12	78	58	1	0	0	4	59	8	4	0	0	15	12	197	737
13:00:00	0	37	3	0	5	40	0	0	70	0	7	70	56	0	0	0	9	56	7	12	0	0	21	19	185	758
13:15:00	0	41	3	0	2	44	0	1	62	0	9	63	52	0	0	0	2	52	12	9	0	0	18	21	180	747
13:30:00	0	33	3	0	2	36	0	0	66	0	7	66	60	0	0	0	0	60	7	9	0	0	18	16	178	740
13:45:00	0	58	2	0	2	60	0	0	69	0	10	69	55	0	0	0	6	55	7	9	0	0	16	16	200	743
14:00:00	0	31	1	0	8	32	0	0	63	0	15	63	58	0	0	0	9	58	12	11	0	0	18	23	176	734
14:15:00	0	41	2	0	5	43	0	0	67	0	10	67	70	0	0	0	3	70	7	15	0	0	21	22	202	756
14:30:00	0	43	3	0	2	46	0	0	53	0	8	53	61	0	0	1	3	62	12	15	0	0	10	27	188	766
14:45:00	0	53	2	0	6	55	0	0	58	1	6	59	61	0	0	0	2	61	4	9	0	0	11	13	188	754
Grand Total	0	642	40	0	61	682	0	1	1025	1	151	1027	921	1	0	1	63	923	133	150	0	0	261	283	2915	-
Approach%	0%	94.1%	5.9%	0%	-	-	0%	0.1%	99.9%	0.1%	-	-	99.8%	0.1%	0%	0.1%	-	-	47%	53%	0%	0%	-	-	-	-
Totals %	0%	22%	1.4%	0%	23.4%	0%	0%	35.2%	0%	35.2%	31.6%	0%	0%	0%	31.7%	4.6%	5.1%	0%	0%	9.7%	-	-	-	-	-	-
Heavy	0	9	2	0	-	0	0	34	0	-	39	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Heavy %	0%	1.4%	0%	0%	-	0%	0%	3.3%	0%	-	4.2%	0%	0%	0%	-	0%	1.3%	0%	0%	-	-	-	-	-	-	-
Bicycles	1	42	1	0	-	0	2	14	0	-	12	5	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Bicycle %	0%	6.5%	0.2%	0%	-	0%	200%	1.4%	0%	-	1.3%	500%	0%	0%	-	-	3%	2.7%	0%	0%	-	-	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

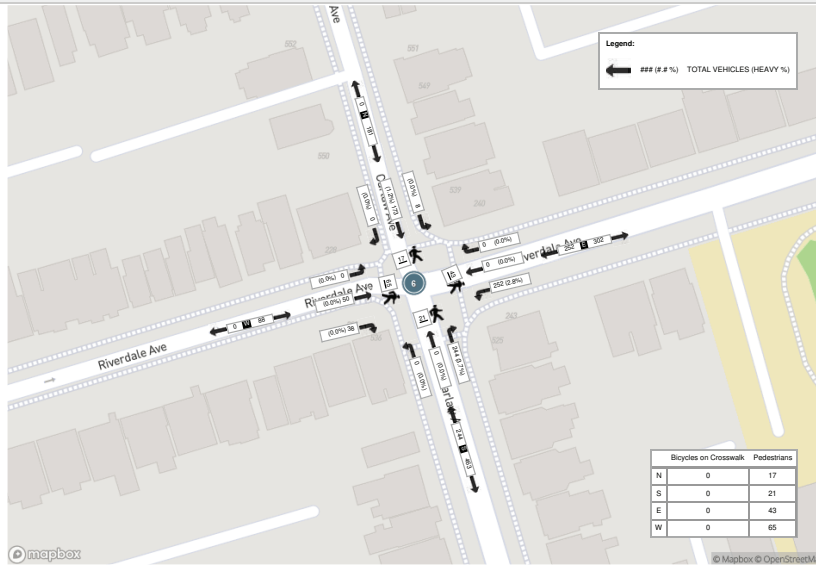
Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach CARLAW AVE						E Approach RIVERDALE AVE						S Approach CARLAW AVE						W Approach RIVERDALE AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
13:45:00	0	58	2	0	2	60	0	0	69	0	10	69	55	0	0	0	6	55	7	9	0	0	16	16	200
14:00:00	0	31	1	0	8	32	0	0	63	0	15	63	58	0	0	0	9	58	12	11	0	0	18	23	176
14:15:00	0	41	2	0	5	43	0	0	67	0	10	67	70	0	0	0	3	70	7	15	0	0	21	22	202
14:30:00	0	43	3	0	2	46	0	0	53	0	8	53	61	0	0	1	3	62	12	15	0	0	10	27	188
Grand Total	0	173	8	0	17	181	0	0	252	0	43	252	244	0	0	1	21	245	38	50	0	0	65	88	766
Approach%	0%	95.6%	4.4%	0%	-	-	0%	0%	100%	0%	-	-	99.6%	0%	0%	0.4%	-	-	43.2%	56.8%	0%	0%	-	-	-
Totals %	0%	22.6%	1%	0%	23.6%	0%	0%	32.9%	0%	32.9%	31.9%	0%	0%	0%	0%	0.1%	32%	32%	5%	6.5%	0%	0%	11.5%	-	-
PHF	0	0.75	0.67	0	0.75	0	0	0.91	0	0.91	0.91	0.87	0	0	0	0.25	0.88	0.88	0.79	0.83	0	0	0.81	-	-
Heavy	0	2	0	0	2	2	0	0	7	0	7	7	9	0	0	0	0	9	0	0	0	0	0	0	-
Heavy %	0%	1.2%	0%	0%	1.1%	0%	0%	2.8%	0%	2.8%	3.7%	0%	0%	0%	0%	0%	3.7%	0%	0%	0%	0%	0%	0%	0%	-
Lights	0	171	8	0	-	179	0	0	245	0	245	245	235	0	0	1	236	236	38	50	0	0	65	88	-
Lights %	0%	98.8%	100%	0%	-	98.9%	0%	0%	97.2%	0%	97.2%	97.2%	96.3%	0%	0%	100%	96.3%	96.3%	100%	100%	0%	0%	100%	100%	-
Single-Unit Trucks	0	2	0	0	-	2	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	-
Single-Unit Trucks %	0%	1.2%	0%	0%	-	1.1%	0%	0%	0%	0%	0%	0%	0.8%	0%	0%	0%	0%	0.8%	0%	0%	0%	0%	0%	0%	-
Buses	0	0	0	0	-	0	0	0	7	0	7	7	7	0	0	0	0	7	0	0	0	0	0	0	-
Buses %	0%	0%	0%	0%	-	0%	0%	0%	2.8%	0%	2.8%	2.8%	2.9%	0%	0%	0%	0%	2.9%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	17	-	-	-	-	-	43	-	-	-	-	-	21	-	-	-	-	-	65	-	-
Pedestrians%	-	-	-	-	11.6%	-	-	-	-	-	29.5%	-	-	-	-	-	14.4%	-	-	-	-	-	44.5%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	8	1	0	0	-	0	0	2	0	0	-	5	2	0	0	0	-	1	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y82

Turning Movement Count (6 - CARLAW AVE & RIVERDALE AVE)

Turning Movement Count (6 - CARLAW AVE & RIVERDALE AVE)																										
Start Time	N Approach CARLAW AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach CARLAW AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N		Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E		Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S		Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W			
07:30:00	0	10	0	0	5	10	0	0	40	0	4	40	21	0	0	0	0	21	2	3	0	0	2	5	76	
07:45:00	0	24	4	0	4	28	0	0	63	0	2	63	30	0	0	0	0	30	4	4	0	0	7	8	129	
08:00:00	0	30	3	0	6	33	0	0	65	0	7	65	28	0	0	0	3	28	4	9	0	0	10	13	139	
08:15:00	0	34	4	0	4	38	0	0	70	0	5	70	35	0	0	0	0	35	5	13	0	0	10	18	161	505
08:30:00	0	44	5	0	8	49	0	0	69	0	16	69	40	0	0	0	1	40	14	7	0	0	15	21	179	608
08:45:00	0	63	4	0	12	67	0	0	73	0	24	73	47	0	0	0	30	47	5	7	0	0	18	12	199	678
09:00:00	0	56	0	0	3	56	0	0	64	0	5	64	38	0	0	0	3	38	10	2	0	0	9	12	170	709
09:15:00	0	23	1	0	2	24	0	0	48	0	2	48	40	0	0	0	1	40	5	5	0	0	11	10	122	670
BREAK																										
16:00:00	0	31	2	0	7	33	0	0	52	0	11	52	91	0	0	0	7	91	15	18	0	0	13	33	209	
16:15:00	0	39	4	0	3	43	0	0	63	0	7	63	77	0	0	0	0	77	13	16	0	0	11	29	212	
16:30:00	0	43	5	0	6	48	0	0	52	0	10	52	80	0	0	0	2	80	13	10	0	0	12	23	203	
16:45:00	0	42	0	0	9	42	0	0	64	0	4	64	64	0	0	0	2	64	8	13	0	0	9	21	191	815
17:00:00	0	41	2	0	4	43	0	0	56	1	7	57	87	0	0	0	3	87	5	14	0	0	14	19	206	812
17:15:00	0	27	5	0	6	32	0	0	60	0	25	60	71	0	0	0	1	71	7	17	0	0	16	24	187	787
17:30:00	0	40	3	0	8	43	0	0	51	0	16	51	73	0	0	0	0	73	11	12	0	0	10	23	190	774
17:45:00	0	45	2	0	10	47	0	0	46	0	10	46	66	0	0	0	2	66	11	11	0	0	26	22	181	764
Grand Total	0	592	44	0	97	636	0	0	936	1	155	937	888	0	0	0	55	888	132	161	0	0	193	293	2754	-
Approach%	0%	93.1%	6.9%	0%	-	-	0%	0%	99.9%	0.1%	-	-	100%	0%	0%	0%	-	-	45.1%	54.9%	0%	0%	-	-	-	-
Totals %	0%	21.5%	1.6%	0%	-	23.1%	0%	0%	34%	0%	-	34%	32.2%	0%	0%	0%	-	32.2%	4.8%	5.8%	0%	0%	-	10.6%	-	-
Heavy	0	10	1	0	-	-	0	0	70	0	-	-	59	0	0	0	-	-	3	2	0	0	-	-	-	-
Heavy %	0%	1.7%	2.3%	0%	-	-	0%	0%	7.5%	0%	-	-	6.6%	0%	0%	0%	-	-	2.3%	1.2%	0%	0%	-	-	-	-
Bicycles	1	40	2	0	-	-	0	0	22	0	-	-	7	1	0	0	-	-	2	4	0	0	-	-	-	-
Bicycle %	0%	6.8%	4.5%	0%	-	-	0%	0%	2.4%	0%	-	-	0.8%	0%	0%	0%	-	-	1.5%	2.5%	0%	0%	-	-	-	-

Turning Movement
Count

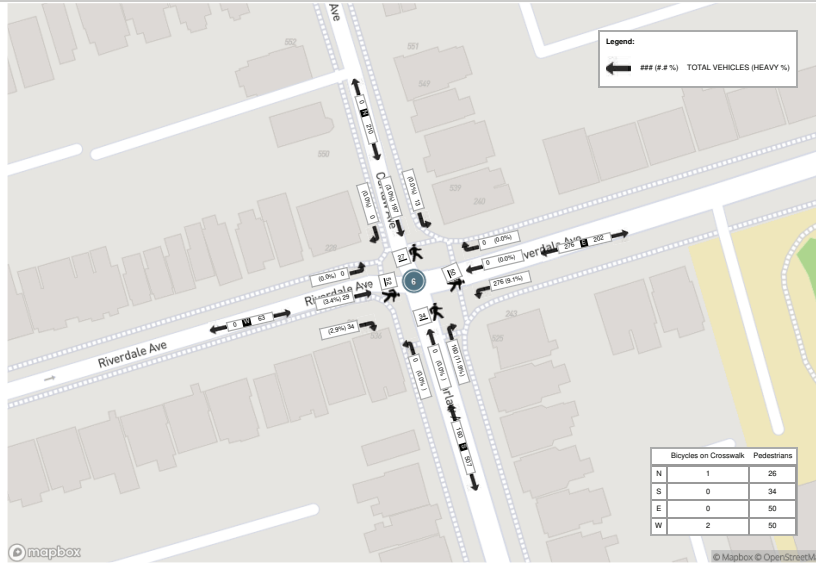
Page 1 of 5

BAC22Y82

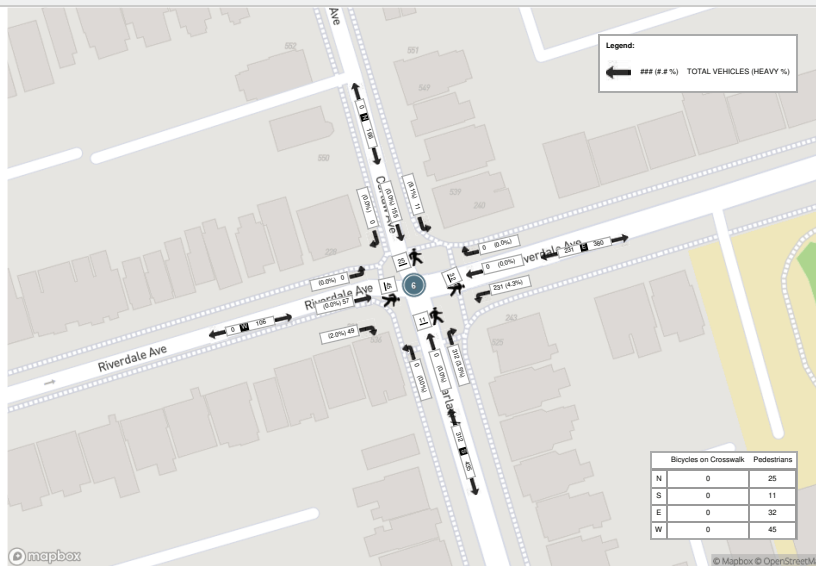
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach CARLAW AVE						E Approach RIVERDALE AVE						S Approach CARLAW AVE						W Approach RIVERDALE AVE						Int. Total (15 min)
	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	
08:15:00	0	34	4	0	4	38	0	0	70	0	5	70	35	0	0	0	0	35	5	13	0	0	10	18	161
08:30:00	0	44	5	0	8	49	0	0	69	0	16	69	40	0	0	0	1	40	14	7	0	0	15	21	179
08:45:00	0	63	4	0	12	67	0	0	73	0	24	73	47	0	0	0	30	47	5	7	0	0	18	12	199
09:00:00	0	56	0	0	3	56	0	0	64	0	5	64	38	0	0	0	3	38	10	2	0	0	9	12	170
Grand Total	0	197	13	0	27	210	0	0	276	0	50	276	160	0	0	0	34	160	34	29	0	0	52	63	709
Approach%	0%	93.8%	6.2%	0%	-	-	0%	0%	100%	0%	-	-	100%	0%	0%	0%	-	-	54%	46%	0%	0%	-	-	-
Totals %	0%	27.8%	1.8%	0%	29.6%	0%	0%	38.9%	0%	38.9%	0%	38.9%	22.6%	0%	0%	0%	22.6%	4.8%	4.1%	0%	0%	8.9%	-	-	-
PHF	0	0.78	0.65	0	0.78	0	0	0.95	0	0.95	0	0.95	0.85	0	0	0	0.85	0.61	0.56	0	0	0.75	-	-	-
Heavy	0	6	0	0	6	0	0	25	0	25	0	25	19	0	0	0	19	1	1	0	0	2	-	-	-
Heavy %	0%	3%	0%	0%	2.9%	0%	0%	9.1%	0%	9.1%	0%	9.1%	11.9%	0%	0%	0%	11.9%	2.9%	3.4%	0%	0%	3.2%	-	-	-
Lights	0	191	13	0	204	0	0	251	0	251	0	251	141	0	0	0	141	33	28	0	0	61	-	-	-
Lights %	0%	97%	100%	0%	97.1%	0%	0%	90.9%	0%	90.9%	0%	90.9%	88.1%	0%	0%	0%	88.1%	97.1%	96.6%	0%	0%	96.8%	-	-	-
Single-Unit Trucks	0	1	0	0	1	0	0	6	0	6	0	6	3	0	0	0	3	0	1	0	0	1	-	-	-
Single-Unit Trucks %	0%	0.5%	0%	0%	0.5%	0%	0%	2.2%	0%	2.2%	0%	2.2%	1.9%	0%	0%	0%	1.9%	0%	3.4%	0%	0%	1.6%	-	-	-
Buses	0	5	0	0	5	0	0	19	0	19	0	19	15	0	0	0	15	1	0	0	0	1	-	-	-
Buses %	0%	2.5%	0%	0%	2.4%	0%	0%	6.9%	0%	6.9%	0%	6.9%	9.4%	0%	0%	0%	9.4%	2.9%	0%	0%	0%	1.6%	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	-	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0%	0.6%	0%	0%	0%	0%	0%	-	-	-
Pedestrians	-	-	-	-	26	-	-	-	-	50	-	50	-	-	-	-	34	-	-	-	-	50	-	-	-
Pedestrians%	-	-	-	-	16%	-	-	-	-	30.7%	-	30.7%	-	-	-	-	20.9%	-	-	-	-	30.7%	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0.6%	-	-	-	-	0%	-	0%	-	-	-	-	0%	-	-	-	-	1.2%	-	-	-
Bicycles on Road	0	14	1	0	0	-	0	0	7	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	0%	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-

Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)																										
Start Time	N Approach CARLAW AVE						E Approach RIVERDALE AVE						S Approach CARLAW AVE						W Approach RIVERDALE AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
16:00:00	0	31	2	0	7	33	0	0	52	0	11	52	91	0	0	0	7	91	15	18	0	0	13	33	209	
16:15:00	0	39	4	0	3	43	0	0	63	0	7	63	77	0	0	0	0	77	13	16	0	0	11	29	212	
16:30:00	0	43	5	0	6	48	0	0	52	0	10	52	80	0	0	0	2	80	13	10	0	0	12	23	203	
16:45:00	0	42	0	0	9	42	0	0	64	0	4	64	64	0	0	0	2	64	8	13	0	0	9	21	191	
Grand Total	0	155	11	0	25	166	0	0	231	0	32	231	312	0	0	0	11	312	49	57	0	0	45	106	815	
Approach%	0%	93.4%	6.6%	0%	-	-	0%	0%	100%	0%	-	-	100%	0%	0%	0%	-	-	46.2%	53.8%	0%	0%	-	-	-	
Totals %	0%	19%	1.3%	0%	20.4%	0%	0%	28.3%	0%	28.3%	0%	28.3%	38.3%	0%	0%	0%	38.3%	6%	7%	0%	0%	13%	-	-	-	
PHF	0	0.9	0.55	0	0.86	0	0.86	0	0.9	0	0.86	0	0.86	0	0	0	0	0.86	0.82	0.79	0	0	0.8	-	-	-
Heavy	0	0	1	0	1	0	0	10	0	10	0	10	11	0	0	0	11	1	0	0	0	1	-	-	-	
Heavy %	0%	0%	9.1%	0%	0.6%	0%	0%	4.3%	0%	4.3%	0%	4.3%	3.5%	0%	0%	0%	3.5%	2%	0%	0%	0%	0.9%	-	-	-	
Lights	0	155	10	0	165	0	0	221	0	221	0	221	301	0	0	0	0	301	48	57	0	0	105	-	-	
Lights %	0%	100%	90.9%	0%	99.4%	0%	0%	95.7%	0%	95.7%	0%	95.7%	96.5%	0%	0%	0%	96.5%	98%	100%	0%	0%	99.1%	-	-	-	
Single-Unit Trucks	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	-	-	-	
Single-Unit Trucks %	0%	0%	9.1%	0%	0.6%	0%	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0%	0.3%	2%	0%	0%	0%	0.9%	-	-	-	
Buses	0	0	0	0	0	0	0	0	10	0	0	10	10	0	0	0	10	0	0	0	0	0	-	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	4.3%	0%	0%	4.3%	3.2%	0%	0%	0%	3.2%	0%	0%	0%	0%	0%	-	-	-	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
Pedestrians	-	-	-	-	25	-	-	-	-	32	-	32	-	-	-	-	11	-	-	-	-	45	-	-	-	
Pedestrians%	-	-	-	-	22.1%	-	-	-	-	28.3%	-	28.3%	-	-	-	-	9.7%	-	-	-	-	39.8%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	
Bicycles on Road	1	1	0	0	0	-	0	0	3	0	0	-	1	0	0	0	0	-	2	1	0	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)



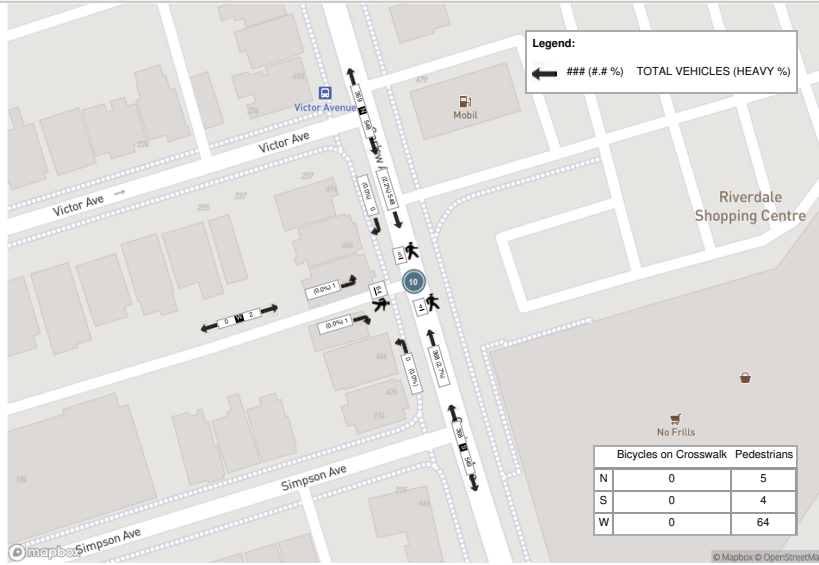
Turning Movement Count (10 . CARLAW AVE & S VICTOR AVE LANEWAY)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach S VICTOR AVE LANEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
11:00:00	0	114	0	1	114	101	0	0	2	101	0	0	0	18	0	215	
11:15:00	0	143	0	0	143	90	1	0	0	91	0	0	0	14	0	234	
11:30:00	0	139	0	1	139	71	0	0	0	71	0	0	0	19	0	210	
11:45:00	0	128	0	0	128	72	0	0	1	72	0	0	0	18	0	200	859
12:00:00	0	133	0	4	133	87	0	0	0	87	0	0	0	11	0	220	864
12:15:00	1	126	0	0	127	110	0	0	0	110	0	1	0	13	1	238	868
12:30:00	0	120	0	1	120	87	0	0	0	87	0	0	0	12	0	207	865
12:45:00	0	148	0	2	148	104	0	0	0	104	0	0	0	7	0	252	917
13:00:00	0	124	0	0	124	86	0	0	1	86	0	0	0	24	0	210	907
13:15:00	0	148	0	1	148	95	0	0	0	95	1	1	0	16	2	245	914
13:30:00	0	120	0	2	120	91	0	0	2	91	0	0	0	20	0	211	918
13:45:00	0	156	0	1	156	84	0	0	2	84	0	0	0	17	0	240	906
14:00:00	0	124	0	1	124	98	0	0	0	98	0	0	0	11	0	222	918
14:15:00	0	135	0	1	135	94	0	0	0	94	0	0	0	26	0	229	902
14:30:00	0	129	0	0	129	95	0	0	0	95	0	0	0	4	0	224	915
14:45:00	0	125	0	0	125	89	0	0	0	89	0	0	0	12	0	214	889
Grand Total	1	2112	0	15	2113	1454	1	0	8	1455	1	2	0	242	3	3571	-
Approach%	0%	100%	0%		-	99.9%	0.1%	0%		-	33.3%	66.7%	0%		-	-	-
Totals %	0%	59.1%	0%		59.2%	40.7%	0%	0%		40.7%	0%	0.1%	0%		0.1%	-	-
Heavy	0	50	0		-	43	0	0		-	0	0	0		-	-	-
Heavy %	0%	2.4%	0%		-	3%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	0	58	0		-	25	0	0		-	0	0	0		-	-	-
Bicycle %	0%	2.7%	0%		-	1.7%	0%	0%		-	0%	0%	0%		-	-	-

Peak Hour: 01:15 PM - 02:15 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach S VICTOR AVE LANEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
13:15:00	0	148	0	1	148	95	0	0	0	95	1	1	0	16	2	245
13:30:00	0	120	0	2	120	91	0	0	2	91	0	0	0	20	0	211
13:45:00	0	156	0	1	156	84	0	0	2	84	0	0	0	17	0	240
14:00:00	0	124	0	1	124	98	0	0	0	98	0	0	0	11	0	222
Grand Total	0	548	0	5	548	368	0	0	4	368	1	1	0	64	2	918
Approach%	0%	100%	0%		-	100%	0%	0%		-	50%	50%	0%		-	-
Totals %	0%	59.7%	0%		59.7%	40.1%	0%	0%		40.1%	0.1%	0.1%	0%		0.2%	-
PHF	0	0.88	0		0.88	0.94	0	0		0.94	0.25	0.25	0		0.25	-
Heavy	0	12	0		12	10	0	0		10	0	0	0		0	-
Heavy %	0%	2.2%	0%		2.2%	2.7%	0%	0%		2.7%	0%	0%	0%		0%	-
Lights	0	536	0		536	358	0	0		358	1	1	0		2	-
Lights %	0%	97.8%	0%		97.8%	97.3%	0%	0%		97.3%	100%	100%	0%		100%	-
Single-Unit Trucks	0	4	0		4	3	0	0		3	0	0	0		0	-
Single-Unit Trucks %	0%	0.7%	0%		0.7%	0.8%	0%	0%		0.8%	0%	0%	0%		0%	-
Buses	0	8	0		8	7	0	0		7	0	0	0		0	-
Buses %	0%	1.5%	0%		1.5%	1.9%	0%	0%		1.9%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	5	-	-	-	-	4	-	-	-	-	64	-	-
Pedestrians%	-	-	-	6.8%	-	-	-	-	5.5%	-	-	-	-	87.7%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	0	12	0	0	-	5	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 01:15 PM - 02:15 PM Weather: Scattered Clouds (3.45 °C)



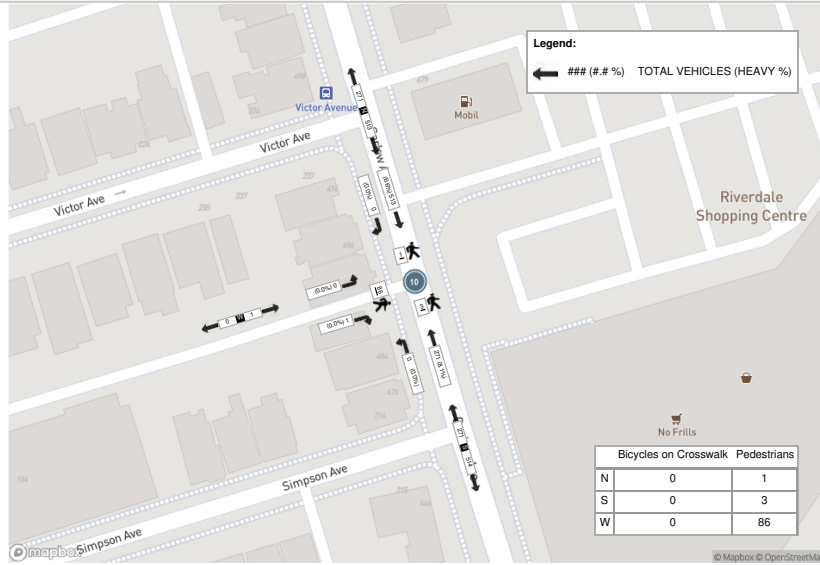
Turning Movement Count (10 . CARLAW AVE & S VICTOR AVE LANEWAY)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach S VICTOR AVE LANEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	0	59	0	0	59	26	0	0	0	26	0	0	0	6	0	85	
07:45:00	0	92	0	0	92	48	0	0	0	48	1	0	0	8	1	141	
08:00:00	0	114	0	0	114	50	0	0	0	50	1	0	0	3	1	165	
08:15:00	0	102	0	1	102	64	0	0	1	64	0	0	0	12	0	166	557
08:30:00	0	123	0	0	123	70	0	0	1	70	1	0	0	39	1	194	666
08:45:00	0	157	0	0	157	72	0	0	1	72	0	0	0	23	0	229	754
09:00:00	0	131	0	0	131	65	0	0	0	65	0	0	0	12	0	196	785
09:15:00	0	94	0	0	94	67	0	0	0	67	1	0	0	9	1	162	781
BREAK																	
16:00:00	0	114	0	0	114	120	0	0	0	120	0	0	0	13	0	234	
16:15:00	1	120	0	2	121	93	0	0	0	93	0	0	0	13	0	214	
16:30:00	1	130	0	1	131	112	0	0	1	112	0	0	0	18	0	243	
16:45:00	0	147	0	1	147	103	0	0	0	103	0	0	0	21	0	250	941
17:00:00	0	132	0	1	132	109	0	0	0	109	0	0	0	19	0	241	948
17:15:00	0	120	0	1	120	99	0	0	0	99	0	0	0	21	0	219	953
17:30:00	0	140	0	0	140	104	0	0	0	104	1	0	0	12	1	245	955
17:45:00	1	141	0	0	142	91	0	0	1	91	0	0	0	30	0	233	938
Grand Total	3	1916	0	7	1919	1293	0	0	5	1293	5	0	0	259	5	3217	-
Approach%	0.2%	99.8%	0%		-	100%	0%	0%		-	100%	0%	0%		-	-	-
Totals %	0.1%	59.6%	0%		59.7%	40.2%	0%	0%		40.2%	0.2%	0%	0%		0.2%	-	-
Heavy	0	89	0		-	69	0	0		-	0	0	0		-	-	-
Heavy %	0%	4.6%	0%		-	5.3%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	0	68	0		-	25	0	0		-	0	0	0		-	-	-
Bicycle %	0%	3.5%	0%		-	1.9%	0%	0%		-	0%	0%	0%		-	-	-

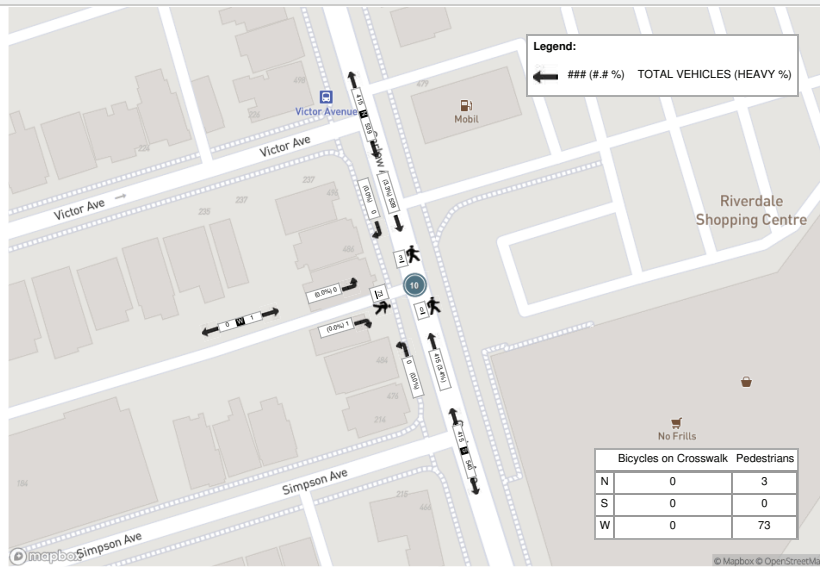
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach S VICTOR AVE LANEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:15:00	0	102	0	1	102	64	0	0	1	64	0	0	0	12	0	166
08:30:00	0	123	0	0	123	70	0	0	1	70	1	0	0	39	1	194
08:45:00	0	157	0	0	157	72	0	0	1	72	0	0	0	23	0	229
09:00:00	0	131	0	0	131	65	0	0	0	65	0	0	0	12	0	196
Grand Total	0	513	0	1	513	271	0	0	3	271	1	0	0	86	1	785
Approach%	0%	100%	0%	-	-	100%	0%	0%	-	-	100%	0%	0%	-	-	-
Totals %	0%	65.4%	0%	-	65.4%	34.5%	0%	0%	-	34.5%	0.1%	0%	0%	-	0.1%	-
PHF	0	0.82	0	-	0.82	0.94	0	0	-	0.94	0.25	0	0	-	0.25	-
Heavy	0	34	0	-	34	22	0	0	-	22	0	0	0	-	0	-
Heavy %	0%	6.6%	0%	-	6.6%	8.1%	0%	0%	-	8.1%	0%	0%	0%	-	0%	-
Lights	0	479	0	-	479	249	0	0	-	249	1	0	0	-	1	-
Lights %	0%	93.4%	0%	-	93.4%	91.9%	0%	0%	-	91.9%	100%	0%	0%	-	100%	-
Single-Unit Trucks	0	11	0	-	11	5	0	0	-	5	0	0	0	-	0	-
Single-Unit Trucks %	0%	2.1%	0%	-	2.1%	1.8%	0%	0%	-	1.8%	0%	0%	0%	-	0%	-
Buses	0	22	0	-	22	16	0	0	-	16	0	0	0	-	0	-
Buses %	0%	4.3%	0%	-	4.3%	5.9%	0%	0%	-	5.9%	0%	0%	0%	-	0%	-
Articulated Trucks	0	1	0	-	1	1	0	0	-	1	0	0	0	-	0	-
Articulated Trucks %	0%	0.2%	0%	-	0.2%	0.4%	0%	0%	-	0.4%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	1	-	-	-	-	3	-	-	-	-	86	-	-
Pedestrians %	-	-	-	1.1%	-	-	-	-	3.3%	-	-	-	-	95.6%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	0	19	0	0	-	1	0	0	0	-	0	0	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach S VICTOR AVE LANEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:45:00	0	147	0	1	147	103	0	0	0	103	0	0	0	21	0	250
17:00:00	0	132	0	1	132	109	0	0	0	109	0	0	0	19	0	241
17:15:00	0	120	0	1	120	99	0	0	0	99	0	0	0	21	0	219
17:30:00	0	140	0	0	140	104	0	0	0	104	1	0	0	12	1	245
Grand Total	0	539	0	3	539	415	0	0	0	415	1	0	0	73	1	955
Approach%	0%	100%	0%	-	-	100%	0%	0%	-	-	100%	0%	0%	-	-	-
Totals %	0%	56.4%	0%	-	56.4%	43.5%	0%	0%	-	43.5%	0.1%	0%	0%	-	0.1%	-
PHF	0	0.92	0	-	0.92	0.95	0	0	-	0.95	0.25	0	0	-	0.25	-
Heavy	0	18	0	-	18	14	0	0	-	14	0	0	0	-	0	-
Heavy %	0%	3.3%	0%	-	3.3%	3.4%	0%	0%	-	3.4%	0%	0%	0%	-	0%	-
Lights	0	521	0	-	521	401	0	0	-	401	1	0	0	-	1	-
Lights %	0%	96.7%	0%	-	96.7%	96.6%	0%	0%	-	96.6%	100%	0%	0%	-	100%	-
Single-Unit Trucks	0	5	0	-	5	4	0	0	-	4	0	0	0	-	0	-
Single-Unit Trucks %	0%	0.9%	0%	-	0.9%	1%	0%	0%	-	1%	0%	0%	0%	-	0%	-
Buses	0	12	0	-	12	10	0	0	-	10	0	0	0	-	0	-
Buses %	0%	2.2%	0%	-	2.2%	2.4%	0%	0%	-	2.4%	0%	0%	0%	-	0%	-
Articulated Trucks	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	0%	0.2%	0%	-	0.2%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	3	-	-	-	-	0	-	-	-	-	73	-	-
Pedestrians %	-	-	-	3.9%	-	-	-	-	0%	-	-	-	-	96.1%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	0	27	0	0	-	15	0	0	0	-	0	0	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)



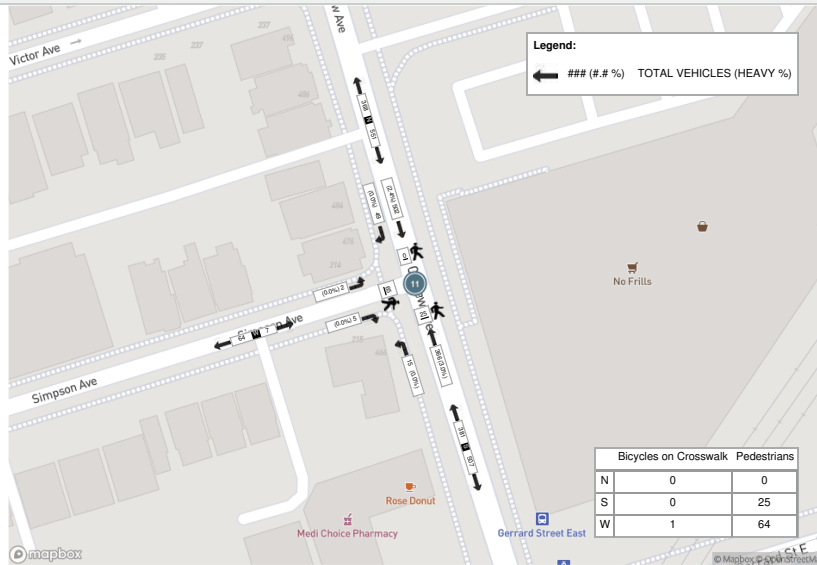
Turning Movement Count (11 . CARLAW AVE & SIMPSON AVE)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach SIMPSON AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N-W	Thru N-S	UTurn N-N	Peds N:	Approach Total	Thru S-N	Left S-W	UTurn S-S	Peds S:	Approach Total	Right W-S	Left W-N	UTurn W-W	Peds W:	Approach Total		
11:00:00	13	101	0	0	114	94	5	1	8	100	0	0	0	18	0	214	
11:15:00	9	134	0	0	143	90	10	0	7	100	0	1	0	15	1	244	
11:30:00	7	131	0	1	138	71	10	0	9	81	0	0	0	16	0	219	
11:45:00	14	114	0	1	128	72	5	1	8	78	0	0	0	19	0	206	883
12:00:00	18	116	0	0	134	87	8	0	9	95	0	0	0	12	0	229	898
12:15:00	9	118	0	0	127	110	6	0	5	116	0	0	0	19	0	243	897
12:30:00	14	108	0	0	122	87	7	0	3	94	0	0	0	12	0	216	894
12:45:00	18	130	0	3	148	103	3	0	1	106	0	2	0	9	2	256	944
13:00:00	9	114	0	0	123	86	8	0	4	94	0	0	0	21	0	217	932
13:15:00	11	140	0	0	151	93	4	2	8	99	0	1	0	13	1	251	940
13:30:00	11	110	0	0	121	92	6	1	5	99	0	0	0	20	0	220	944
13:45:00	17	138	0	0	155	84	1	1	5	86	3	0	0	20	3	244	932
14:00:00	10	114	1	0	125	97	4	0	7	101	2	1	0	12	3	229	944
14:15:00	13	122	0	0	135	92	5	0	7	97	0	1	0	23	1	233	926
14:30:00	10	119	0	0	129	95	5	0	5	100	2	0	0	7	2	231	937
14:45:00	19	105	0	2	124	88	7	0	4	95	1	1	0	12	2	221	914
Grand Total	202	1914	1	7	2117	1441	94	6	95	1541	8	7	0	248	15	3673	-
Approach%	9.5%	90.4%	0%		-	93.5%	6.1%	0.4%		-	53.3%	46.7%	0%		-	-	-
Totals %	5.5%	52.1%	0%		57.6%	39.2%	2.6%	0.2%		42%	0.2%	0.2%	0%		0.4%	-	-
Heavy	3	48	0		-	44	0	0		-	0	0	0		-	-	-
Heavy %	1.5%	2.5%	0%		-	3.1%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	11	46	1		-	24	3	1		-	3	0	0		-	-	-
Bicycle %	5.4%	2.4%	100%		-	1.7%	3.2%	16.7%		-	37.5%	0%	0%		-	-	-

Peak Hour: 01:15 PM - 02:15 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach SIMPSON AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
13:15:00	11	140	0	0	151	93	4	2	8	99	0	1	0	13	1	251
13:30:00	11	110	0	0	121	92	6	1	5	99	0	0	0	20	0	220
13:45:00	17	138	0	0	155	84	1	1	5	86	3	0	0	20	3	244
14:00:00	10	114	1	0	125	97	4	0	7	101	2	1	0	12	3	229
Grand Total	49	502	1	0	552	366	15	4	25	385	5	2	0	65	7	944
Approach%	8.9%	90.9%	0.2%		-	95.1%	3.9%	1%		-	71.4%	28.6%	0%		-	-
Totals %	5.2%	53.2%	0.1%		58.5%	38.8%	1.6%	0.4%		40.8%	0.5%	0.2%	0%		0.7%	-
PHF	0.72	0.9	0.25		0.89	0.94	0.63	0.5		0.95	0.42	0.5	0		0.58	-
Heavy	0	12	0		12	11	0	0		11	0	0	0		0	-
Heavy %	0%	2.4%	0%		2.2%	3%	0%	0%		2.9%	0%	0%	0%		0%	-
Lights	49	490	1		540	355	15	4		374	5	2	0		7	-
Lights %	100%	97.6%	100%		97.8%	97%	100%	100%		97.1%	100%	100%	0%		100%	-
Single-Unit Trucks	0	4	0		4	4	0	0		4	0	0	0		0	-
Single-Unit Trucks %	0%	0.8%	0%		0.7%	1.1%	0%	0%		1%	0%	0%	0%		0%	-
Buses	0	8	0		8	7	0	0		7	0	0	0		0	-
Buses %	0%	1.6%	0%		1.4%	1.9%	0%	0%		1.8%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	25	-	-	-	-	64	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	27.8%	-	-	-	-	71.1%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	1.1%	-	-
Bicycles on Road	0	11	0	0	-	5	0	1	0	-	2	0	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 01:15 PM - 02:15 PM Weather: Scattered Clouds (3.45 °C)



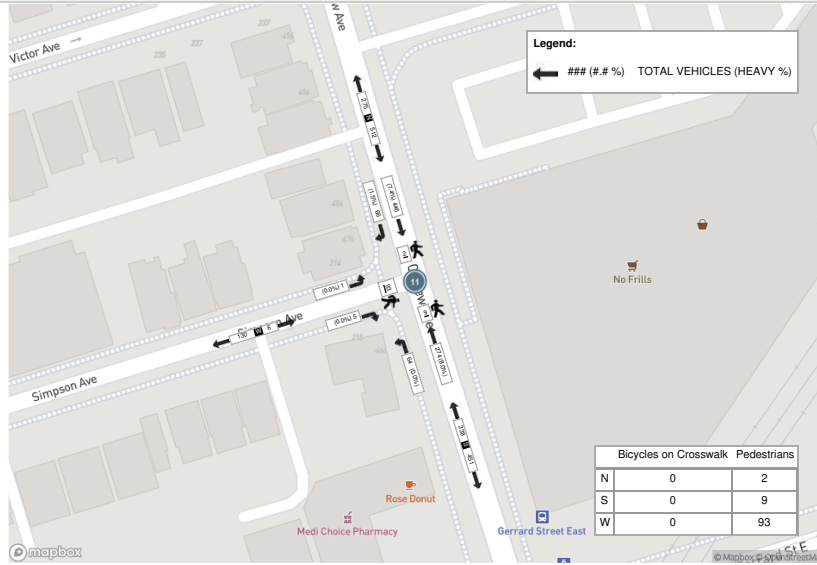
Turning Movement Count (11 . CARLAW AVE & SIMPSON AVE)

Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach SIMPSON AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	8	52	0	1	60	26	5	0	2	31	1	0	0	7	1	92	
07:45:00	8	83	0	0	91	47	8	0	2	55	2	1	0	7	3	149	
08:00:00	15	99	1	1	115	50	12	0	1	62	3	0	0	5	3	180	
08:15:00	14	89	0	1	103	64	22	1	3	87	1	0	0	11	1	191	612
08:30:00	17	106	0	0	123	71	13	0	2	84	3	0	0	41	3	210	730
08:45:00	16	137	0	0	153	72	14	1	2	87	0	1	0	29	1	241	822
09:00:00	19	114	0	1	133	67	15	0	2	82	1	0	0	12	1	216	858
09:15:00	8	88	0	0	96	65	5	0	1	70	1	1	0	7	2	168	835
BREAK																	
16:00:00	14	100	0	0	114	118	14	0	3	132	0	1	0	12	1	247	
16:15:00	11	108	0	0	119	92	13	0	3	105	2	1	0	14	3	227	
16:30:00	13	117	0	0	130	111	10	1	3	122	1	1	0	18	2	254	
16:45:00	15	131	0	0	146	102	10	1	4	113	0	1	0	26	1	260	988
17:00:00	14	117	0	0	131	108	10	0	5	118	3	1	0	22	4	253	994
17:15:00	9	111	0	0	120	98	6	0	2	104	1	2	0	10	3	227	994
17:30:00	14	127	0	0	141	103	12	0	2	115	0	1	0	13	1	257	997
17:45:00	9	129	0	0	138	87	14	1	8	102	2	1	0	32	3	243	980
Grand Total	204	1708	1	4	1913	1281	183	5	45	1469	21	12	0	266	33	3415	-
Approach%	10.7%	89.3%	0.1%	-	-	87.2%	12.5%	0.3%	-	-	63.6%	36.4%	0%	-	-	-	-
Totals %	6%	50%	0%	-	56%	37.5%	5.4%	0.1%	-	43%	0.6%	0.4%	0%	-	1%	-	-
Heavy	2	86	0	-	-	69	1	0	-	-	0	0	0	-	-	-	-
Heavy %	1%	5%	0%	-	-	5.4%	0.5%	0%	-	-	0%	0%	0%	-	-	-	-
Bicycles	8	62	0	-	-	23	6	0	-	-	3	3	0	-	-	-	-
Bicycle %	3.9%	3.6%	0%	-	-	1.8%	3.3%	0%	-	-	14.3%	25%	0%	-	-	-	-

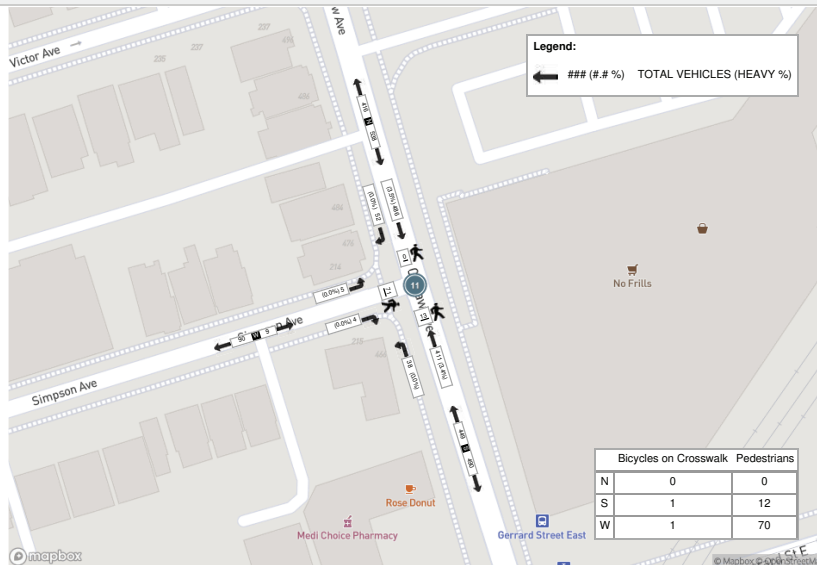
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach SIMPSON AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:15:00	14	89	0	1	103	64	22	1	3	87	1	0	0	11	1	191
08:30:00	17	106	0	0	123	71	13	0	2	84	3	0	0	41	3	210
08:45:00	16	137	0	0	153	72	14	1	2	87	0	1	0	29	1	241
09:00:00	19	114	0	1	133	67	15	0	2	82	1	0	0	12	1	216
Grand Total	66	446	0	2	512	274	64	2	9	340	5	1	0	93	6	858
Approach%	12.9%	87.1%	0%		-	80.6%	18.8%	0.6%		-	83.3%	16.7%	0%		-	-
Totals %	7.7%	52%	0%		59.7%	31.9%	7.5%	0.2%		39.6%	0.6%	0.1%	0%		0.7%	-
PHF	0.87	0.81	0		0.84	0.95	0.73	0.5		0.98	0.42	0.25	0		0.5	-
Heavy	1	33	0		34	22	0	0		22	0	0	0		0	-
Heavy %	1.5%	7.4%	0%		6.6%	8%	0%	0%		6.5%	0%	0%	0%		0%	-
Lights	65	413	0		478	252	64	2		318	5	1	0		6	-
Lights %	98.5%	92.6%	0%		93.4%	92%	100%	100%		93.5%	100%	100%	0%		100%	-
Single-Unit Trucks	0	11	0		11	5	0	0		5	0	0	0		0	-
Single-Unit Trucks %	0%	2.5%	0%		2.1%	1.8%	0%	0%		1.5%	0%	0%	0%		0%	-
Buses	1	21	0		22	16	0	0		16	0	0	0		0	-
Buses %	1.5%	4.7%	0%		4.3%	5.8%	0%	0%		4.7%	0%	0%	0%		0%	-
Articulated Trucks	0	1	0		1	1	0	0		1	0	0	0		0	-
Articulated Trucks %	0%	0.2%	0%		0.2%	0.4%	0%	0%		0.3%	0%	0%	0%		0%	-
Pedestrians	-	-	-	2	-	-	-	-	9	-	-	-	-	93	-	-
Pedestrians%	-	-	-	1.9%	-	-	-	-	8.7%	-	-	-	-	89.4%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	2	17	0	0	-	1	0	0	0	-	1	0	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach CARLAW AVE					S Approach CARLAW AVE					W Approach SIMPSON AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:45:00	15	131	0	0	146	102	10	1	4	113	0	1	0	26	1	260
17:00:00	14	117	0	0	131	108	10	0	5	118	3	1	0	22	4	253
17:15:00	9	111	0	0	120	98	6	0	2	104	1	2	0	10	3	227
17:30:00	14	127	0	0	141	103	12	0	2	115	0	1	0	13	1	257
Grand Total	52	486	0	0	538	411	38	1	13	450	4	5	0	71	9	997
Approach%	9.7%	90.3%	0%		-	91.3%	8.4%	0.2%		-	44.4%	55.6%	0%		-	-
Totals %	5.2%	48.7%	0%		54%	41.2%	3.8%	0.1%		45.1%	0.4%	0.5%	0%		0.9%	-
PHF	0.87	0.93	0		0.92	0.95	0.79	0.25		0.95	0.33	0.63	0		0.56	-
Heavy	0	17	0		17	14	0	0		14	0	0	0		0	-
Heavy %	0%	3.5%	0%		3.2%	3.4%	0%	0%		3.1%	0%	0%	0%		0%	-
Lights	52	469	0		521	397	38	1		436	4	5	0		9	-
Lights %	100%	96.5%	0%		96.8%	96.6%	100%	100%		96.9%	100%	100%	0%		100%	-
Single-Unit Trucks	0	5	0		5	4	0	0		4	0	0	0		0	-
Single-Unit Trucks %	0%	1%	0%		0.9%	1%	0%	0%		0.9%	0%	0%	0%		0%	-
Buses	0	11	0		11	10	0	0		10	0	0	0		0	-
Buses %	0%	2.3%	0%		2%	2.4%	0%	0%		2.2%	0%	0%	0%		0%	-
Articulated Trucks	0	1	0		1	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0.2%	0%		0.2%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	12	-	-	-	-	70	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	14.3%	-	-	-	-	83.3%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	1.2%	-	-	-	-	1.2%	-	-
Bicycles on Road	4	23	0	0	-	13	1	0	0	-	0	2	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (10.5 °C)



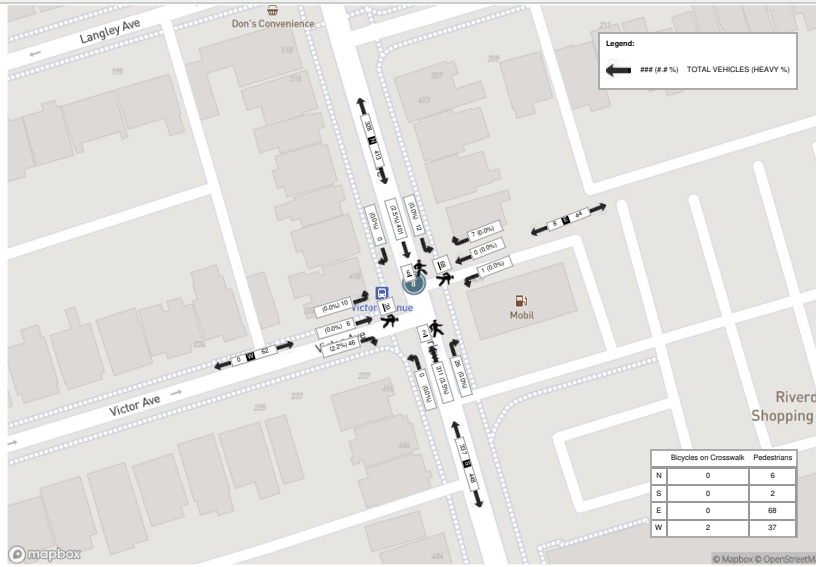


Turning Movement Count (8 . CARLAW AVE & VICTOR AVE / GAS STATION ACCESS)																								
Start Time	N Approach CARLAW AVE						E Approach GAS STATION ACCESS						S Approach CARLAW AVE						W Approach VICTOR AVE					
	Right N/W	Thru N/S	Left N/E	U/Turn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	U/Turn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	U/Turn S/S	Peds S	Approach Total	Right W/S	Thru W/E	Left W/N	U/Turn W/W	Peds W	Approach Total
11:00:00	0	85	7	0	0	92	3	0	2	0	21	5	8	62	0	0	1	70	6	1	3	0	19	10
11:15:00	0	102	4	0	1	106	0	0	3	0	24	3	5	79	0	0	3	84	8	0	2	0	11	10
11:30:00	0	107	2	0	0	109	1	0	1	0	13	2	3	51	0	0	3	54	8	1	1	0	15	10
11:45:00	0	96	4	0	1	100	0	0	1	0	25	1	10	54	0	0	1	64	13	2	0	0	11	15
12:00:00	0	97	4	0	2	101	4	0	1	0	10	5	7	65	0	0	0	72	13	2	0	0	11	15
12:15:00	0	94	3	1	1	98	2	0	0	0	13	2	6	90	0	0	0	96	11	0	3	0	11	14
12:30:00	0	96	1	0	0	97	1	0	0	0	25	1	3	79	0	0	1	82	9	1	2	0	9	12
12:45:00	0	114	4	0	3	118	0	0	0	0	20	0	10	77	0	0	1	87	13	3	5	0	8	21
13:00:00	0	101	4	0	0	105	3	0	0	0	17	3	7	59	0	0	0	66	2	1	6	0	22	9
13:15:00	0	107	5	0	1	112	0	0	5	0	19	5	7	68	0	0	1	75	9	2	2	0	13	13
13:30:00	0	85	3	0	4	88	0	0	0	0	23	0	7	72	0	0	1	79	12	1	1	0	21	14
13:45:00	0	124	4	0	1	128	0	0	1	0	15	1	5	69	0	0	1	74	6	0	3	0	16	9
14:00:00	0	97	2	0	1	99	0	0	1	0	22	1	5	65	0	0	0	70	5	1	6	0	10	12
14:15:00	0	108	5	0	0	113	4	0	0	0	20	4	7	71	0	1	2	79	6	0	3	0	23	9
14:30:00	0	99	4	0	2	103	2	0	4	0	22	6	7	68	0	0	0	75	10	1	2	0	2	13
14:45:00	0	97	2	0	0	99	2	0	1	0	12	3	5	69	0	0	2	74	5	1	6	0	9	12
Grand Total	0	1609	58	1	17	1668	22	0	20	0	301	42	102	1098	0	1	17	1201	136	17	45	0	211	198
Approach%	0%	96.5%	3.5%	0.1%	-	52.4%	0%	47.6%	0%	-	8.5%	91.4%	0%	0.1%	-	68.7%	8.6%	22.7%	0%	-	-	-	-	-
Totals %	0%	51.8%	1.9%	0%	53.7%	0.7%	0%	0.6%	0%	1.4%	3.3%	35.3%	0%	0%	38.6%	4.4%	0.5%	1.4%	0%	6.4%	-	-	-	-
Heavy	0	42	0	0	-	0	0	0	0	-	0	39	0	0	-	2	0	0	0	-	-	-	-	-
Heavy %	0%	2.6%	0%	0%	-	0%	0%	0%	0%	-	0%	3.6%	0%	0%	-	1.5%	0%	0%	0%	-	-	-	-	-
Bicycles	0	52	4	0	-	1	0	0	0	-	1	17	0	0	-	4	2	0	0	-	-	-	-	-
Bicycle %	0%	3.2%	6.9%	0%	-	4.5%	0%	0%	0%	-	1%	1.5%	0%	0%	-	2.9%	11.8%	0%	0%	-	-	-	-	-



Peak Hour: 12:00 PM - 01:00 PM Weather: Scattered Clouds (3.45 °C)																								
Start Time	N Approach CARLAW AVE						E Approach GAS STATION ACCESS						S Approach CARLAW AVE						W Approach VICTOR AVE					
	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total
12:00:00	0	97	4	0	2	101	4	0	1	0	10	5	7	65	0	0	0	72	13	2	0	0	11	15
12:15:00	0	94	3	1	1	98	2	0	0	0	13	2	6	90	0	0	0	96	11	0	3	0	11	14
12:30:00	0	96	1	0	0	97	1	0	0	0	25	1	3	79	0	0	1	82	9	1	2	0	9	12
12:45:00	0	114	4	0	3	118	0	0	0	0	20	0	10	77	0	0	1	87	13	3	5	0	8	21
Grand Total	0	401	12	1	6	414	7	0	1	0	68	8	26	311	0	0	2	337	46	6	10	0	39	62
Approach%	0%	96.9%	2.9%	0.2%	-	87.5%	0%	12.5%	0%	-	7.7%	92.3%	0%	0%	-	74.2%	9.7%	16.1%	0%	-	-	-	-	-
Totals %	0%	48.8%	1.5%	0.1%	50.4%	0.9%	0%	0.1%	0%	1%	3.2%	37.9%	0%	0%	41%	5.6%	0.7%	1.2%	0%	7.6%	-	-	-	-
PHF	0	0.88	0.75	0.25	0.88	0.44	0	0.25	0	0.4	0.65	0.96	0	0	0.88	0.88	0.5	0.5	0	0.74	-	-	-	-
Heavy	0	10	0	0	0	10	0	0	0	0	0	0	0	11	0	0	0	11	1	0	0	0	0	1
Heavy %	0%	2.5%	0%	0%	2.4%	0%	0%	0%	0%	0%	0%	3.5%	0%	0%	3.3%	2.2%	0%	0%	0%	1.6%	-	-	-	-
Lights	0	391	12	1	404	7	0	1	0	8	26	300	0	0	326	45	6	10	0	61	-	-	-	-
Lights %	0%	97.5%	100%	100%	97.6%	100%	0%	100%	0%	100%	100%	96.5%	0%	0%	96.7%	97.8%	100%	100%	0%	98.4%	-	-	-	-
Single-Unit Trucks	0	4	0	0	4	0	0	0	0	0	0	4	0	4	0	0	0	4	1	0	0	0	0	1
Single-Unit Trucks %	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1.3%	0%	0%	1.2%	2.2%	0%	0%	0%	1.6%	-	-	-	-
Buses	0	6	0	0	6	0	0	0	0	0	0	7	0	7	0	0	0	7	0	0	0	0	0	0
Buses %	0%	1.5%	0%	0%	1.4%	0%	0%	0%	0%	0%	0%	2.3%	0%	0%	2.1%	0%	0%	0%	0%	0%	-	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	68	-	-	-	-	2	-	-	-	-	37	-	-	-	-
Pedestrians %	-	-	-	-	5.2%	-	-	-	-	59.1%	-	-	-	-	1.7%	-	-	-	-	32.2%	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	1.7%	-	-	-	-
Bicycles on Road	0	17	2	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-

Peak Hour: 12:00 PM - 01:00 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (8 . CARLAW AVE & VICTOR AVE / GAS STATION ACCESS)

Start Time	N Approach CARLAW AVE						E Approach GAS STATION ACCESS						S Approach CARLAW AVE						W Approach VICTOR AVE						Int. Total (15 min)	Int. Total (1 hr)	
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total			
07:30:00	0	50	1	0	2	51	0	0	0	0	2	0	3	21	0	0	1	24	6	2	3	0	4	11	86		
07:45:00	0	82	2	0	1	84	0	0	0	0	5	0	1	39	0	0	2	40	3	1	1	0	6	5	129		
08:00:00	0	95	0	0	0	95	0	0	0	0	8	0	0	36	0	0	0	36	5	0	0	0	6	5	136		
08:15:00	0	91	1	0	0	92	0	0	0	0	9	0	1	51	0	0	0	52	8	1	1	0	9	10	154	505	
08:30:00	0	110	3	0	0	113	0	0	0	0	43	0	3	62	0	0	1	65	8	0	1	0	36	9	187	606	
08:45:00	0	130	2	0	1	132	0	0	0	0	31	0	3	57	0	0	0	60	8	1	5	0	19	14	206	683	
09:00:00	0	109	8	0	1	117	0	0	5	0	5	5	4	46	0	0	0	50	7	0	0	0	12	7	179	726	
09:15:00	0	71	5	0	0	76	0	0	0	0	6	0	4	55	0	0	0	59	9	1	1	0	5	11	146	718	
BREAK																											
16:00:00	0	87	4	0	0	91	0	0	0	0	11	0	5	93	0	0	1	98	10	0	4	0	14	14	203		
16:15:00	0	98	4	0	1	102	0	0	0	0	17	0	3	82	0	0	2	85	10	1	4	0	7	15	202		
16:30:00	0	100	5	0	0	105	2	0	0	0	10	2	7	87	0	0	1	94	8	3	4	0	16	15	216		
16:45:00	0	103	2	1	0	106	0	0	2	0	12	2	6	69	0	0	4	75	13	0	5	0	20	18	201	822	
17:00:00	0	93	2	0	0	95	2	0	1	0	18	3	11	89	0	0	0	100	9	3	6	0	13	18	216	835	
17:15:00	0	88	3	1	2	92	1	0	1	0	34	2	7	72	0	0	2	79	11	3	3	0	10	17	190	823	
17:30:00	0	97	2	0	0	99	0	0	1	0	17	1	12	78	0	0	2	90	13	0	4	0	10	17	207	814	
17:45:00	0	92	2	0	2	94	1	0	2	0	11	3	7	68	0	0	0	75	16	0	1	0	22	17	189	802	
Grand Total	0	1496	46	2	10	1544	6	0	12	0	239	18	77	1005	0	0	16	1082	144	16	43	0	209	203	2847	-	
Approach%	0%	96.9%	3%	0.1%	-	-	33.3%	0%	66.7%	0%	-	-	7.1%	92.9%	0%	0%	-	-	70.9%	7.9%	21.2%	0%	-	-	-	-	
Totals %	0%	52.5%	1.6%	0.1%	-	54.2%	0.2%	0%	0.4%	0%	0.6%	2.7%	35.3%	0%	0%	0%	38%	5.1%	0.6%	1.5%	0%	7.1%	-	-	-		
Heavy	0	78	0	0	-	-	0	0	0	0	-	-	1	62	0	0	-	-	3	0	1	0	-	-	-	-	
Heavy %	0%	5.2%	0%	0%	-	-	0%	0%	0%	0%	-	-	1.3%	6.2%	0%	0%	-	-	2.1%	0%	2.3%	0%	-	-	-	-	
Bicycles	0	52	1	0	-	-	0	0	0	0	-	-	0	18	2	1	-	-	6	0	3	0	-	-	-	-	
Bicycle %	0%	3.5%	2.2%	0%	-	-	0%	0%	0%	0%	-	-	0%	1.8%	0%	0%	-	-	4.2%	0%	7%	0%	-	-	-	-	

Turning Movement
Count

Page 1 of 5

BAC22Y8Z

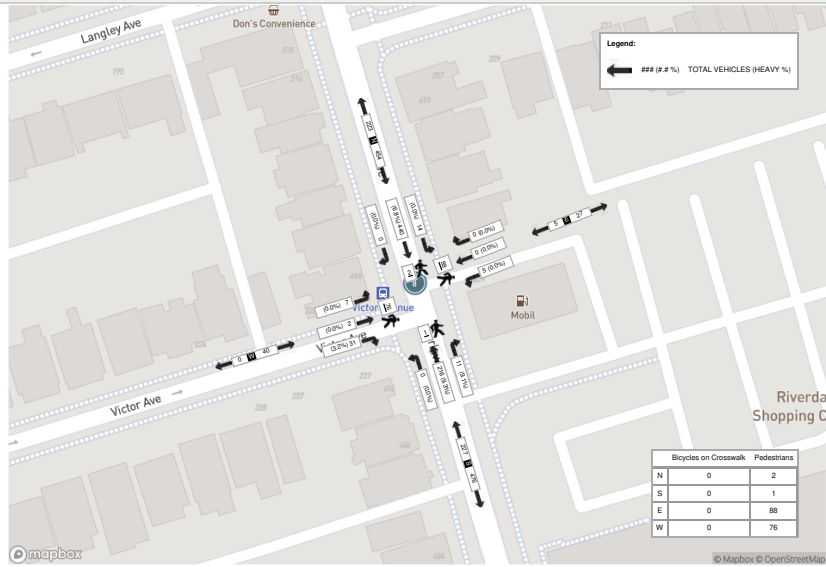


Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach CARLAW AVE					E Approach GAS STATION ACCESS					S Approach CARLAW AVE					W Approach VICTOR AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
08:15:00	0	91	1	0	0	92	0	0	0	0	9	0	1	51	0	0	0	52	8	1	1	0	9	10	154
08:30:00	0	110	3	0	0	113	0	0	0	0	43	0	3	62	0	0	1	65	8	0	1	0	36	9	187
08:45:00	0	130	2	0	1	132	0	0	0	0	31	0	3	57	0	0	0	60	8	1	5	0	19	14	206
09:00:00	0	109	8	0	1	117	0	0	5	0	5	5	4	46	0	0	0	50	7	0	0	0	12	7	179
Grand Total	0	440	14	0	2	454	0	0	5	0	88	5	11	216	0	0	1	227	31	2	7	0	76	40	726
Approach%	0%	96.9%	3.1%	0%	-	-	0%	0%	100%	0%	-	-	4.8%	95.2%	0%	0%	-	77.5%	5%	17.5%	0%	-	-	-	-
Totals %	0%	60.6%	1.9%	0%	62.5%	0%	0%	0.7%	0%	0.7%	1.5%	29.8%	0%	0%	31.3%	4.3%	0.3%	1%	0%	-	-	-	-	5.5%	-
PHF	0	0.85	0.44	0	0	0.85	0	0	0.25	0	0.25	0.69	0.87	0	0	0.87	0.97	0.5	0.35	0	0.71	-	-	-	-
Heavy	0	30	0	0	0	30	0	0	0	0	0	0	20	0	0	0	20	1	0	0	0	1	0	0	21
Heavy %	0	6.8%	0%	0%	0	6.6%	0%	0%	0%	0%	0%	9.1%	9.3%	0%	0%	9.3%	3.2%	0%	0%	0%	2.5%	-	-	-	-
Lights	0	410	14	0	0	424	0	0	5	0	5	5	10	196	0	0	0	206	30	2	7	0	39	0	248
Lights %	0%	93.2%	100%	0%	0	93.4%	0%	0%	100%	0%	100%	100%	90.9%	90.7%	0%	0%	90.7%	96.8%	100%	100%	0%	97.5%	-	-	-
Single-Unit Trucks	0	7	0	0	0	7	0	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	0	0	1
Single-Unit Trucks %	0%	1.6%	0%	0%	0	1.5%	0%	0%	0%	0%	0%	0%	9.1%	1.4%	0%	0%	1.8%	3.2%	0%	0%	0%	2.5%	-	-	-
Buses	0	23	0	0	0	23	0	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	0	0
Buses %	0%	5.2%	0%	0%	0	5.1%	0%	0%	0%	0%	0%	0%	0%	7.4%	0%	0%	7%	0%	0%	0%	0%	0%	0	0	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Articulated Trucks %	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.4%	0%	0%	0%	0%	0%	0	0	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	88	-	-	-	-	-	1	-	-	-	-	76	-	-	-
Pedestrians %	-	-	-	-	1.2%	-	-	-	-	-	52.7%	-	-	-	-	-	0.6%	-	-	-	-	45.5%	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-
Bicycles on Road	0	18	1	0	0	-	0	0	0	0	0	0	0	2	0	0	0	-	1	0	1	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-

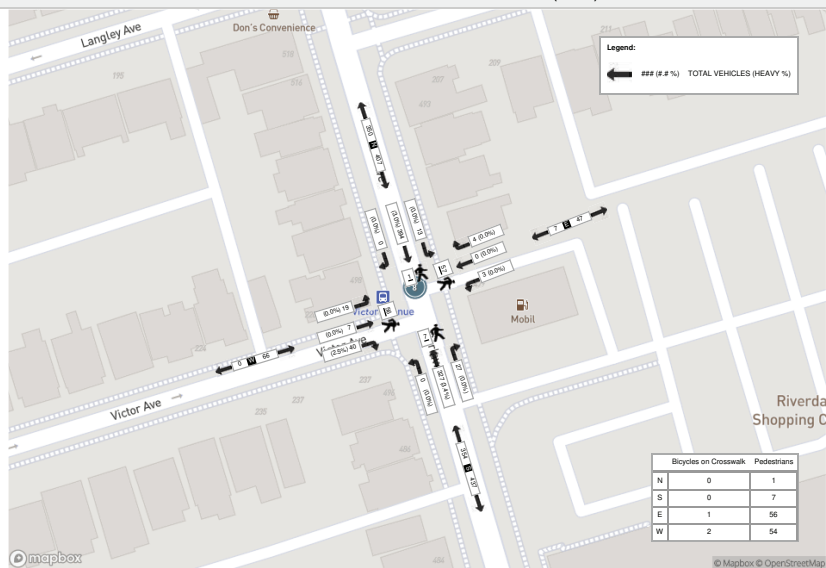


Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																									
Start Time	N Approach CARLAW AVE					E Approach GAS STATION ACCESS					S Approach CARLAW AVE					W Approach VICTOR AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
16:15:00	0	98	4	0	1	102	0	0	0	0	17	0	3	82	0	0	2	85	10	1	4	0	7	15	202
16:30:00	0	100	5	0	0	105	2	0	0	0	10	2	7	87	0	0	1	94	8	3	4	0	16	15	216
16:45:00	0	103	2	1	0	106	0	0	2	0	12	2	6	69	0	0	4	75	13	0	5	0	20	18	201
17:00:00	0	93	2	0	0	95	2	0	1	0	18	3	11	89	0	0	0	100	9	3	6	0	13	18	216
Grand Total	0	394	13	1	1	408	4	0	3	0	57	7	27	327	0	0	7	354	40	7	19	0	56	66	835
Approach%	0%	96.6%	3.2%	0.2%	-	-	57.1%	0%	42.9%	0%	-	-	7.6%	92.4%	0%	0%	-	-	60.6%	10.6%	28.8%	0%	-	-	-
Totals %	0%	47.2%	1.6%	0.1%	48.9%	0.5%	0%	0.4%	0%	0.8%	3.2%	39.2%	0%	0%	42.4%	4.8%	0.8%	2.3%	0%	7.9%	-	-	-	-	
PHF	0	0.96	0.65	0.25	0.96	0.5	0	0.38	0	0.58	0.61	0.92	0	0	0.89	0.77	0.58	0.79	0	0.92	-	-	-	-	
Heavy	0	12	0	0	0	12	0	0	0	0	0	0	0	11	0	0	0	11	1	0	0	0	0	1	
Heavy %	0%	3%	0%	0%	0%	2.9%	0%	0%	0%	0%	0%	0%	0%	3.4%	0%	0%	0%	3.1%	2.5%	0%	0%	0%	1.5%	-	
Lights	0	382	0	1	1	386	4	0	3	0	7	27	316	0	0	343	39	7	19	0	56	66	-		
Lights %	0%	97%	100%	100%	97.1%	100%	0%	100%	0%	100%	100%	100%	96.6%	0%	0%	96.9%	97.5%	100%	100%	0%	98.5%	-	-	-	
Single-Unit Trucks	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	-	-	-	
Single-Unit Trucks %	0%	0.5%	0%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0.3%	2.5%	0%	0%	0%	1.5%	-	-	-	
Buses	0	10	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	-	
Buses %	0%	2.5%	0%	0%	0%	2.5%	0%	0%	0%	0%	0%	0%	3.1%	0%	0%	2.8%	0%	0%	0%	0%	0%	-	-	-	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
Pedestrians	-	-	-	-	1	-	-	-	-	-	56	-	-	-	-	-	7	-	-	-	54	-	-	-	
Pedestrians %	-	-	-	-	0.8%	-	-	-	-	-	46.3%	-	-	-	-	-	5.8%	-	-	-	44.6%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	2	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0.8%	-	-	-	-	-	0%	-	-	-	1.7%	-	-	-	
Bicycles on Road	0	8	0	0	0	-	0	0	0	0	0	-	0	6	1	1	0	-	3	0	1	0	0	-	
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	0%	-	-	-	

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



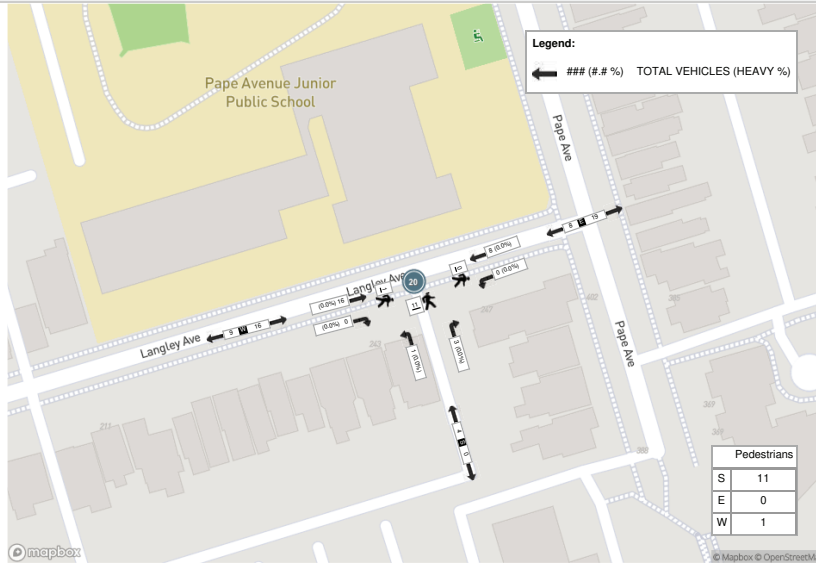
Turning Movement Count (20 . LANGLEY AVE & EAST LANEWAY)

Start Time	E Approach LANGLEY AVE					S Approach EAST LANEWAY					W Approach LANGLEY AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
11:00:00	3	0	0	0	3	0	0	0	0	0	1	0	0	0	1	4	
11:15:00	0	0	0	0	0	1	0	0	1	1	0	5	0	0	5	6	
11:30:00	1	0	0	1	1	0	0	0	2	0	0	1	0	0	1	2	
11:45:00	2	0	0	1	2	0	1	0	6	1	0	3	0	1	3	6	18
12:00:00	4	0	0	0	4	0	0	0	2	0	0	2	0	0	2	6	20
12:15:00	0	0	0	0	0	0	0	0	3	0	0	3	0	0	3	3	17
12:30:00	1	0	0	0	1	1	0	0	2	1	0	5	0	0	5	7	22
12:45:00	3	0	0	0	3	0	1	0	2	1	0	4	0	0	4	8	24
13:00:00	3	0	0	0	3	2	0	0	3	2	0	3	0	0	3	8	26
13:15:00	1	0	0	0	1	0	0	0	4	0	0	4	0	1	4	5	28
13:30:00	1	0	0	0	1	0	0	0	2	0	1	0	0	0	1	2	23
13:45:00	1	1	0	0	2	0	0	0	1	0	0	1	0	0	1	3	18
14:00:00	1	0	0	0	1	1	0	0	1	1	0	3	0	1	3	5	15
14:15:00	1	0	1	1	2	0	0	0	3	0	0	1	0	0	1	3	13
14:30:00	0	0	0	0	0	0	0	0	2	0	0	3	0	0	3	3	14
14:45:00	2	0	0	0	2	0	0	0	1	0	0	5	0	0	5	7	18
Grand Total	24	1	1	3	26	5	2	0	35	7	2	43	0	3	45	78	-
Approach%	92.3%	3.8%	3.8%	-	-	71.4%	28.6%	0%	-	-	4.4%	95.6%	0%	-	-	-	-
Totals %	30.8%	1.3%	1.3%	-	33.3%	6.4%	2.6%	0%	-	9%	2.6%	55.1%	0%	-	57.7%	-	-
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles	4	0	0	0	-	0	0	0	-	-	0	2	0	-	-	-	-
Bicycle %	16.7%	0%	0%	0%	-	0%	0%	0%	-	-	0%	4.7%	0%	-	-	-	-

Peak Hour: 12:30 PM - 01:30 PM Weather: Scattered Clouds (3.45 °C)

Start Time	E Approach LANGLEY AVE					S Approach EAST LANEWAY					W Approach LANGLEY AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
12:30:00	1	0	0	0	1	1	0	0	2	1	0	5	0	0	5	7
12:45:00	3	0	0	0	3	0	1	0	2	1	0	4	0	0	4	8
13:00:00	3	0	0	0	3	2	0	0	3	2	0	3	0	0	3	8
13:15:00	1	0	0	0	1	0	0	0	4	0	0	4	0	1	4	5
Grand Total	8	0	0	0	8	3	1	0	11	4	0	16	0	1	16	28
Approach%	100%	0%	0%	-	-	75%	25%	0%	-	-	0%	100%	0%	-	-	-
Totals %	28.6%	0%	0%	-	28.6%	10.7%	3.6%	0%	-	14.3%	0%	57.1%	0%	-	57.1%	-
PHF	0.67	0	0	-	0.67	0.38	0.25	0	-	0.5	0	0.8	0	-	0.8	-
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lights	8	0	0	-	8	3	1	0	-	4	0	16	0	-	16	-
Lights %	100%	0%	0%	-	100%	100%	100%	0%	-	100%	0%	100%	0%	-	100%	-
Pedestrians	-	-	-	0	-	-	-	-	11	-	-	-	-	1	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	91.7%	-	-	-	-	8.3%	-	-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 12:30 PM - 01:30 PM Weather: Scattered Clouds (3.45 °C)



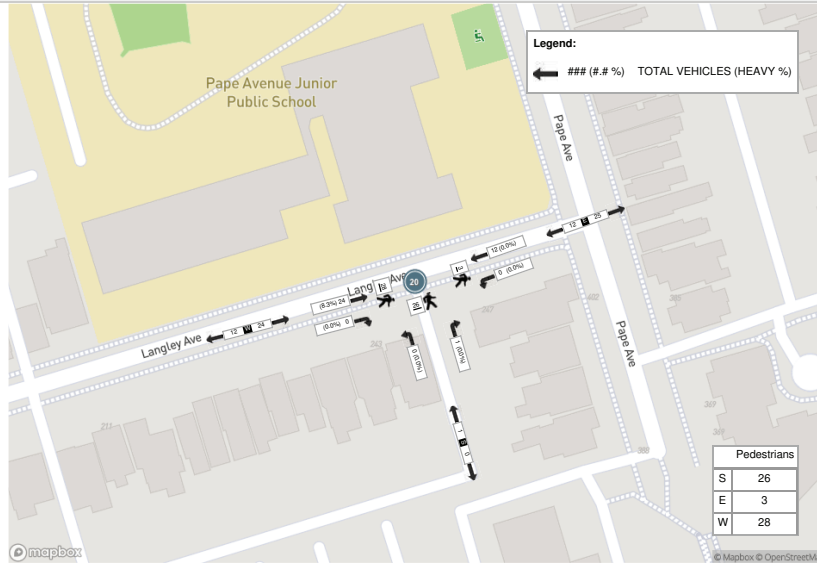
Turning Movement Count (20 . LANGLEY AVE & EAST LANEWAY)

Start Time	E Approach LANGLEY AVE					S Approach EAST LANEWAY					W Approach LANGLEY AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:30:00	2	0	0	0	2	0	0	0	2	0	0	3	0	1	3	5	
07:45:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	2	
08:00:00	0	0	1	0	1	0	0	0	2	0	0	4	0	8	4	5	
08:15:00	1	0	0	2	1	0	0	0	5	0	0	6	0	5	6	7	19
08:30:00	7	0	0	0	7	0	0	0	7	0	0	6	0	7	6	13	27
08:45:00	4	0	0	1	4	1	0	0	12	1	0	8	0	8	8	13	38
09:00:00	2	0	0	0	2	0	1	0	4	1	0	1	0	0	1	4	37
09:15:00	1	0	0	1	1	0	0	0	2	0	0	2	0	2	2	3	33
BREAK																	
16:00:00	0	0	0	3	0	1	0	0	6	1	0	9	0	0	9	10	
16:15:00	0	0	0	0	0	0	0	0	2	0	0	5	0	0	5	5	
16:30:00	3	0	0	1	3	1	0	0	1	1	1	5	0	0	6	10	
16:45:00	2	0	0	0	2	0	0	0	10	0	0	7	0	3	7	9	34
17:00:00	3	0	0	0	3	0	0	0	6	0	0	5	0	1	5	8	32
17:15:00	4	1	1	0	6	0	0	0	4	0	1	7	0	2	8	14	41
17:30:00	2	0	0	0	2	0	0	0	3	0	0	4	0	0	4	6	37
17:45:00	3	0	1	1	4	0	0	0	6	0	0	3	0	0	3	7	35
Grand Total	34	1	3	9	38	3	1	0	74	4	2	77	0	37	79	121	-
Approach%	89.5%	2.6%	7.9%		-	75%	25%	0%		-	2.5%	97.5%	0%		-	-	-
Totals %	28.1%	0.8%	2.5%		31.4%	2.5%	0.8%	0%		3.3%	1.7%	63.6%	0%		65.3%	-	-
Heavy	0	0	0		-	0	0	0		-	0	3	0		-	-	-
Heavy %	0%	0%	0%		-	0%	0%	0%		-	0%	3.9%	0%		-	-	-
Bicycles	3	0	0		-	0	0	0		-	0	8	0		-	-	-
Bicycle %	8.8%	0%	0%		-	0%	0%	0%		-	0%	10.4%	0%		-	-	-

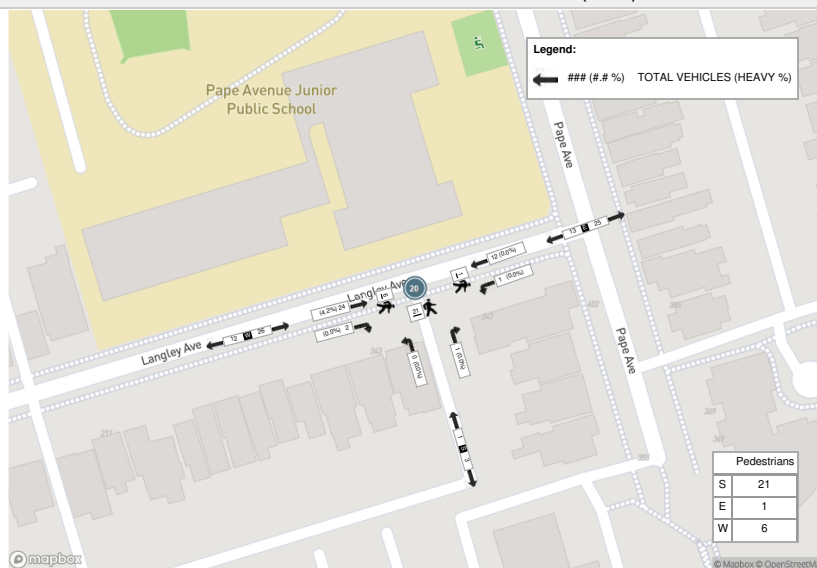
Peak Hour: 08:00 AM - 09:00 AM Weather: Light Rain (3.78 °C)																
Start Time	E Approach LANGLEY AVE					S Approach EAST LANEWAY					W Approach LANGLEY AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	0	0	1	0	1	0	0	0	2	0	0	4	0	8	4	5
08:15:00	1	0	0	2	1	0	0	0	5	0	0	6	0	5	6	7
08:30:00	7	0	0	0	7	0	0	0	7	0	0	6	0	7	6	13
08:45:00	4	0	0	1	4	1	0	0	12	1	0	8	0	8	8	13
Grand Total	12	0	1	3	13	1	0	0	26	1	0	24	0	28	24	38
Approach%	92.3%	0%	7.7%		-	100%	0%	0%		-	0%	100%	0%		-	-
Totals %	31.6%	0%	2.6%		34.2%	2.6%	0%	0%		2.6%	0%	63.2%	0%		63.2%	-
PHF	0.43	0	0.25		0.46	0.25	0	0		0.25	0	0.75	0		0.75	-
Heavy	0	0	0		0	0	0	0		0	0	2	0		2	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	8.3%	0%		8.3%	-
Lights	12	0	1		13	1	0	0		1	0	22	0		22	-
Lights %	100%	0%	100%		100%	100%	0%	0%		100%	0%	91.7%	0%		91.7%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	0	0		0	0	2	0		2	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	8.3%	0%		8.3%	-
Pedestrians	-	-		3	-	-	-		26	-	-		-	28	-	-
Pedestrians%	-	-	-	5.3%	-	-	-		45.6%	-	-	-	-	49.1%	-	-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-		0%	-	-	-		0%	-	-		-	0%	-	-

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)																
Start Time	E Approach LANGLEY AVE					S Approach EAST LANEWAY					W Approach LANGLEY AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:30:00	3	0	0	1	3	1	0	0	1	1	1	5	0	0	6	10
16:45:00	2	0	0	0	2	0	0	0	10	0	0	7	0	3	7	9
17:00:00	3	0	0	0	3	0	0	0	6	0	0	5	0	1	5	8
17:15:00	4	1	1	0	6	0	0	0	4	0	1	7	0	2	8	14
Grand Total	12	1	1	1	14	1	0	0	21	1	2	24	0	6	26	41
Approach%	85.7%	7.1%	7.1%		-	100%	0%	0%		-	7.7%	92.3%	0%		-	-
Totals %	29.3%	2.4%	2.4%		34.1%	2.4%	0%	0%		2.4%	4.9%	58.5%	0%		63.4%	-
PHF	0.75	0.25	0.25		0.58	0.25	0	0		0.25	0.5	0.86	0		0.81	-
Heavy	0	0	0		0	0	0	0		0	0	1	0		1	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	4.2%	0%		3.8%	-
Lights	12	1	1		14	1	0	0		1	2	23	0		25	-
Lights %	100%	100%	100%		100%	100%	0%	0%		100%	100%	95.8%	0%		96.2%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	1	0		1	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	4.2%	0%		3.8%	-
Buses	0	0	0		0	0	0	0		0	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-		1	-	-	-		21	-	-	-		6	-	-
Pedestrians%	-	-	-	3.6%	-	-	-	-	75%	-	-	-	-	21.4%	-	-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	3	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (19 - LANGLEY AVE & WEST LANEWAY)																										
Start Time	N Approach NORTH DRIVEWAY						E Approach LANGLEY AVE						S Approach WEST LANEWAY						W Approach LANGLEY AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N:	Approach Total	Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E:	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S:	Approach Total	Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W:	Approach Total		
11:00:00	0	0	0	0	6	0	0	1	0	1	0	2	0	0	1	0	1	1	0	1	0	0	0	1	4	
11:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	0	0	0	5	5	
11:30:00	0	0	0	0	6	0	0	1	0	0	0	1	0	0	1	0	1	1	1	1	0	0	0	2	4	
11:45:00	0	0	0	0	12	0	0	2	0	0	0	2	0	0	0	0	3	0	0	3	0	0	0	3	5	18
12:00:00	0	0	0	0	3	0	0	5	0	0	0	5	0	0	0	0	5	0	1	2	0	0	2	3	8	22
12:15:00	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	2	0	0	4	0	0	0	4	5	22
12:30:00	1	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	4	0	2	4	0	0	1	6	8	26
12:45:00	0	0	0	0	7	0	0	3	0	0	0	3	0	0	0	0	1	0	0	4	0	0	2	4	7	28
13:00:00	0	0	0	0	3	0	0	2	0	1	0	3	1	0	0	0	3	1	2	1	0	0	0	3	7	27
13:15:00	0	0	0	0	3	0	0	1	1	0	0	2	0	0	0	0	2	0	0	5	0	0	0	5	7	29
13:30:00	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	2	0	1	2	0	0	0	3	4	25
13:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	0	0	0	2	4	22
14:00:00	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	8	0	0	2	0	0	0	2	4	19
14:15:00	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	1	13
14:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	3	3	12
14:45:00	0	0	0	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	6	14
Grand Total	1	0	0	0	54	1	0	23	1	2	1	26	1	0	4	0	41	5	7	43	0	0	5	50	82	-
Approach%	100%	0%	0%	0%	0%	-	0%	88.5%	3.8%	7.7%	-	20%	0%	80%	0%	-	14%	86%	0%	0%	-	-	-	-	-	-
Totals %	1.2%	0%	0%	0%	0%	1.2%	0%	28%	1.2%	2.4%	-	31.7%	1.2%	0%	4.9%	0%	-	6.1%	8.5%	52.4%	0%	0%	-	61%	-	-
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles	0	0	0	0	0	-	0	3	0	0	0	-	0	0	0	0	0	-	0	1	0	0	-	-	-	-
Bicycle %	0%	0%	0%	0%	0%	-	0%	13%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	2.3%	0%	0%	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

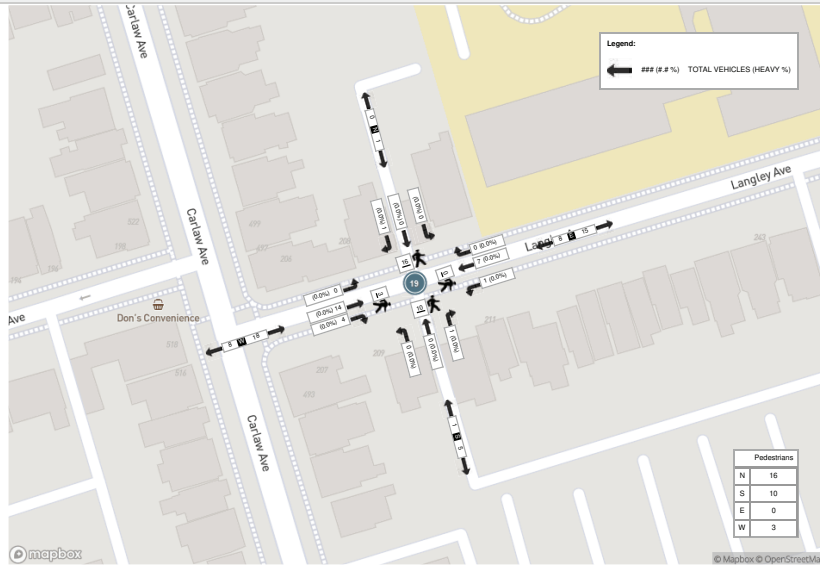
Peak Hour: 12:30 PM - 01:30 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach NORTH DRIVEWAY						E Approach LANGLEY AVE						S Approach WEST LANEWAY						W Approach LANGLEY AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
12:30:00	1	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	4	0	2	4	0	0	1	6	8
12:45:00	0	0	0	0	7	0	0	3	0	0	0	3	0	0	0	0	1	0	0	4	0	0	2	4	7
13:00:00	0	0	0	0	3	0	0	2	0	1	0	3	1	0	0	0	3	1	2	1	0	0	0	3	7
13:15:00	0	0	0	0	3	0	0	1	1	0	0	2	0	0	0	0	2	0	0	5	0	0	0	5	7
Grand Total	1	0	0	0	16	1	0	7	1	1	0	9	1	0	0	0	10	1	4	14	0	0	3	18	29
Approach%	100%	0%	0%	0%	0%	-	0%	77.8%	11.1%	11.1%	-	100%	0%	0%	0%	-	22.2%	77.8%	0%	0%	-	-	-	-	-
Totals %	3.4%	0%	0%	0%	0%	3.4%	0%	24.1%	3.4%	3.4%	-	31%	3.4%	0%	0%	0%	-	3.4%	13.8%	48.3%	0%	0%	-	62.1%	-
PHF	0.25	0	0	0	0	0.25	0	0.58	0.25	0.25	0	0.75	0.25	0	0	0	0	0.25	0.5	0.7	0	0	0	0.75	-
Heavy %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy %	-	-	-	-	-	%	-	-	-	-	-	%	-	-	-	-	-	%	-	-	-	-	-	%	-
Lights	1	0	0	0	0	1	0	7	1	1	0	9	1	0	0	0	0	1	4	14	0	0	0	18	-
Lights %	100%	0%	0%	0%	0%	100%	0%	100%	100%	100%	-	100%	100%	0%	0%	0%	-	100%	100%	100%	0%	0%	-	100%	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	3	-	-
Pedestrians%	-	-	-	-	55.2%	-	-	-	-	-	0%	-	-	-	-	-	34.5%	-	-	-	-	-	10.3%	-	-
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 12:30 PM - 01:30 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (19 - LANGLEY AVE & WEST LANEWAY)

Turning Movement Count (19 - LANGLEY AVE & WEST LANEWAY)																											
Start Time	N Approach NORTH DRIVEWAY						E Approach LANGLEY AVE						S Approach WEST LANEWAY						W Approach LANGLEY AVE						Int. Total (15 min)	Int. Total (1 hr)	
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total			
07:30:00	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	3	0	0	3	0	0	0	0	3	5	
07:45:00	1	0	0	0	4	1	0	1	0	0	0	1	0	0	1	0	3	1	0	2	0	0	0	0	2	5	
08:00:00	0	0	0	0	9	0	0	0	0	0	0	0	0	0	1	0	3	1	1	5	0	0	1	6	7		
08:15:00	0	0	0	0	17	0	0	1	0	0	3	1	1	0	1	0	3	2	0	4	0	0	2	4	7	24	
08:30:00	0	0	0	0	46	0	0	6	0	0	1	6	0	0	0	0	2	0	0	9	0	1	1	10	16	35	
08:45:00	0	0	0	0	60	0	0	6	0	0	6	6	0	0	1	0	10	1	0	7	0	1	5	8	15	45	
09:00:00	0	0	0	0	6	0	0	3	0	0	0	3	0	0	0	0	5	0	0	2	0	0	2	2	5	43	
09:15:00	0	0	0	0	6	0	0	1	0	0	1	1	1	0	0	0	4	1	0	4	0	0	1	4	6	42	
BREAK																											
16:00:00	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	10	0	0	0	10	10		
16:15:00	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	1	0	1	5	0	1	1	7	7		
16:30:00	0	0	0	0	5	0	0	2	0	0	0	2	1	0	0	0	4	1	0	8	0	0	1	8	11		
16:45:00	0	0	0	0	3	0	1	2	0	0	1	3	0	0	0	0	4	0	0	4	0	0	1	4	7	35	
17:00:00	0	0	0	0	8	0	0	2	1	0	2	3	0	0	0	0	11	0	0	5	0	0	0	5	8	33	
17:15:00	0	0	0	0	9	0	0	4	0	0	1	4	1	0	1	0	4	2	0	7	0	0	4	7	13	39	
17:30:00	0	0	0	0	10	0	0	2	0	0	0	2	0	0	1	0	5	1	0	5	0	0	0	5	8	36	
17:45:00	0	0	0	0	5	0	0	2	0	0	2	2	0	0	0	0	2	0	2	4	0	0	2	6	8	37	
Grand Total	1	0	0	0	198	1	1	34	1	0	18	36	4	0	6	0	66	10	4	84	0	3	21	91	138	-	
Approach%	100%	0%	0%	0%	-	-	2.8%	94.4%	2.8%	0%	-	-	40%	0%	60%	0%	-	-	4.4%	92.3%	0%	3.3%	-	-	-	-	
Totals %	0.7%	0%	0%	0%	0.7%	0.7%	0.7%	24.6%	0.7%	0%	25.1%	2.9%	0%	4.3%	0%	7.2%	2.9%	60.9%	0%	2.2%	-	-	65.9%	-	-		
Heavy	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	0	-	-	0	3	0	0	-	-	-	-	
Heavy %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	3.6%	0%	0%	-	-	-	-	
Bicycles	1	0	0	0	-	-	0	1	0	0	-	-	0	0	0	0	-	-	0	5	0	0	-	-	-	-	
Bicycle %	100%	0%	0%	0%	-	-	0%	2.9%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	6%	0%	0%	-	-	-	-	

Turning Movement
Count

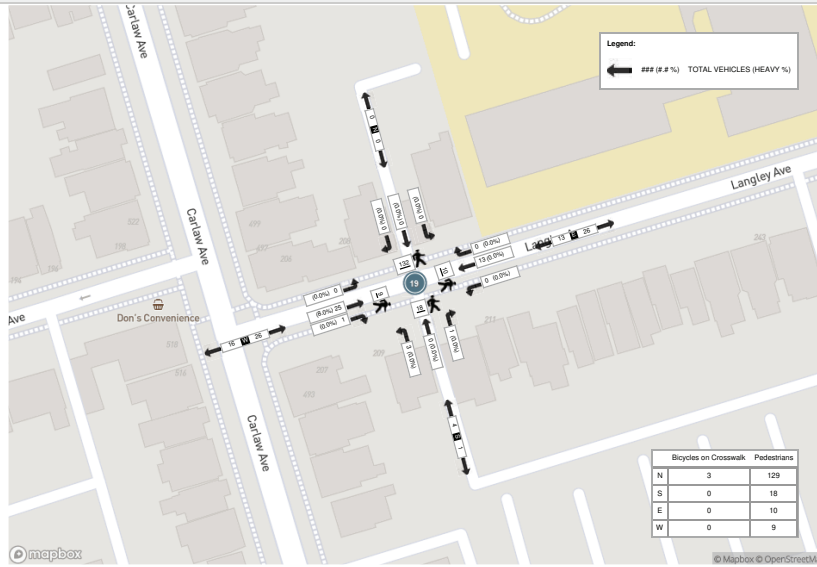
Page 1 of 5

BAC22Y8Z

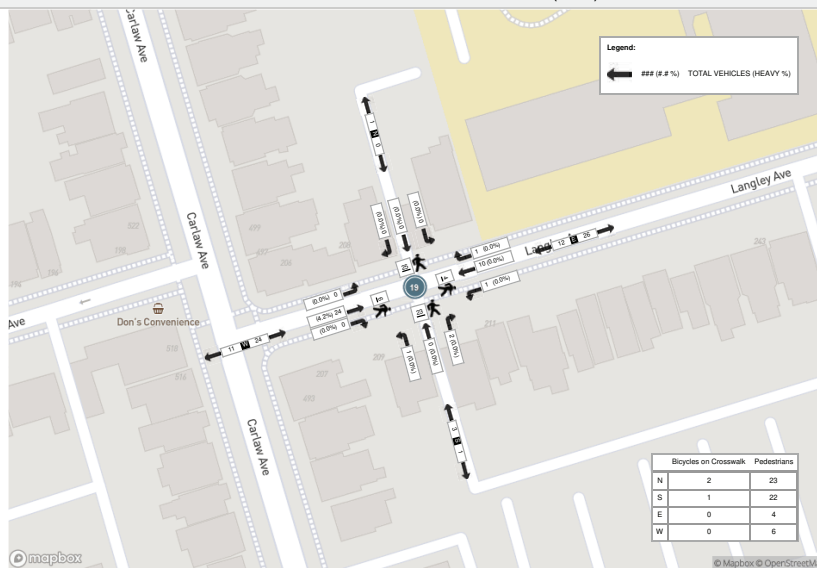
Peak Hour: 08:00 AM - 09:00 AM Weather: Light Rain (3.78 °C)																										
Start Time	N Approach NORTH DRIVEWAY						E Approach LANGLEY AVE						S Approach WEST LANEWAY						W Approach LANGLEY AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
08:00:00	0	0	0	0	9	0	0	0	0	0	0	0	0	0	1	0	3	1	1	5	0	0	1	6	7	
08:15:00	0	0	0	0	17	0	0	1	0	0	3	1	1	0	1	0	3	2	0	4	0	0	2	4	7	
08:30:00	0	0	0	0	46	0	0	6	0	0	1	6	0	0	0	0	2	0	0	9	0	1	1	10	16	
08:45:00	0	0	0	0	60	0	0	6	0	0	6	6	0	0	1	0	10	1	0	7	0	1	5	8	15	
Grand Total	0	0	0	0	132	0	0	13	0	0	10	13	1	0	3	0	18	4	1	25	0	2	9	28	45	
Approach%	0%	0%	0%	0%	-	-	0%	100%	0%	0%	-	-	25%	0%	75%	0%	-	-	3.6%	89.3%	0%	7.1%	-	-	-	
Totals %	0%	0%	0%	0%	28.9%	0%	0%	28.9%	0%	0%	28.9%	28.9%	2.2%	0%	6.7%	0%	8.9%	2.2%	55.6%	0%	4.4%	62.2%	-	-	-	
PIV	0	0	0	0	0	0	0	0.54	0	0	0	0.54	0.25	0	0.75	0	0.5	0.25	0.69	0	0.5	0.7	-	-	-	
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	7.1%	-	-	-	
Lights	0	0	0	0	0	0	0	13	0	0	13	1	0	3	0	4	1	23	0	2	2	26	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	100%	0%	100%	92%	0%	100%	92.9%	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	-	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	7.1%	-	-	-	
Pedestrians	-	-	-	-	129	-	-	-	-	-	10	-	-	-	-	-	18	-	-	-	-	9	-	-	-	
Pedestrians%	-	-	-	-	76.3%	-	-	-	-	-	5.9%	-	-	-	-	-	10.7%	-	-	-	-	5.3%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	
Bicycles on Crosswalk%	-	-	-	-	1.8%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)																										
Start Time	N Approach NORTH DRIVEWAY						E Approach LANGLEY AVE						S Approach WEST LANEWAY						W Approach LANGLEY AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
16:30:00	0	0	0	0	5	0	0	2	0	0	0	2	1	0	0	0	4	1	0	8	0	0	1	8	11	
16:45:00	0	0	0	0	3	0	1	2	0	0	1	3	0	0	0	0	4	0	4	0	0	1	4	7		
17:00:00	0	0	0	0	8	0	0	2	1	0	2	3	0	0	0	0	11	0	0	5	0	0	0	5	8	
17:15:00	0	0	0	0	9	0	0	4	0	0	1	4	1	0	1	0	4	2	0	7	0	0	4	7	13	
Grand Total	0	0	0	0	25	0	1	10	1	0	4	12	2	0	1	0	23	3	0	24	0	0	6	24	39	
Approach%	0%	0%	0%	0%	-	-	8.3%	83.3%	8.3%	0%	-	-	66.7%	0%	33.3%	0%	-	-	0%	100%	0%	0%	-	-	-	
Totals %	0%	0%	0%	0%	-	0%	2.6%	25.6%	2.6%	0%	-	30.8%	5.1%	0%	2.6%	0%	-	7.7%	0%	61.5%	0%	0%	-	61.5%	-	
PIV	0	0	0	0	0	0	0.25	0.63	0.25	0	0	0.75	0.5	0	0.25	0	0.38	0	0.75	0	0	0	0.75	-	0.75	
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.2%	0%	0%	-	4.2%	-	
Lights	0	0	0	0	0	0	1	10	1	0	0	12	2	0	1	0	3	0	23	0	0	0	0	23	-	
Lights %	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	100%	100%	0%	100%	0%	100%	0%	95.8%	0%	0%	0%	0	95.8%	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.2%	0%	0%	0%	4.2%	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	
Pedestrians	-	-	-	-	23	-	-	-	-	-	4	-	-	-	-	-	22	-	-	-	-	-	6	-	-	
Pedestrians%	-	-	-	-	39.7%	-	-	-	-	-	6.9%	-	-	-	-	-	37.9%	-	-	-	-	-	10.3%	-	-	
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	
Bicycles on Crosswalk%	-	-	-	-	3.4%	-	-	-	-	-	0%	-	-	-	-	-	1.7%	-	-	-	-	-	0%	-	-	
Bicycles on Road	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	

Peak Hour: 08:00 AM - 09:00 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (5 . LOGAN AVE & GERRARD ST E)																										
Start Time	N Approach LOGAN AVE						E Approach GERRARD ST						S Approach LOGAN AVE						W Approach GERRARD ST						Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right E/N	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right S/E	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total		
11:00:00	0	0	0	0	34	0	2	72	12	0	6	86	20	36	13	0	20	69	13	107	7	0	15	127	282	
11:15:00	0	0	0	0	21	0	8	82	15	0	16	105	5	12	8	0	27	25	12	82	5	0	30	99	229	
11:30:00	0	0	0	0	20	0	8	112	6	0	17	126	12	20	8	0	37	40	10	84	11	0	36	105	271	
11:45:00	1	0	0	0	26	1	8	86	8	0	26	102	13	27	17	0	28	57	9	81	5	0	40	95	255	1037
12:00:00	0	0	0	0	19	0	3	107	10	0	22	120	10	36	11	0	25	57	12	94	5	0	46	111	288	1043
12:15:00	0	0	0	0	23	0	9	98	13	0	15	120	20	32	17	0	26	69	6	88	6	0	18	100	289	1103
12:30:00	0	0	0	0	27	0	2	99	7	0	16	108	15	26	14	0	35	55	8	86	7	0	33	101	264	1096
12:45:00	0	0	0	0	21	0	11	114	10	0	12	135	15	27	14	0	48	56	13	82	5	0	38	100	291	1132
13:00:00	0	0	0	0	27	0	11	109	11	0	23	131	11	36	20	0	49	67	11	95	6	0	30	112	310	1154
13:15:00	0	0	0	0	30	0	4	94	7	0	22	105	19	28	13	0	43	60	9	99	10	0	34	118	283	1148
13:30:00	0	0	0	0	28	0	9	82	11	0	16	102	15	33	5	0	41	53	12	86	8	0	33	106	261	1145
13:45:00	0	0	0	0	37	0	4	103	10	0	18	117	9	30	7	0	46	46	15	88	8	0	49	111	274	1128
14:00:00	0	0	0	0	41	0	19	96	8	0	16	123	9	32	14	0	37	55	10	91	3	0	32	104	282	1100
14:15:00	0	0	0	0	32	0	12	82	7	0	14	101	10	25	11	0	40	46	15	105	3	0	19	123	270	1087
14:30:00	0	0	0	0	32	0	16	93	6	0	35	115	12	27	12	0	37	51	13	109	4	0	39	126	292	1118
14:45:00	0	0	0	0	23	0	10	93	3	0	21	106	13	27	13	0	40	53	17	84	6	0	37	107	266	1110
Grand Total	1	0	0	0	441	1	136	1522	144	0	295	1802	208	454	197	0	579	899	185	1461	99	0	529	1745	4407	-
Approach%	100%	0%	0%	0%	0%	-	7.5%	84.5%	8%	0%	-	24.2%	52.9%	22.9%	0%	-	10.6%	83.7%	5.7%	0%	-	-	-	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	3.1%	34.5%	3.3%	0%	40.9%	4.7%	10.3%	4.5%	0%	19.5%	4.2%	33.2%	2.2%	0%	39.6%	-	-	-	-	-
Heavy	0	0	0	0	0	-	0	43	2	0	-	4	3	5	0	-	1	42	0	0	-	-	-	-	-	-
Heavy %	0%	0%	0%	0%	0%	-	0%	2.8%	1.4%	0%	-	1.9%	0.7%	2.5%	0%	-	0.5%	2.9%	0%	0%	-	-	-	-	-	-
Bicycles	2	12	0	0	0	-	16	49	1	0	-	7	37	0	0	-	3	44	7	0	-	-	-	-	-	-
Bicycle %	200%	0%	0%	0%	0%	-	11.8%	3.2%	0.7%	0%	-	3.4%	8.1%	0%	0%	-	1.6%	3%	7.1%	0%	-	-	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)																										
Start Time	N Approach LOGAN AVE						E Approach GERRARD ST						S Approach LOGAN AVE						W Approach GERRARD ST						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
12:15:00	0	0	0	0	23	0	9	98	13	0	15	120	20	32	17	0	26	69	6	88	6	0	18	100	289	
12:30:00	0	0	0	0	27	0	2	99	7	0	16	108	15	26	14	0	35	55	8	86	7	0	33	101	264	
12:45:00	0	0	0	0	21	0	11	114	10	0	12	135	15	27	14	0	48	56	13	82	5	0	38	100	291	
13:00:00	0	0	0	0	27	0	11	109	11	0	23	131	11	36	20	0	49	67	11	95	6	0	30	112	310	
Grand Total	0	0	0	0	98	0	33	420	41	0	66	494	61	121	65	0	158	247	38	351	24	0	119	413	1154	
Approach%	0%	0%	0%	0%	0%	-	6.7%	85%	8.3%	0%	-	24.7%	49%	26.3%	0%	-	9.2%	85%	5.8%	0%	-	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	2.9%	36.4%	3.6%	0%	42.8%	5.3%	10.5%	5.6%	0%	21.4%	3.3%	30.4%	2.1%	0%	35.8%	-	-	-	-	
PHF	0	0	0	0	0	0	0.75	0.92	0.79	0	0.91	0.76	0.84	0.81	0	0.89	0.73	0.92	0.88	0	0.92	-	-	-	-	
Heavy	0	0	0	0	0	-	0	0	11	2	0	13	1	1	1	0	3	0	14	0	0	-	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	2.6%	4.9%	0%	2.6%	1.6%	0.8%	1.5%	0%	1.2%	0%	4%	0%	0%	-	-	-	-	-	
Lights	0	0	0	0	0	0	33	409	39	0	481	60	120	64	0	244	38	337	24	0	399	-	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	100%	97.4%	95.1%	0%	97.4%	98.4%	99.2%	98.5%	0%	98.8%	100%	96%	100%	0%	96.6%	-	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	3	2	0	5	1	1	1	0	3	0	4	0	0	4	-	-	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0.7%	4.9%	0%	1%	1.6%	0.8%	1.5%	0%	1.2%	0%	1.1%	0%	0%	1%	-	-	-	-	
Buses	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	-	-	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	1.9%	0%	0%	1.6%	0%	0%	0%	0%	0%	0%	2.8%	0%	0%	2.4%	-	-	-	-	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
Pedestrians	-	-	-	-	98	-	-	-	-	-	66	-	-	-	-	-	157	-	-	-	-	115	-	-	-	
Pedestrians %	-	-	-	-	22.2%	-	-	-	-	-	15%	-	-	-	-	-	35.6%	-	-	-	-	26.1%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	4	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0.2%	-	-	-	-	0.9%	-	-	-	
Bicycles on Road	0	3	0	0	0	-	1	18	1	0	0	-	1	8	0	0	0	-	0	12	0	0	0	-	-	
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (S . LOGAN AVE & GERRARD ST E)																									
Start Time	N Approach LOGAN AVE					E Approach GERRARD ST					S Approach LOGAN AVE					W Approach GERRARD ST					Int. Total (15 min)	Int. Total (1 hr)			
	Right N\W	Thru N\S	Left N\E	UTurn N\N	Peds N:	Approach Total	Right E\N	Thru E\W	Left E\E	UTurn E\E	Peds E:	Approach Total	Right S\E	Thru S\N	Left S\W	UTurn S\S	Peds S:	Approach Total	Right W\S	Thru W\E			Left W\N	UTurn W\W	Peds W:
07:30:00	0	0	0	0	4	0	3	89	7	1	2	100	8	6	3	0	4	17	6	24	0	0	3	30	147
07:45:00	0	0	0	0	3	0	6	100	6	0	1	112	2	11	6	0	6	19	12	44	4	0	14	60	191
08:00:00	0	0	0	0	9	0	9	117	10	0	4	136	2	13	12	0	7	27	7	48	4	0	11	59	222
08:15:00	0	0	0	0	5	0	7	123	10	0	3	140	5	30	13	0	14	48	11	54	5	0	18	70	258
08:30:00	0	0	0	0	39	0	5	115	9	0	8	129	9	31	15	0	27	55	10	68	2	0	31	80	264
08:45:00	0	0	0	0	29	0	9	124	12	0	5	145	8	23	13	0	17	44	9	67	5	0	20	81	270
09:00:00	0	0	0	0	10	0	5	129	11	0	5	145	9	16	10	0	21	35	13	66	4	0	15	83	263
09:15:00	0	0	0	0	16	0	3	100	6	0	2	109	13	15	11	0	19	39	11	67	3	0	18	81	229
BREAK																									
16:00:00	0	0	0	0	28	0	16	73	9	0	7	98	17	30	8	0	27	55	8	101	8	0	26	117	270
16:15:00	0	0	0	0	23	0	9	82	2	0	11	93	21	32	4	0	22	57	12	144	3	0	19	159	309
16:30:00	0	0	0	0	33	0	10	88	9	0	7	107	22	28	14	0	24	64	8	126	5	0	21	139	310
16:45:00	0	0	0	0	22	0	10	67	9	0	10	86	11	37	10	0	31	58	11	122	1	0	34	134	278
17:00:00	0	0	0	0	24	0	12	96	7	0	15	115	18	27	6	0	33	51	8	122	4	0	24	134	300
17:15:00	0	0	0	0	25	0	8	97	11	0	15	116	15	37	9	0	29	61	20	123	7	0	24	150	327
17:30:00	0	0	0	0	26	0	5	77	6	0	10	88	14	34	11	0	36	59	12	132	6	0	30	150	297
17:45:00	0	0	0	0	26	0	10	88	10	0	11	108	9	27	7	0	42	43	10	98	3	0	28	111	262
Grand Total	0	0	0	0	322	0	127	1565	134	1	116	1827	183	397	152	0	359	732	168	1406	64	0	336	1638	4197
Approach%	0%	0%	0%	0%	-	-	7%	85.7%	7.3%	0.1%	-	25%	54.2%	20.8%	0%	-	10.3%	85.8%	3.9%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	3%	37.3%	3.2%	0%	43.5%	4.4%	9.5%	3.6%	0%	17.4%	4%	33.5%	1.5%	0%	39%	-	-		
Heavy	0	0	0	0	-	-	4	63	4	1	-	-	3	5	3	0	-	9	59	0	0	-	-	-	
Heavy %	0%	0%	0%	0%	-	-	3.1%	4%	3%	100%	-	-	1.6%	1.3%	2%	0%	-	5.4%	4.2%	0%	0%	-	-	-	
Bicycles	1	5	0	0	-	-	7	35	2	0	-	-	4	37	3	0	-	6	37	3	0	-	-	-	
Bicycle %	0%	0%	0%	0%	-	-	5.5%	2.2%	1.5%	0%	-	-	2.2%	9.3%	2%	0%	-	3.6%	2.6%	4.7%	0%	-	-	-	

Turning Movement
Count

Page 1 of 5

BAC22Y8Z

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach LOGAN AVE						E Approach GERRARD ST						S Approach LOGAN AVE						W Approach GERRARD ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:15:00	0	0	0	0	5	0	7	123	10	0	3	140	5	30	13	0	14	48	11	54	5	0	18	70	258
08:30:00	0	0	0	0	39	0	5	115	9	0	8	129	9	31	15	0	27	55	10	68	2	0	31	80	264
08:45:00	0	0	0	0	29	0	9	124	12	0	5	145	8	23	13	0	17	44	9	67	5	0	20	81	270
09:00:00	0	0	0	0	10	0	5	129	11	0	5	145	9	16	10	0	21	35	13	66	4	0	15	83	263
Grand Total	0	0	0	0	83	0	26	491	42	0	21	559	31	100	51	0	79	182	43	255	16	0	84	314	1055
Approach%	0%	0%	0%	0%	-	-	4.7%	87.8%	7.5%	0%	-	-	17%	54.9%	28%	0%	-	13.7%	81.2%	5.1%	0%	-	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	2.5%	46.5%	4%	0%	53%	53%	2.9%	9.5%	4.8%	0%	17.3%	4.1%	24.2%	1.5%	0%	-	-	-	29.8%
PHF	0	0	0	0	0	0	0.72	0.95	0.88	0	0.96	0.96	0.86	0.81	0.85	0	0.83	0.83	0.94	0.8	0	0	0.95	-	-
Heavy	0	0	0	0	0	0	1	25	2	0	0	28	1	5	1	0	7	8	21	0	0	0	29	-	-
Heavy %	0%	0%	0%	0%	0%	0%	3.8%	5.1%	4.8%	0%	0%	5%	3.2%	0%	2%	0%	3.8%	18.6%	8.2%	0%	0%	-	-	-	9.2%
Lights	0	0	0	0	0	0	25	466	40	0	0	531	30	95	50	0	175	35	234	16	0	0	285	-	-
Lights %	0%	0%	0%	0%	0%	0%	96.2%	94.9%	95.2%	0%	95%	95%	96.8%	95%	98%	0%	96.2%	81.4%	91.8%	100%	0%	-	-	-	90.8%
Single-Unit Trucks	0	0	0	0	0	0	1	7	0	0	0	8	0	2	0	0	2	0	5	0	0	0	5	-	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	3.8%	1.4%	0%	0%	1.4%	1.4%	0%	2%	0%	0%	1.1%	0%	2%	0%	0%	-	-	-	1.6%
Buses	0	0	0	0	0	0	0	18	2	0	0	20	1	3	1	0	5	8	16	0	0	0	24	-	-
Buses %	0%	0%	0%	0%	0%	0%	0%	3.7%	4.8%	0%	3.6%	3.6%	3.2%	3%	2%	0%	2.7%	18.6%	6.3%	0%	0%	-	-	-	7.6%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	0%
Pedestrians	-	-	-	-	82	-	-	-	-	-	21	-	-	-	-	-	77	-	-	-	-	-	83	-	-
Pedestrians %	-	-	-	-	30.7%	-	-	-	-	-	7.9%	-	-	-	-	-	28.8%	-	-	-	-	-	31.1%	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-
Bicycles on Crosswalk %	-	-	-	-	0.4%	-	-	-	-	-	0%	-	-	-	-	-	0.7%	-	-	-	-	-	0.4%	-	-
Bicycles on Road	0	0	0	0	0	0	0	10	1	0	0	0	1	3	1	0	0	-	2	3	0	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)																									
Start Time	N Approach LOGAN AVE						E Approach GERRARD ST						S Approach LOGAN AVE						W Approach GERRARD ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:30:00	0	0	0	0	33	0	10	88	9	0	7	107	22	28	14	0	24	64	8	126	5	0	21	139	310
16:45:00	0	0	0	0	22	0	10	67	9	0	10	86	11	37	10	0	31	58	11	122	1	0	34	134	278
17:00:00	0	0	0	0	24	0	12	96	7	0	15	115	18	27	6	0	33	51	8	122	4	0	24	134	300
17:15:00	0	0	0	0	25	0	8	97	11	0	15	116	15	37	9	0	29	61	20	123	7	0	24	150	327
Grand Total	0	0	0	0	104	0	40	348	36	0	47	424	66	129	39	0	117	234	47	493	17	0	103	557	1215
Approach%	0%	0%	0%	0%	-	-	9.4%	82.1%	8.5%	0%	-	-	28.2%	55.1%	16.7%	0%	-	-	8.4%	88.9%	3.1%	0%	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	3.3%	28.6%	3%	0%	34.9%	34.9%	5.4%	10.6%	3.2%	0%	19.3%	3.9%	40.6%	1.4%	0%	-	-	45.8%	-
PHF	0	0	0	0	0	0	0.83	0.9	0.82	0	0.91	0.91	0.75	0.87	0.7	0	0	0.91	0.59	0.98	0.61	0	0	0.93	-
Heavy	0	0	0	0	0	0	1	13	0	0	0	14	0	0	0	0	0	0	0	11	0	0	11	-	-
Heavy %	0%	0%	0%	0%	0%	0%	2.5%	3.7%	0%	0%	3.3%	3.3%	0%	0%	0%	0%	0%	0%	0%	2.2%	0%	0%	2%	-	-
Lights	0	0	0	0	0	0	39	335	36	0	0	410	66	129	39	0	234	47	482	17	0	0	546	-	-
Lights %	0%	0%	0%	0%	0%	0%	97.5%	96.3%	100%	0%	96.7%	96.7%	100%	100%	100%	0%	100%	100%	97.8%	100%	0%	-	-	98%	-
Single-Unit Trucks	0	0	0	0	0	0	1	3	0	0	0	4	0	0	0	0	0	0	0	2	0	0	2	-	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	2.5%	0.9%	0%	0%	0.9%	0%	0%	0%	0%	0%	0%	0%	0%	0.4%	0%	0%	0%	-	-
Buses	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	9	0	0	9	-	-
Buses %	0%	0%	0%	0%	0%	0%	0%	2.9%	0%	0%	2.4%	2.4%	0%	0%	0%	0%	0%	0%	0%	1.8%	0%	0%	1.6%	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-
Pedestrians	-	-	-	-	104	-	-	-	-	-	45	-	-	-	-	-	116	-	-	-	-	-	97	-	-
Pedestrians %	-	-	-	-	28%	-	-	-	-	-	12.1%	-	-	-	-	-	31.3%	-	-	-	-	-	26.1%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	6	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0.5%	-	-	-	-	-	0.3%	-	-	-	-	-	1.6%	-	-
Bicycles on Road	1	3	0	0	0	-	1	11	1	0	0	-	2	16	0	0	0	-	2	15	1	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (2. LOGAN AVE & LANGLEY AVE)																										
Start Time	N Approach LOGAN AVE						E Approach LANGLEY AVE						S Approach LOGAN AVE						W Approach LANGLEY AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N	Approach Total	Right E/E	Thru E/W	Left E/S	UTurn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S	Approach Total	Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W	Approach Total		
11:00:00	0	0	0	0	1	0	12	5	0	0	12	17	0	38	1	0	6	39	0	0	0	0	10	0	56	
11:15:00	0	0	0	0	9	0	17	8	0	0	35	25	0	30	3	0	6	33	0	0	0	0	24	0	58	
11:30:00	0	0	0	0	11	0	10	7	0	0	14	17	0	35	5	0	7	40	0	0	0	0	18	0	57	
11:45:00	0	0	0	0	2	0	10	6	0	0	22	16	0	31	4	0	6	35	0	0	0	0	22	0	51	
12:00:00	0	0	0	0	11	0	13	15	0	0	18	28	0	41	2	0	6	43	0	0	0	0	31	0	71	
12:15:00	0	0	0	0	11	0	16	7	0	0	32	23	0	47	4	0	5	51	0	0	0	0	19	0	74	
12:30:00	0	0	0	0	6	0	15	14	0	0	14	29	0	40	6	0	3	46	0	0	0	0	17	0	75	
12:45:00	0	0	0	0	7	0	17	10	0	0	28	27	0	44	1	0	1	45	0	0	0	0	25	0	72	
13:00:00	0	0	0	0	6	0	14	6	0	0	28	20	0	51	6	0	7	57	0	0	0	0	33	0	77	
13:15:00	0	0	0	0	5	0	11	5	0	0	19	16	0	36	2	0	14	38	0	0	0	0	27	0	54	
13:30:00	0	0	0	0	5	0	11	19	0	0	22	30	0	41	4	0	3	45	0	0	0	0	24	0	75	
13:45:00	0	0	0	0	4	0	24	10	0	0	20	34	0	50	2	0	1	52	0	0	0	0	34	0	86	
14:00:00	0	0	0	0	9	0	9	9	0	0	34	18	0	50	5	0	3	55	0	0	0	0	19	0	73	
14:15:00	0	0	0	0	8	0	8	9	0	0	21	17	0	40	3	0	4	43	0	0	0	0	33	0	60	
14:30:00	0	0	0	0	10	0	7	9	0	0	25	16	0	44	2	0	4	46	0	0	0	0	23	0	62	
14:45:00	0	0	0	0	4	0	20	11	0	0	42	31	0	34	6	0	4	40	0	0	0	0	33	0	71	
Grand Total	0	0	0	0	109	0	214	150	0	0	386	364	0	652	56	0	80	708	0	0	0	0	392	0	1072	
Approach%	0%	0%	0%	0%		-	58.8%	41.2%	0%	0%		-	0%	92.1%	7.9%	0%		-	0%	0%	0%	0%		-	-	
Totals %	0%	0%	0%	0%		0%	20%	14%	0%	0%		34%	0%	60.8%	5.2%	0%		66%	0%	0%	0%	0%		0%	-	
Heavy	0	0	0	0		-	1	0	0	0		-	0	3	1	0		-	0	0	0	0		-	-	
Heavy %	0%	0%	0%	0%		-	0.5%	0%	0%	0%		-	0%	0.5%	1.8%	0%		-	0%	0%	0%	0%		-	-	
Bicycles	2	14	0	0		-	2	10	2	0		-	1	51	7	0		-	0	0	0	0		-	-	
Bicycle %	0%	0%	0%	0%		-	0.9%	6.7%	0%	0%		-	0%	7.8%	12.5%	0%		-	0%	0%	0%	0%		-	-	

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

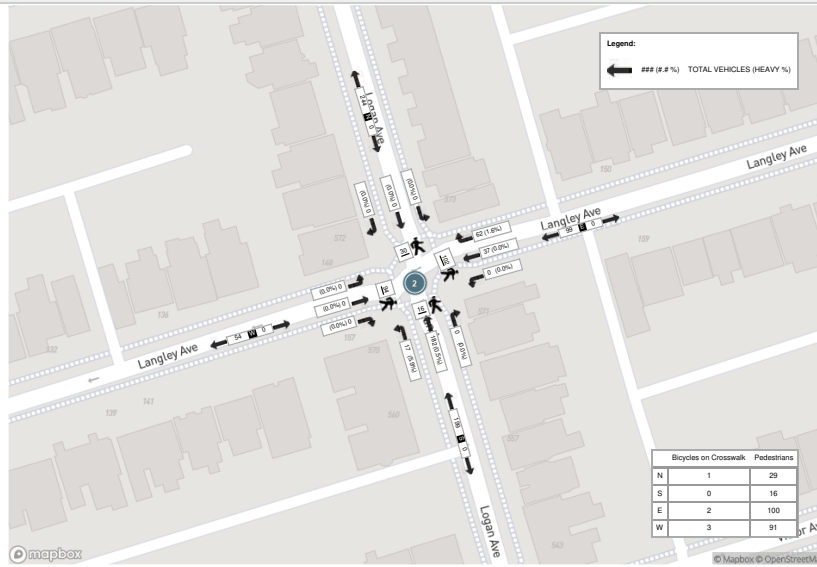
Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)																										
Start Time	N Approach LOGAN AVE						E Approach LANGLEY AVE						S Approach LOGAN AVE						W Approach LANGLEY AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
12:15:00	0	0	0	0	11	0	16	7	0	0	32	23	0	47	4	0	5	51	0	0	0	0	19	0	74	
12:30:00	0	0	0	0	6	0	15	14	0	0	14	29	0	40	6	0	3	46	0	0	0	0	17	0	75	
12:45:00	0	0	0	0	7	0	17	10	0	0	28	27	0	44	1	0	1	45	0	0	0	0	25	0	72	
13:00:00	0	0	0	0	6	0	14	6	0	0	28	20	0	51	6	0	7	57	0	0	0	0	33	0	77	
Grand Total	0	0	0	0	30	0	62	37	0	0	102	99	0	182	17	0	16	199	0	0	0	0	94	0	298	
Approach%	0%	0%	0%	0%	-	-	62.6%	37.4%	0%	0%	-	-	0%	91.9%	8.5%	0%	-	-	0%	0%	0%	0%	-	-	-	
Totals %	0%	0%	0%	0%	-	0%	20.8%	12.4%	0%	0%	-	33.2%	0%	61.1%	5.7%	0%	-	66.8%	0%	0%	0%	0%	-	0%	-	
PBF	0	0	0	0	0	0	0.91	0.66	0	0	0	0.85	0	0.89	0.71	0	0	0.87	0	0	0	0	0	0	0	
Heavy	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	2	0	0	0	0	0	0	0	
Heavy %	0%	0%	0%	0%	0%	0%	1.6%	0%	0%	0%	0%	1%	0%	0.5%	5.9%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	
Lights	0	0	0	0	0	0	61	37	0	0	0	98	0	181	16	0	0	197	0	0	0	0	0	0	0	
Lights %	0%	0%	0%	0%	0%	0%	98.4%	100%	0%	0%	0%	99%	0%	99.9%	94.1%	0%	0%	99%	0%	0%	0%	0%	0%	0%	0%	
Single-Unit Trucks	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	2	0	0	0	0	0	0	0	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	1.6%	0%	0%	0%	0%	1%	0%	0.5%	5.9%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	
Pedestrians	-	-	-	-	29	-	-	-	-	-	100	-	-	-	-	-	16	-	-	-	-	-	91	-	-	
Pedestrians%	-	-	-	-	12%	-	-	-	-	-	41.3%	-	-	-	-	-	6.6%	-	-	-	-	-	37.6%	-	-	
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-	
Bicycles on Crosswalk%	-	-	-	-	0.4%	-	-	-	-	-	0.8%	-	-	-	-	-	0%	-	-	-	-	-	1.2%	-	-	
Bicycles on Road	0	1	0	0	0	-	1	1	0	0	0	-	0	14	2	0	0	-	0	0	0	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)



Turning Movement
 Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (2 - LOGAN AVE & LANGLEY AVE)

Start Time	N Approach LOGAN AVE						E Approach LANGLEY AVE						S Approach LOGAN AVE						W Approach LANGLEY AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NW	Left NW	UTurn NW	Peds N	Approach Total	Right EN	Thru EN	Left EN	UTurn EN	Peds E	Approach Total	Right SE	Thru SE	Left SE	UTurn SE	Peds S	Approach Total	Right WS	Thru WS	Left WS	UTurn WS	Peds W	Approach Total		
07:30:00	0	0	0	0	0	0	3	4	0	0	3	7	0	11	1	0	1	12	0	0	0	0	2	0	19	
07:45:00	0	0	0	0	1	0	3	9	0	0	8	12	0	17	4	0	7	21	0	0	0	0	13	0	33	
08:00:00	0	0	0	0	5	0	4	10	0	0	13	14	0	22	6	0	4	28	0	0	0	0	7	0	42	
08:15:00	0	0	0	0	10	0	13	13	0	0	9	26	0	48	6	0	2	54	0	0	0	0	14	0	80	174
08:30:00	0	0	0	0	7	0	14	17	0	0	10	31	0	39	1	0	9	40	0	0	0	0	43	0	71	226
08:45:00	0	0	0	0	9	0	11	18	0	0	15	29	0	48	4	0	4	52	0	0	0	0	30	0	81	274
09:00:00	0	0	0	0	2	0	9	19	0	0	3	28	0	27	4	0	3	31	0	0	0	0	14	0	59	291
09:15:00	0	0	0	0	4	0	8	6	0	0	7	14	0	20	2	0	2	22	0	0	0	0	7	0	36	247
BREAK																										
16:00:00	0	0	0	0	9	0	4	5	0	0	17	9	0	58	8	0	2	66	0	0	0	0	15	0	75	
16:15:00	0	0	0	0	9	0	5	4	0	0	11	9	0	49	2	0	3	51	0	0	0	0	18	0	60	
16:30:00	0	0	0	0	3	0	8	8	0	0	23	16	0	40	1	0	7	41	0	0	0	0	18	0	57	
16:45:00	0	0	0	0	7	0	6	9	0	0	16	15	0	40	11	0	2	51	0	0	0	0	13	0	66	258
17:00:00	0	0	0	0	9	0	10	5	0	0	14	15	0	46	2	0	12	48	0	0	0	0	24	0	63	246
17:15:00	0	0	0	0	14	0	4	6	0	0	17	10	0	55	5	0	4	60	0	0	0	0	14	0	70	256
17:30:00	0	0	0	0	2	0	7	3	0	0	20	10	0	42	2	0	9	44	0	0	0	0	11	0	54	253
17:45:00	0	0	0	0	6	0	3	8	0	0	20	11	0	50	3	0	7	53	0	0	0	0	25	0	64	251
Grand Total	0	0	0	0	97	0	112	144	0	0	206	256	0	612	62	0	78	674	0	0	0	0	268	0	930	-
Approach%	0%	0%	0%	0%	-	-	43.8%	56.3%	0%	0%	-	-	0%	90.8%	9.2%	0%	-	-	0%	0%	0%	0%	-	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	12%	15.5%	0%	0%	27.5%	0%	65.8%	6.7%	0%	-	-	72.5%	0%	0%	0%	0%	-	-	-	-
Heavy	0	0	0	0	-	-	3	3	0	0	-	-	0	9	0	0	-	-	0	0	0	0	-	-	-	-
Heavy %	0%	0%	0%	0%	-	-	2.7%	2.1%	0%	0%	-	-	0%	1.5%	0%	0%	-	-	0%	0%	0%	0%	-	-	-	-
Bicycles	0	7	0	0	-	-	3	14	1	0	-	-	2	52	2	0	-	-	0	0	1	0	-	-	-	-
Bicycle %	0%	0%	0%	0%	-	-	2.7%	9.7%	0%	0%	-	-	0%	8.5%	3.2%	0%	-	-	0%	0%	0%	0%	-	-	-	-

Turning Movement
 Count

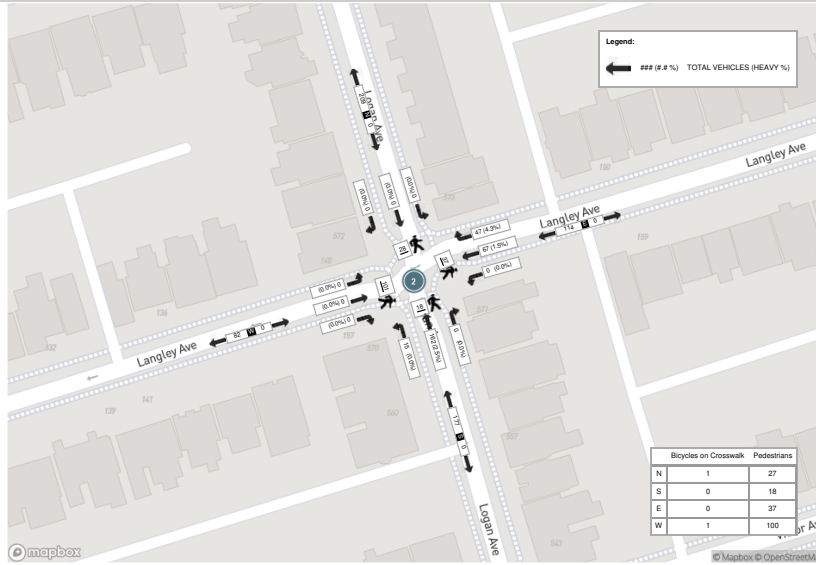
Page 1 of 5

BAC22Y8Z

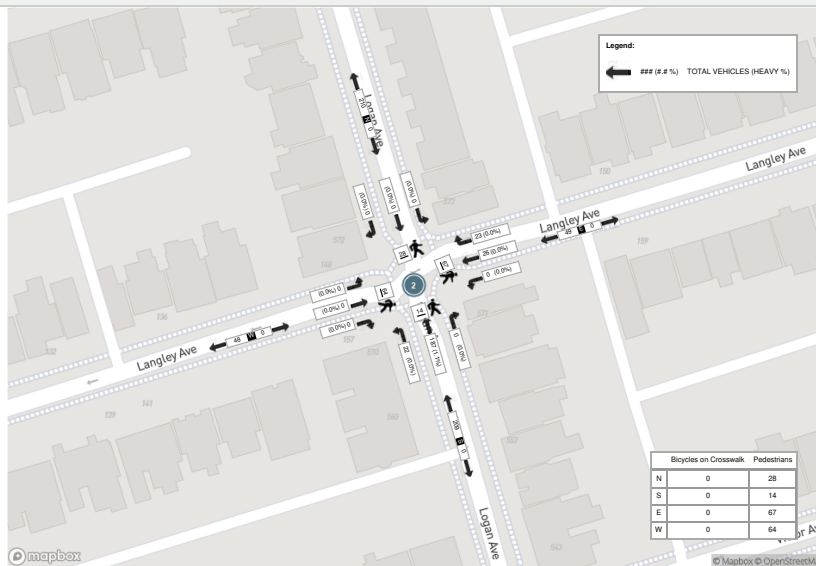
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach LOGAN AVE						E Approach LANGLEY AVE						S Approach LOGAN AVE						W Approach LANGLEY AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:15:00	0	0	0	0	10	0	13	13	0	0	9	26	0	48	6	0	2	54	0	0	0	0	14	0	80
08:30:00	0	0	0	0	7	0	14	17	0	0	10	31	0	39	1	0	9	40	0	0	0	0	43	0	71
08:45:00	0	0	0	0	9	0	11	18	0	0	15	29	0	48	4	0	4	52	0	0	0	0	30	0	81
09:00:00	0	0	0	0	2	0	9	19	0	0	3	28	0	27	4	0	3	31	0	0	0	0	14	0	59
Grand Total	0	0	0	0	28	0	47	67	0	0	37	114	0	162	15	0	18	177	0	0	0	0	101	0	291
Approach%	0%	0%	0%	0%	-	-	41.2%	58.8%	0%	0%	-	-	0%	91.5%	8.5%	0%	-	-	0%	0%	0%	0%	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	16.2%	23%	0%	0%	39.2%	0%	55.7%	5.2%	0%	60.8%	0%	0%	0%	0%	0%	0%	0%	0%	-
PIF	0	0	0	0	0	0	0.84	0.88	0	0	0.92	0	0.84	0.63	0	0.82	0	0	0	0	0	0	0	0	-
Heavy	0	0	0	0	0	0	2	1.5%	0%	0%	2.6%	0%	2.5%	0%	0%	2.3%	0%	0%	0%	0%	0%	0%	0%	0%	-
Lights	0	0	0	0	0	0	45	66	0	0	111	0	158	15	0	173	0	0	0	0	0	0	0	0	-
Lights %	0%	0%	0%	0%	0%	0%	95.7%	98.5%	0%	0%	97.4%	0%	97.5%	100%	0%	97.7%	0%	0%	0%	0%	0%	0%	0%	0%	-
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.2%	0%	0%	1.1%	0%	0%	0%	0%	0%	0%	0%	0%	-
Buses	0	0	0	0	0	0	2	1	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	-
Buses %	0%	0%	0%	0%	0%	0%	4.3%	1.5%	0%	0%	2.6%	0%	1.2%	0%	0%	1.1%	0%	0%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	27	-	-	-	-	-	37	-	-	-	-	18	-	-	-	-	-	100	-	-	-
Pedestrians%	-	-	-	-	14.7%	-	-	-	-	-	20.1%	-	-	-	-	9.8%	-	-	-	-	-	54.3%	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0.5%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0.5%	-	-	-
Bicycles on Road	0	0	0	0	0	-	0	6	0	0	0	-	0	7	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-

Peak Hour: 04:00 PM - 05:00 PM																									Weather: Broken Clouds (10.5 °C)				
Start Time	N Approach LOGAN AVE						E Approach LANGLEY AVE						S Approach LOGAN AVE						W Approach LANGLEY AVE						Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total					
16:00:00	0	0	0	0	9	0	4	5	0	0	17	9	0	58	8	0	2	66	0	0	0	0	15	0	75				
16:15:00	0	0	0	0	9	0	5	4	0	0	11	9	0	49	2	0	3	51	0	0	0	0	18	0	60				
16:30:00	0	0	0	0	3	0	8	8	0	0	23	16	0	40	1	0	7	41	0	0	0	0	18	0	57				
16:45:00	0	0	0	0	7	0	6	9	0	0	16	15	0	40	11	0	2	51	0	0	0	0	13	0	66				
Grand Total	0	0	0	0	28	0	23	26	0	0	67	49	0	187	22	0	14	209	0	0	0	0	64	0	259				
Approach%	0%	0%	0%	0%	-	-	46.9%	53.1%	0%	0%	-	-	0%	89.5%	10.5%	0%	-	-	0%	0%	0%	0%	-	-	-				
Totals %	0%	0%	0%	0%	0%	0%	8.9%	10.1%	0%	0%	19%	0%	72.5%	8.5%	0%	81%	0%	0%	0%	0%	0%	0%	0%	0%	-				
PIF	0	0	0	0	0	0	0.72	0.72	0	0	0.77	0	0.81	0.5	0	0.79	0	0	0	0	0	0	0	0	-				
Heavy	-	-	-	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	-				
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	-				
Lights	0	0	0	0	0	0	23	26	0	0	49	0	185	22	0	207	0	0	0	0	0	0	0	0	-				
Lights %	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	100%	0%	98.9%	100%	0%	99%	0%	0%	0%	0%	0%	0%	0%	0%	-				
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	-				
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	0%	0%	-				
Buses	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	-				
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	0%	0%	-				
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-				
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-				
Pedestrians	-	-	-	-	28	-	-	-	-	-	67	-	-	-	-	14	-	-	-	-	-	64	-	-	-				
Pedestrians %	-	-	-	-	16.2%	-	-	-	-	-	38.7%	-	-	-	-	8.1%	-	-	-	-	-	37%	-	-	-				
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-				
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-				
Bicycles on Road	0	5	0	0	0	-	1	1	0	0	0	-	1	12	0	0	0	-	0	0	0	0	0	-	-				
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-				

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (1 . LOGAN AVE & RIVERDALE AVE)																										
Start Time	N Approach LOGAN AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach LOGAN AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NS	Left NE	UTurn NN	Peds N		Right EN	Thru EW	Left ES	UTurn EE	Peds E		Right SE	Thru SN	Left SW	UTurn SS	Peds S		Right WS	Thru WE	Left WN	UTurn WW	Peds W			
11:00:00	0	0	0	0	10	0	1	0	0	0	19	1	6	43	0	0	8	49	1	7	9	0	16	17	67	
11:15:00	0	0	0	0	9	0	0	0	0	0	38	0	7	39	0	0	7	46	0	15	11	0	35	26	72	
11:30:00	0	0	0	0	4	0	0	0	0	0	17	0	9	40	0	0	1	49	0	10	5	0	28	15	64	
11:45:00	0	0	0	0	7	0	0	0	0	0	27	0	3	37	0	0	5	40	0	16	7	0	25	23	63	266
12:00:00	0	0	0	0	2	0	0	0	0	0	32	0	3	50	0	0	10	53	0	7	6	0	41	13	66	265
12:15:00	0	0	0	0	2	0	0	0	0	0	38	0	4	61	0	0	2	65	0	17	6	0	24	23	88	281
12:30:00	0	0	0	0	3	0	0	0	0	0	16	0	5	51	0	0	5	56	0	5	5	0	24	10	66	283
12:45:00	0	0	0	0	9	0	0	0	0	0	25	0	0	59	0	0	2	59	0	12	10	0	35	22	81	301
13:00:00	0	0	0	0	1	0	0	0	0	0	25	0	6	60	0	0	13	66	0	14	10	0	37	24	90	325
13:15:00	0	0	0	0	2	0	0	0	0	0	28	0	7	40	0	0	9	47	0	13	10	0	33	23	70	307
13:30:00	0	0	0	0	9	0	0	0	0	0	31	0	5	45	0	0	4	50	0	10	6	0	37	16	66	307
13:45:00	0	0	0	0	5	0	0	0	0	0	22	0	9	66	0	0	9	75	0	15	12	0	52	27	102	328
14:00:00	0	0	0	0	4	0	0	0	0	0	38	0	9	48	0	0	6	57	0	11	5	0	28	16	73	311
14:15:00	0	0	0	0	2	0	0	0	0	0	26	0	5	43	0	0	8	48	0	18	7	0	32	25	73	314
14:30:00	0	0	0	0	5	0	0	0	0	0	31	0	3	45	0	0	0	48	0	23	11	0	36	34	82	330
14:45:00	0	0	0	0	5	0	0	0	0	0	49	0	5	49	1	0	5	55	0	10	12	0	35	22	77	305
Grand Total	0	0	0	0	79	0	1	0	0	0	462	1	86	776	1	0	94	863	1	203	132	0	518	336	1290	-
Approach%	0%	0%	0%	0%	0%	-	100%	0%	0%	0%	0%	-	10%	89.9%	0.1%	0%	0%	-	0.3%	60.4%	39.3%	0%	0%	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	0.1%	0%	0%	0%	0%	0.1%	7.2%	64.7%	0.1%	0%	0%	71.9%	0.1%	16.9%	11%	0%	0%	28%	-	-
Heavy	0	0	0	0	0	-	0	0	0	0	0	-	0	4	0	0	0	-	0	2	0	0	0	-	-	-
Heavy %	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.5%	0%	0%	0%	-	0%	1%	0%	0%	0%	-	-	-
Bicycles	3	8	1	0	0	-	3	0	0	0	0	-	5	58	0	0	0	-	3	4	4	0	0	-	-	-
Bicycle %	0%	0%	0%	0%	0%	-	300%	0%	0%	0%	0%	-	5.8%	7.5%	0%	0%	0%	-	300%	2%	3%	0%	0%	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

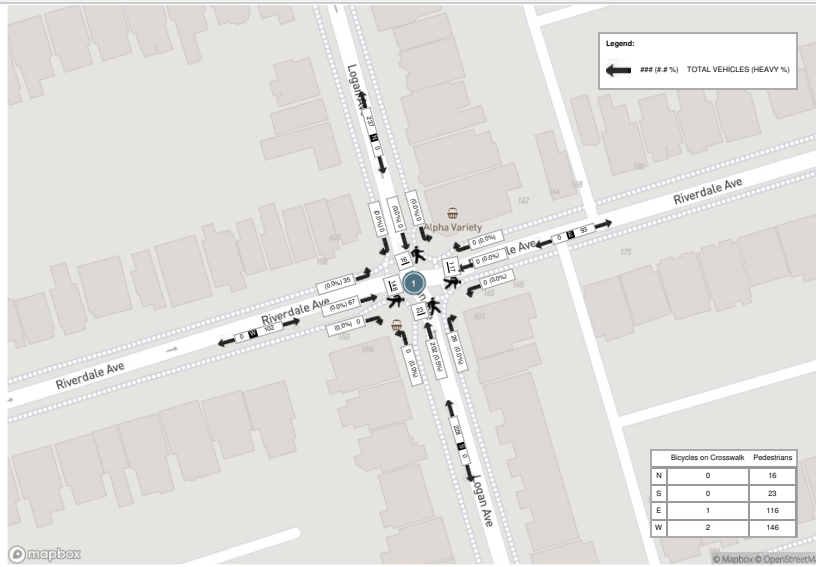
Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach LOGAN AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach LOGAN AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds		Right	Thru	Left	UTurn	Peds		Right	Thru	Left	UTurn	Peds		Right	Thru	Left	UTurn	Peds		
13:45:00	0	0	0	0	5	0	0	0	0	0	22	0	9	66	0	0	9	75	0	15	12	0	52	27	102
14:00:00	0	0	0	0	4	0	0	0	0	0	38	0	9	48	0	0	6	57	0	11	5	0	28	16	73
14:15:00	0	0	0	0	2	0	0	0	0	0	26	0	5	43	0	0	8	48	0	18	7	0	32	25	73
14:30:00	0	0	0	0	5	0	0	0	0	0	31	0	3	45	0	0	0	48	0	23	11	0	36	34	82
Grand Total	0	0	0	0	16	0	0	0	0	0	117	0	26	202	0	0	23	228	0	67	35	0	148	102	330
Approach%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	11.4%	88.6%	0%	0%	0%	-	0%	65.7%	34.3%	0%	0%	-	-
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7.9%	61.2%	0%	0%	0%	69.1%	0%	20.3%	10.6%	0%	0%	30.9%	-
PBF	0	0	0	0	0	0	0	0	0	0	0	0	0	0.72	0.77	0	0	0.76	0	0.73	0.73	0	0	6.75	-
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0%	0.4%	0%	0%	0%	0%	0%	0%	0%
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	26	201	0	0	227	0	67	35	0	148	102	-
Lights %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	99.5%	0%	0%	0%	99.6%	0%	100%	100%	0%	100%	100%	-
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0%	0.4%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	116	-	-	-	-	-	23	-	-	-	-	-	148	-	-
Pedestrians%	-	-	-	-	5.3%	-	-	-	-	-	38.2%	-	-	-	-	-	7.6%	-	-	-	-	-	48%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0.3%	-	-	-	-	-	0%	-	-	-	-	-	0.7%	-	-
Bicycles on Road	2	2	0	0	0	-	2	0	0	0	0	-	1	17	0	0	0	-	0	0	2	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 01:45 PM - 02:45 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (1 . LOGAN AVE & RIVERDALE AVE)

Turning Movement Count (1 . LOGAN AVE & RIVERDALE AVE)																										
Start Time	N Approach LOGAN AVE						E Approach RIVERDALE AVE						S Approach LOGAN AVE						W Approach RIVERDALE AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/W	Left N/E	U/Turn N/N	Peds N:	Approach Total	Right E/N	Thru E/W	Left E/S	U/Turn E/E	Peds E:	Approach Total	Right S/E	Thru S/N	Left S/W	U/Turn S/S	Peds S:	Approach Total	Right W/S	Thru W/E	Left W/N	U/Turn W/W	Peds W:	Approach Total		
07:30:00	0	0	0	0	2	0	0	0	0	0	2	0	0	13	0	0	2	13	0	5	2	0	8	7	20	
07:45:00	0	0	0	0	5	0	0	0	0	12	0	2	20	0	0	3	22	0	7	9	0	14	16	38		
08:00:00	0	0	0	0	2	0	0	0	0	5	0	3	22	0	0	5	25	0	9	5	0	10	14	39		
08:15:00	0	0	0	0	2	0	0	0	0	12	0	6	56	0	0	0	62	0	9	8	0	20	17	79	176	
08:30:00	0	0	0	0	6	0	0	0	0	11	0	8	45	0	0	6	53	0	10	8	0	45	18	71	227	
08:45:00	0	0	0	0	11	0	0	0	0	17	0	4	54	0	0	5	58	0	9	7	0	43	16	74	263	
09:00:00	0	0	0	0	8	0	0	0	0	12	0	6	31	0	0	1	37	0	6	8	0	23	14	51	275	
09:15:00	0	0	0	0	7	0	0	0	0	10	0	6	21	0	0	2	27	0	8	4	0	7	12	39	235	
BREAK																										
16:00:00	0	0	0	0	4	0	0	0	0	16	0	7	56	0	0	7	63	0	23	9	0	14	32	95		
16:15:00	0	0	0	0	4	0	1	0	0	22	1	8	45	0	0	3	53	0	23	5	0	25	28	82		
16:30:00	0	0	0	0	10	0	0	0	0	21	0	6	44	0	0	7	50	0	15	3	0	21	18	68		
16:45:00	0	0	0	0	4	0	0	0	0	25	0	6	41	0	0	7	47	0	14	6	0	16	20	67	312	
17:00:00	0	0	0	0	10	0	0	0	0	20	0	7	46	0	0	6	53	0	15	6	0	33	21	74	291	
17:15:00	0	0	0	0	6	0	0	0	0	18	0	10	47	0	0	6	57	0	21	13	0	34	34	91	300	
17:30:00	0	0	0	0	8	0	0	0	0	21	0	6	45	0	0	3	51	0	14	5	0	14	19	70	302	
17:45:00	0	0	0	0	7	0	0	0	0	17	0	6	48	0	0	6	54	0	17	12	0	33	29	83	318	
Grand Total	0	0	0	0	96	0	1	0	0	241	1	91	634	0	0	69	725	0	205	110	0	360	315	1041	-	
Approach%	0%	0%	0%	0%	-	100%	0%	0%	0%	-	-	12.6%	87.4%	0%	0%	-	-	0%	65.1%	34.9%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	0.1%	0%	0%	0%	0.1%	8.7%	60.9%	0%	0%	69.6%	0%	19.7%	10.6%	0%	30.3%	-	-	-	-	
Heavy	0	0	0	0	-	-	0	0	0	0	-	3	11	0	0	-	-	0	2	1	0	-	-	-	-	
Heavy %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	3.3%	1.7%	0%	0%	-	-	0%	1%	0.9%	0%	-	-	-	-	
Bicycles	0	10	0	0	-	-	0	0	0	0	-	2	57	1	0	-	-	0	3	3	0	-	-	-	-	
Bicycle %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	2.2%	9%	0%	0%	-	-	0%	1.5%	2.7%	0%	-	-	-	-	

Turning Movement
Count

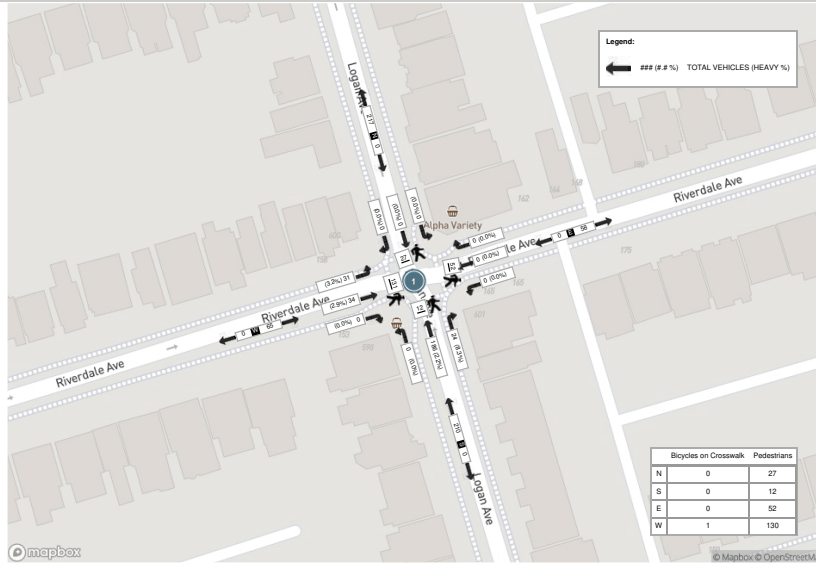
Page 1 of 5

BAC22Y8Z

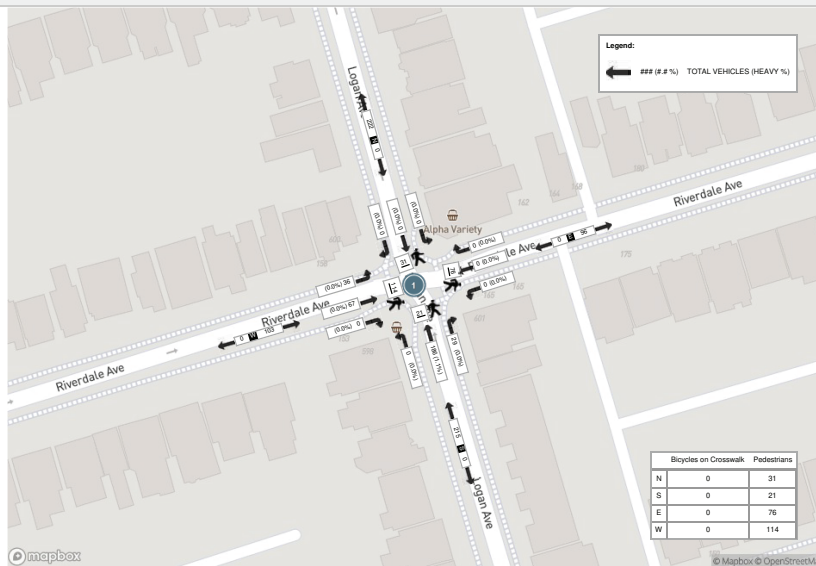
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																										
Start Time	N Approach LOGAN AVE						E Approach RIVERDALE AVE						S Approach LOGAN AVE						W Approach RIVERDALE AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
08:15:00	0	0	0	0	2	0	0	0	0	0	12	0	6	56	0	0	0	62	0	9	8	0	20	17	79	
08:30:00	0	0	0	0	6	0	0	0	0	0	11	0	8	45	0	0	6	53	0	10	8	0	45	18	71	
08:45:00	0	0	0	0	11	0	0	0	0	0	17	0	4	54	0	0	5	58	0	9	7	0	43	16	74	
09:00:00	0	0	0	0	8	0	0	0	0	0	12	0	6	31	0	0	1	37	0	6	8	0	23	14	51	
Grand Total	0	0	0	0	27	0	0	0	0	0	52	0	24	186	0	0	12	210	0	34	31	0	131	65	275	
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	11.4%	88.6%	0%	0%	-	0%	52.3%	47.7%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8.7%	67.6%	0%	0%	0%	76.4%	0%	12.4%	11.3%	0%	-	23.6%	-	
PIV	0	0	0	0	0	0	0	0	0	0	0	0	0.75	0.83	0	0	0	0.85	0	0.85	0.97	0	0.9	-	-	
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	6	0	1	1	0	2	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8.3%	2.2%	0%	0%	2.9%	2.9%	0%	2.9%	3.2%	0%	3.1%	-	-	
Lights	0	0	0	0	0	0	0	0	0	0	0	0	22	182	0	0	204	0	33	30	0	63	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	91.7%	97.8%	0%	0%	97.1%	0%	97.1%	96.8%	0%	96.9%	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	1	0	2	-	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.2%	0.5%	0%	0%	1%	0%	2.9%	3.2%	0%	3.1%	-	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	-	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.2%	1.6%	0%	0%	1.9%	0%	0%	0%	0%	0%	-	-	-	
Pedestrians	-	-	-	-	27	-	-	-	-	-	52	-	-	-	-	-	12	-	-	-	-	130	-	-	-	
Pedestrians %	-	-	-	-	12.2%	-	-	-	-	-	23.4%	-	-	-	-	-	5.4%	-	-	-	-	58.6%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0.5%	-	-	-	
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	10	0	0	0	-	0	0	1	0	0	-	-	
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Peak Hour: 05:00 PM - 06:00 PM Weather: Broken Clouds (10.5 °C)																										
Start Time	N Approach LOGAN AVE						E Approach RIVERDALE AVE						S Approach LOGAN AVE						W Approach RIVERDALE AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
17:00:00	0	0	0	0	10	0	0	0	0	0	20	0	7	46	0	0	6	53	0	15	6	0	33	21	74	
17:15:00	0	0	0	0	6	0	0	0	0	0	18	0	10	47	0	0	6	57	0	21	13	0	34	34	91	
17:30:00	0	0	0	0	8	0	0	0	0	0	21	0	6	45	0	0	3	51	0	14	5	0	14	19	70	
17:45:00	0	0	0	0	7	0	0	0	0	0	17	0	6	48	0	0	6	54	0	17	12	0	33	29	83	
Grand Total	0	0	0	0	31	0	0	0	0	0	76	0	29	186	0	0	21	215	0	67	36	0	114	103	318	
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	13.5%	86.5%	0%	0%	-	67.6%	0%	69%	35%	0%	-	-	-	
Totals %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	9.1%	58.5%	0%	0%	-	67.6%	0%	21.1%	11.3%	0%	-	32.4%	-	
PIV	0	0	0	0	0	0	0	0	0	0	0	0	0.73	0.97	0	0	0	0.94	0	0.8	0.69	0	0.76	-	-	
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.1%	0%	0%	0%	0.9%	0%	0%	0%	0%	0%	-	-	
Lights	0	0	0	0	0	0	0	0	0	0	0	0	29	184	0	0	213	0	67	36	0	103	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	98.9%	0%	0%	99.1%	0%	100%	100%	0%	100%	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.1%	0%	0%	0%	0.9%	0%	0%	0%	0%	0%	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	
Pedestrians	-	-	-	-	31	-	-	-	-	-	76	-	-	-	-	-	21	-	-	-	-	-	114	-	-	-
Pedestrians%	-	-	-	-	12.8%	-	-	-	-	-	31.4%	-	-	-	-	-	8.7%	-	-	-	-	-	47.1%	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-
Bicycles on Road	0	4	0	0	0	-	0	0	0	0	0	-	2	30	0	0	0	-	0	2	1	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (4 . LOGAN AVE & SIMPSON AVE)																										
Start Time	N Approach LOGAN AVE						E Approach SIMPSON AVE						S Approach LOGAN AVE						W Approach SIMPSON AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru NS	Left NE	UTurn NN	Peds N:	Approach Total	Right E/W	Thru EW	Left ES	UTurn EE	Peds E:	Approach Total	Right S/E	Thru SN	Left SW	UTurn SS	Peds S:	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W:	Approach Total		
11:00:00	0	0	0	0	0	0	1	17	0	0	10	18	3	37	5	0	7	45	0	0	0	0	6	0	63	
11:15:00	0	0	0	0	3	0	8	11	0	0	16	19	1	21	3	0	8	25	0	0	0	0	22	0	44	
11:30:00	0	0	0	0	2	0	8	9	0	0	13	17	1	32	6	0	7	39	0	0	0	0	27	0	56	
11:45:00	0	0	0	0	4	0	2	18	1	0	16	21	0	33	8	0	7	41	0	0	0	0	31	0	62	225
12:00:00	0	0	0	0	3	0	2	25	0	0	16	27	1	40	4	0	5	45	0	0	0	0	44	0	72	234
12:15:00	0	0	0	0	3	0	2	13	0	0	25	15	0	42	3	0	11	45	0	0	0	0	19	0	60	250
12:30:00	0	0	0	0	5	0	7	11	0	0	10	18	0	31	4	0	4	35	0	0	0	0	24	0	53	247
12:45:00	0	0	0	0	2	0	5	23	0	0	15	28	2	39	3	0	0	44	0	0	0	0	24	0	72	257
13:00:00	0	0	0	0	6	0	4	11	0	0	24	15	0	46	6	0	6	52	0	0	0	0	27	0	67	252
13:15:00	0	0	0	0	6	0	2	9	0	0	14	11	0	36	2	0	3	38	0	0	0	0	32	0	49	241
13:30:00	0	0	0	0	0	0	1	21	0	0	14	22	1	47	4	0	9	52	0	0	0	0	25	0	74	262
13:45:00	0	0	0	0	8	0	4	13	0	0	15	17	1	38	3	0	4	42	0	0	0	0	37	0	59	249
14:00:00	0	0	0	0	3	0	4	10	0	0	17	14	3	51	2	0	7	56	0	0	0	0	27	0	70	252
14:15:00	0	0	0	0	0	0	5	15	0	0	20	20	3	39	2	0	4	44	0	0	0	0	19	0	64	267
14:30:00	0	0	0	0	7	0	0	15	0	0	12	15	2	45	1	0	3	48	0	0	0	0	22	0	63	256
14:45:00	0	0	0	0	0	0	5	20	0	0	26	25	1	35	5	0	3	41	0	0	0	0	26	0	66	263
Grand Total	0	0	0	0	52	0	60	241	1	0	263	302	19	612	61	0	88	692	0	0	0	0	412	0	994	-
Approach%	0%	0%	0%	0%		-	19.9%	79.8%	0.3%	0%		-	2.7%	88.4%	8.8%	0%		-	0%	0%	0%	0%		-	-	-
Totals %	0%	0%	0%	0%	0%	0%	6%	24.2%	0.1%	0%	30.4%	1.9%	61.6%	6.1%	0%	69.6%	0%	0%	0%	0%	0%	0%	0%	-	-	-
Heavy	0	0	0	0		-	0	2	0	0	-	0	3	0	0		-	-	0	0	0	0		-	-	-
Heavy %	0%	0%	0%	0%	0%	-	0%	0.8%	0%	0%	-	0%	0.5%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	-	-	-
Bicycles	7	5	0	0	0	-	3	10	5	0	-	3	55	2	0	-	3	55	2	0	0	0	-	-	-	-
Bicycle %	0%	0%	0%	0%		-	5%	4.1%	500%	0%	-	15.8%	9%	3.3%	0%	-	0%	0%	0%	0%	0%	-	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z

Peak Hour: 01:30 PM - 02:30 PM Weather: Scattered Clouds (3.45 °C)																										
Start Time	N Approach LOGAN AVE						E Approach SIMPSON AVE						S Approach LOGAN AVE						W Approach SIMPSON AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
13:30:00	0	0	0	0	0	0	1	21	0	0	14	22	1	47	4	0	9	52	0	0	0	0	25	0	74	
13:45:00	0	0	0	0	8	0	4	13	0	0	15	17	1	38	3	0	4	42	0	0	0	0	37	0	59	
14:00:00	0	0	0	0	3	0	4	10	0	0	17	14	3	51	2	0	7	56	0	0	0	0	27	0	70	
14:15:00	0	0	0	0	0	0	5	15	0	0	20	20	3	39	2	0	4	44	0	0	0	0	19	0	64	
Grand Total	0	0	0	0	11	0	14	59	0	0	66	73	8	175	11	0	24	194	0	0	0	0	108	0	267	
Approach%	0%	0%	0%	0%	-	-	19.2%	80.8%	0%	0%	-	-	4.1%	90.2%	5.7%	0%	-	-	0%	0%	0%	0%	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	5.2%	22.1%	0%	0%	27.3%	3%	65.9%	4.1%	0%	72.7%	0%	0%	0%	0%	0%	0%	-	-	-	
PBF	0	0	0	0	0	0	0	0.7	0	0	0	0.83	0.67	0.86	0.69	0	0	0.87	0	0	0	0	0	0	-	
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	-	-	
Lights	0	0	0	0	0	0	14	59	0	0	73	73	8	174	11	0	193	14	0	0	0	0	0	0	-	
Lights %	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	100%	100%	99.4%	100%	0%	99.9%	0%	0%	0%	0%	0%	0%	0%	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	-	-	
Pedestrians	-	-	-	-	11	-	-	-	-	-	66	-	-	-	-	-	24	-	-	-	-	106	-	-	-	
Pedestrians%	-	-	-	-	5.3%	-	-	-	-	-	31.6%	-	-	-	-	-	11.5%	-	-	-	-	50.7%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	2	-	-	-	
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	1%	-	-	-	
Bicycles on Road	0	2	0	0	0	-	0	2	0	0	0	-	1	18	1	0	0	-	0	2	0	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 01:30 PM - 02:30 PM Weather: Scattered Clouds (3.45 °C)



Turning Movement Count (4 - LOGAN AVE & SIMPSON AVE)

Start Time	N Approach LOGAN AVE						E Approach SIMPSON AVE						S Approach LOGAN AVE						W Approach SIMPSON AVE						Int. Total (15 min)	Int. Total (1 hr)	
	Right N/W	Thru N/S	Left N/E	UTurn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S	Approach Total	Right W/S	Thru W/E	Left W/W	UTurn W/W	Peds W	Approach Total			
07:30:00	0	0	0	0	0	0	2	9	0	0	2	11	0	8	1	0	0	9	0	0	0	0	5	0	20		
07:45:00	0	0	0	0	0	0	2	13	0	0	7	15	2	18	3	0	1	23	0	0	0	0	10	0	38		
08:00:00	0	0	0	0	3	0	5	21	0	0	5	26	3	22	0	0	3	25	0	0	0	0	11	0	51		
08:15:00	0	0	0	0	3	0	9	27	0	1	5	37	3	36	3	0	5	42	0	0	0	0	7	0	79	188	
08:30:00	0	0	0	0	11	0	7	25	0	0	8	32	4	34	3	0	10	41	0	0	0	0	30	0	73	241	
08:45:00	0	0	0	0	3	0	10	21	0	0	8	31	1	32	3	0	7	36	0	0	1	0	37	1	68	271	
09:00:00	0	0	0	0	0	0	10	30	0	0	5	40	1	22	4	0	5	27	0	0	0	0	12	0	67	287	
09:15:00	0	0	0	0	1	0	1	13	0	0	2	14	1	19	1	0	4	21	0	0	0	0	10	0	35	243	
BREAK																											
16:00:00	0	0	0	0	3	0	13	11	0	0	7	24	1	54	2	0	3	57	0	0	0	0	23	0	81		
16:15:00	0	0	0	0	2	0	8	17	0	0	8	25	4	39	3	0	6	46	0	0	0	0	20	0	71		
16:30:00	0	0	0	0	4	0	8	15	0	0	17	23	3	39	1	0	5	43	0	0	0	0	13	0	66		
16:45:00	0	0	0	0	9	0	7	16	0	0	24	23	2	40	6	0	10	48	0	0	0	0	16	0	71	289	
17:00:00	0	0	0	0	0	0	9	15	0	0	12	24	1	39	2	0	4	42	0	0	0	0	15	0	66	274	
17:15:00	0	0	0	0	5	0	3	10	0	0	15	13	1	47	2	0	6	50	0	0	0	0	17	0	63	266	
17:30:00	0	0	0	0	4	0	6	17	0	0	11	23	0	41	2	0	8	43	0	0	0	0	24	0	66	266	
17:45:00	0	0	0	0	3	0	13	11	0	0	13	24	4	35	3	0	9	42	0	0	0	0	16	0	66	261	
Grand Total	0	0	0	0	51	0	113	271	0	1	149	385	31	525	39	0	86	595	0	0	1	0	266	1	981	-	
Approach%	0%	0%	0%	0%	-	-	29.4%	70.4%	0%	0.3%	-	-	5.2%	88.2%	6.6%	0%	-	-	0%	0%	100%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	11.5%	27.6%	0%	0.1%	39.2%	3.2%	53.5%	4%	0%	60.7%	0%	0%	0.1%	0%	0.1%	-	-	-	-		
Heavy	0	0	0	0	-	-	0	3	0	0	-	-	0	9	2	0	-	-	0	0	0	0	-	-	-	-	
Heavy %	0%	0%	0%	0%	-	-	0%	1.1%	0%	0%	-	-	0%	1.7%	5.1%	0%	-	-	0%	0%	0%	0%	-	-	-	-	
Bicycles	2	7	0	0	-	-	5	9	3	0	-	-	3	39	4	0	-	-	0	2	1	0	-	-	-	-	
Bicycle %	0%	0%	0%	0%	-	-	4.4%	3.3%	0%	0%	-	-	9.7%	7.4%	10.3%	0%	-	-	0%	0%	100%	0%	-	-	-	-	

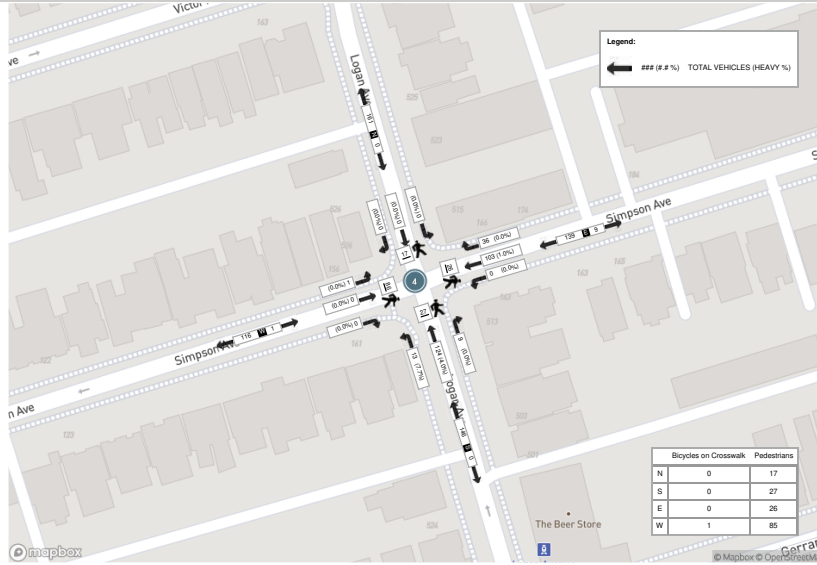


Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach LOGAN AVE					E Approach SIMPSON AVE					S Approach LOGAN AVE					W Approach SIMPSON AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
08:15:00	0	0	0	0	3	0	9	27	0	1	5	37	3	36	3	0	5	42	0	0	0	0	7	0	79
08:30:00	0	0	0	0	11	0	7	25	0	0	8	32	4	34	3	0	10	41	0	0	0	0	30	0	73
08:45:00	0	0	0	0	3	0	10	21	0	0	8	31	1	32	3	0	7	36	0	0	1	0	37	1	68
09:00:00	0	0	0	0	0	0	10	30	0	0	5	40	1	22	4	0	5	27	0	0	0	0	12	0	67
Grand Total	0	0	0	0	17	0	36	103	0	1	26	140	9	124	13	0	27	146	0	0	1	0	86	1	287
Approach%	0%	0%	0%	0%	-	-	25.7%	73.6%	0%	0.7%	-	6.2%	84.9%	8.9%	0%	-	0%	0%	100%	0%	-	-	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	12.5%	35.9%	0%	0.3%	48.8%	3.1%	43.2%	4.5%	0%	50.9%	0%	0%	0.3%	0%	0.3%	-	-	-	-
PHF	0	0	0	0	0	0	0.9	0.86	0	0.25	0.88	0.56	0.86	0.81	0	0.87	0	0	0.25	0	0.25	-	-	-	-
Heavy	0	0	0	0	0	0	0	0	1	0	0	0	5	1	0	6	0	0	0	0	0	0	0	0	0
Heavy %	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0.7%	0%	4%	7.7%	0%	4.1%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	0	0	0	0	0	0	36	103	0	1	139	9	119	12	0	140	0	0	1	0	1	0	1	-	-
Lights %	0%	0%	0%	0%	0%	0%	100%	99%	0%	100%	99.3%	100%	96%	92.3%	0%	95.9%	0%	0%	100%	0%	100%	-	-	-	-
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2.4%	0%	0%	2.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Buses	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0
Buses %	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0.7%	0%	1.6%	7.7%	0%	2.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Pedestrians	-	-	-	-	17	-	-	-	-	26	-	-	-	-	27	-	-	-	-	85	-	-	-	-	-
Pedestrians%	-	-	-	-	10.9%	-	-	-	-	16.7%	-	-	-	-	17.3%	-	-	-	-	54.5%	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0.6%	-	-	-	-	-
Bicycles on Road	1	0	0	0	0	-	0	4	1	0	0	-	0	3	0	0	0	-	0	1	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-



Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)																									
Start Time	N Approach LOGAN AVE					E Approach SIMPSON AVE					S Approach LOGAN AVE					W Approach SIMPSON AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
16:00:00	0	0	0	0	3	0	13	11	0	0	7	24	1	54	2	0	3	57	0	0	0	0	23	0	81
16:15:00	0	0	0	0	2	0	8	17	0	0	8	25	4	39	3	0	6	46	0	0	0	0	20	0	71
16:30:00	0	0	0	0	4	0	8	15	0	0	17	23	3	39	1	0	5	43	0	0	0	0	13	0	66
16:45:00	0	0	0	0	9	0	7	16	0	0	24	23	2	40	6	0	10	48	0	0	0	0	16	0	71
Grand Total	0	0	0	0	18	0	36	59	0	0	56	95	10	172	12	0	24	194	0	0	0	0	72	0	269
Approach%	0%	0%	0%	0%	-	-	37.9%	62.1%	0%	0%	-	5.2%	88.7%	6.2%	0%	-	0%	0%	0%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	12.5%	20.4%	32.9%	3.5%	59.5%	4.2%	0%	67.1%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
PHF	0	0	0	0	0	0	0.69	0.87	0	0	0.95	0.63	0.8	0.5	0	0.85	0	0	0	0	0	0	0	0	-
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	-
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	0	0	0	0	0	0	36	59	0	0	95	10	171	12	0	193	0	0	0	0	0	0	0	0	-
Lights %	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	100%	100%	99.4%	100%	0%	99.5%	0%	0%	0%	0%	0%	0%	0%	0%	-
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	0%	0%	-
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	18	-	-	-	-	56	-	-	-	-	-	21	-	-	-	-	72	-	-	-	-
Pedestrians%	-	-	-	-	10.6%	-	-	-	-	32.9%	-	-	-	-	-	12.4%	-	-	-	-	42.4%	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	0	-	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	1.8%	-	-	-	-	0%	-	-	-	-
Bicycles on Road	0	4	0	0	0	-	1	2	2	0	0	-	2	9	0	0	0	-	0	1	1	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)





Turning Movement Count (3 - LOGAN AVE & VICTOR AVE)																										
Start Time	N Approach LOGAN AVE					E Approach VICTOR AVE					S Approach LOGAN AVE					W Approach VICTOR AVE					Int. Total (15 min)	Int. Total (1 hr)				
	Right N/W	Thru NS	Left NE	UTurn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S	Approach Total	Right W/S	Thru W/E			Left W/N	UTurn W/W	Peds W	Approach Total
11:00:00	0	0	0	0	2	0	0	0	0	0	11	0	4	37	0	0	11	41	0	6	3	0	8	9	50	
11:15:00	0	0	0	0	3	0	0	0	0	0	18	0	1	29	0	0	1	30	0	10	4	0	22	14	44	
11:30:00	0	0	0	0	6	0	0	0	0	0	19	0	3	34	0	0	12	37	0	5	6	0	26	11	48	
11:45:00	0	0	0	0	7	0	0	0	0	0	18	0	2	33	0	0	1	35	0	12	2	0	29	14	49	191
12:00:00	0	0	0	0	3	0	0	0	0	0	17	0	1	40	1	0	4	42	0	15	3	0	44	18	60	201
12:15:00	0	0	0	0	1	0	0	0	0	0	26	0	1	46	0	0	8	47	0	10	6	0	19	16	63	220
12:30:00	0	0	0	0	3	0	0	0	0	0	13	0	0	39	0	0	7	39	0	12	7	0	16	19	58	230
12:45:00	0	0	0	0	8	0	0	0	0	0	22	0	3	42	0	0	8	45	0	15	4	0	27	19	64	245
13:00:00	0	0	0	0	2	0	0	0	0	0	31	0	2	48	0	0	2	50	0	6	8	0	26	14	64	249
13:15:00	0	0	0	0	7	0	0	0	0	0	13	0	2	36	0	0	5	38	0	10	3	0	28	13	51	237
13:30:00	0	0	0	0	4	0	0	0	0	0	18	0	3	42	0	0	5	45	0	12	3	0	30	15	60	239
13:45:00	0	0	0	0	0	0	0	0	0	0	22	0	1	46	0	0	1	47	0	11	6	0	33	17	64	239
14:00:00	0	0	0	0	8	0	0	0	0	0	27	0	3	52	0	0	11	55	0	9	3	0	30	12	67	242
14:15:00	0	0	0	0	4	0	0	0	0	0	23	0	1	40	0	0	3	41	0	9	3	0	25	12	53	244
14:30:00	0	0	0	0	2	0	0	0	0	0	20	0	2	42	0	0	11	44	0	12	3	0	26	15	59	243
14:45:00	0	0	0	0	7	0	0	0	0	0	35	0	5	36	0	0	6	41	0	11	5	0	28	16	57	236
Grand Total	0	0	0	0	67	0	0	0	0	0	333	0	34	642	1	0	96	677	0	165	69	0	417	234	911	-
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	5%	94.8%	0.1%	0%	-	0%	70.5%	29.5%	0%	-	-	-	-	-
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3.7%	70.5%	0.1%	0%	-	74.3%	0%	18.1%	7.6%	0%	25.7%	-	-	-
Heavy	0	0	0	0	-	-	0	0	0	0	-	-	0	4	0	0	-	-	0	2	0	0	-	-	-	-
Heavy %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	0.6%	0%	0%	-	-	0%	1.2%	0%	0%	-	-	-	-
Bicycles	0	10	1	0	-	-	1	0	0	0	-	-	0	56	0	0	-	-	2	5	6	0	-	-	-	-
Bicycle %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	8.7%	0%	0%	-	-	0%	3%	8.7%	0%	-	-	-	-

Turning Movement
Count

Page 1 of 3

BAC22Y8Z



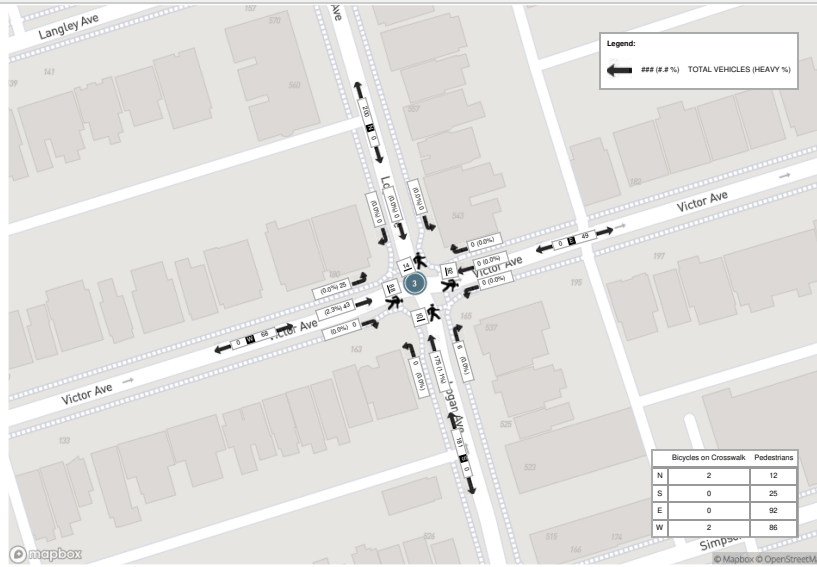
Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach LOGAN AVE					E Approach VICTOR AVE					S Approach LOGAN AVE					W Approach VICTOR AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
12:15:00	0	0	0	0	1	0	0	0	0	0	26	0	1	46	0	0	8	47	0	10	6	0	19	16	63
12:30:00	0	0	0	0	3	0	0	0	0	0	13	0	0	39	0	0	7	39	0	12	7	0	16	19	58
12:45:00	0	0	0	0	8	0	0	0	0	0	22	0	3	42	0	0	8	45	0	15	4	0	27	19	64
13:00:00	0	0	0	0	2	0	0	0	0	0	31	0	2	48	0	0	2	50	0	6	8	0	26	14	64
Grand Total	0	0	0	0	14	0	0	0	0	0	92	0	6	175	0	0	25	181	0	43	25	0	88	68	249
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	3.3%	96.7%	0%	0%	-	-	0%	63.2%	36.8%	0%	-	-	-
Totals %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	2.4%	70.3%	0%	0%	-	72.7%	0%	17.3%	10%	0%	-	27.3%	-
PBF	0	0	0	0	-	0	0	0	0	0	-	0	0.5	0.91	0	0	-	0.91	0	0.72	0.78	0	-	0.89	-
Heavy	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	1	0	0	-	1	-
Heavy %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	1.1%	0%	0%	-	1.1%	0%	2.3%	0%	0%	-	1.5%	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	6	173	0	0	-	179	0	42	25	0	-	67	-
Lights %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	100%	98.9%	0%	0%	-	98.9%	0%	97.7%	100%	0%	-	98.9%	-
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	1	0	0	-	1	-
Single-Unit Trucks %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	1.1%	0%	0%	-	1.1%	0%	2.3%	0%	0%	-	1.5%	-
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	-
Buses %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	92	-	-	-	-	25	-	-	-	-	-	-	86	-	-
Pedestrians%	-	-	-	-	5.5%	-	-	-	-	-	42%	-	-	-	-	11.4%	-	-	-	-	-	-	39.3%	-	-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0.9%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	0.9%	-	-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	16	0	0	0	-	0	1	2	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	0%	-	-

Turning Movement
Count

Page 2 of 3

BAC22Y8Z

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)



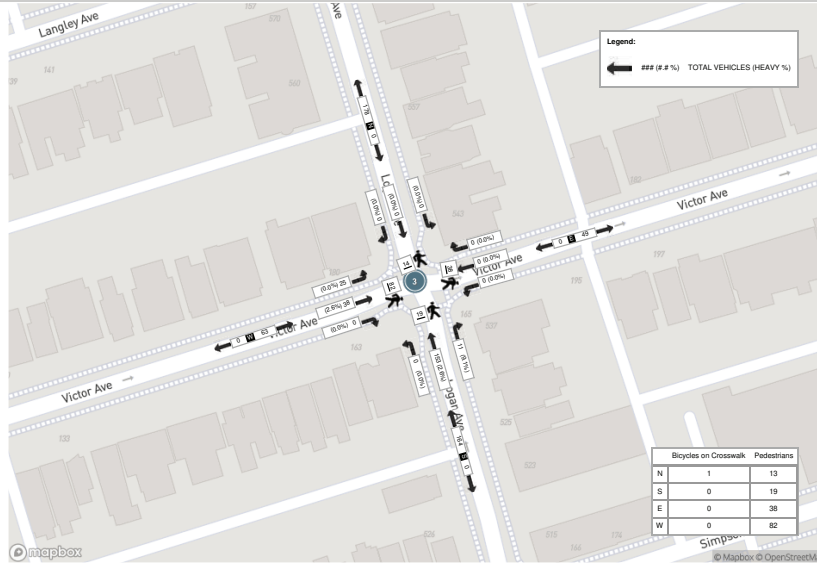
Turning Movement Count (3 . LOGAN AVE & VICTOR AVE)

Start Time	N Approach LOGAN AVE						E Approach VICTOR AVE						S Approach LOGAN AVE						W Approach VICTOR AVE						Int. Total (15 min)	Int. Total (1 hr)	
	Right NW	Thru NW	Left NW	UTurn NW	Peds N	Approach Total	Right NE	Thru NE	Left NE	UTurn NE	Peds E	Approach Total	Right SW	Thru SW	Left SW	UTurn SW	Peds S	Approach Total	Right WN	Thru WN	Left WN	UTurn WN	Peds W	Approach Total			
07:30:00	0	0	0	0	0	0	0	0	0	0	2	0	1	9	0	0	2	10	0	8	3	0	6	11	21		
07:45:00	0	0	0	0	2	0	0	0	0	0	5	0	2	18	0	0	1	20	0	2	3	0	12	5	25		
08:00:00	0	0	0	0	2	0	0	0	0	0	5	0	3	23	0	0	2	26	0	3	6	0	8	9	35		
08:15:00	0	0	0	0	6	0	0	0	0	0	9	0	2	45	0	0	4	47	0	9	9	0	10	18	65	146	
08:30:00	0	0	0	0	5	0	0	0	0	0	16	0	1	35	0	0	4	36	0	8	8	0	36	16	52	177	
08:45:00	0	0	0	0	3	0	0	0	0	0	9	0	5	44	0	0	5	49	0	13	5	0	24	18	67	219	
09:00:00	0	0	0	0	0	0	0	0	0	0	4	0	3	29	0	0	6	32	0	8	3	0	12	11	43	227	
09:15:00	0	0	0	0	6	0	0	0	0	0	6	0	1	19	0	0	2	20	0	4	2	0	10	6	26	188	
BREAK																											
16:00:00	0	0	0	0	6	0	0	0	0	0	11	0	6	64	0	0	6	70	0	9	4	0	26	13	83		
16:15:00	0	0	0	0	7	0	0	0	0	0	10	0	4	43	0	0	2	47	0	11	7	0	22	18	65		
16:30:00	0	0	0	0	4	0	0	0	0	0	19	0	4	42	0	0	5	46	0	14	1	0	18	15	61		
16:45:00	0	0	0	0	2	0	0	0	0	0	25	0	3	41	0	0	7	44	0	13	10	0	17	23	67	276	
17:00:00	0	0	0	0	6	0	0	0	0	0	11	0	5	45	0	0	4	50	0	14	3	0	11	17	67	260	
17:15:00	0	0	0	0	1	0	0	0	0	0	20	0	4	47	0	0	5	51	0	12	11	0	17	23	74	269	
17:30:00	0	0	0	0	9	0	0	0	0	0	16	0	2	44	0	0	7	46	0	14	5	0	21	19	65	273	
17:45:00	0	0	0	0	2	0	0	0	0	0	18	0	1	47	0	0	1	48	0	14	6	0	20	20	68	274	
Grand Total	0	0	0	0	61	0	0	0	0	0	186	0	47	595	0	0	63	642	0	156	86	0	270	242	884	-	
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	7.3%	92.7%	0%	0%	-	-	0%	64.5%	35.5%	0%	-	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5.3%	67.3%	0%	0%	72.6%	0%	17.6%	9.7%	0%	-	-	27.4%	-	-	
Heavy	0	0	0	0	-	-	0	0	0	0	-	-	2	8	0	0	-	-	0	2	1	0	-	-	-	-	
Heavy %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	4.3%	1.3%	0%	0%	-	-	0%	1.3%	1.2%	0%	-	-	-	-	
Bicycles	1	7	1	0	-	-	2	1	2	0	-	-	0	45	0	0	-	-	0	10	8	0	-	-	-	-	
Bicycle %	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	0%	7.6%	0%	0%	-	-	0%	6.4%	9.3%	0%	-	-	-	-	

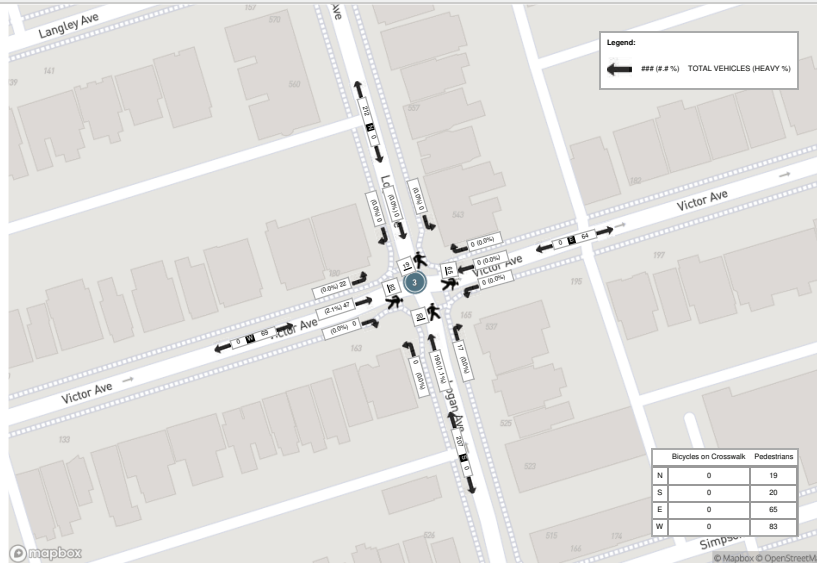
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																										
Start Time	N Approach LOGAN AVE						E Approach VICTOR AVE						S Approach LOGAN AVE						W Approach VICTOR AVE						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
08:15:00	0	0	0	0	6	0	0	0	0	0	9	0	2	45	0	0	4	47	0	9	9	0	10	18	65	
08:30:00	0	0	0	0	5	0	0	0	0	0	16	0	1	35	0	0	4	36	0	8	8	0	36	16	52	
08:45:00	0	0	0	0	3	0	0	0	0	0	9	0	5	44	0	0	5	49	0	13	5	0	24	18	67	
09:00:00	0	0	0	0	0	0	0	0	0	0	4	0	3	29	0	0	6	32	0	8	3	0	12	11	43	
Grand Total	0	0	0	0	14	0	0	0	0	0	38	0	11	153	0	0	19	164	0	38	25	0	62	63	227	
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	6.7%	93.3%	0%	0%	-	-	0%	60.3%	39.7%	0%	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4.8%	67.4%	0%	0%	72.2%	0%	16.7%	11%	0%	-	27.8%	-	-	
PHF	0	0	0	0	0	0	0	0	0	0	0	0	0.55	0.85	0	0	0	0.84	0	0.73	0.69	0	0.88	-	-	
Heavy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9.1%	2.6%	0%	0%	3%	0%	2.6%	0%	0%	1.6%	-	-	-	
Lights	0	0	0	0	0	0	0	0	0	0	0	0	10	149	0	0	159	0	37	25	0	62	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	90.9%	97.4%	0%	0%	97%	0%	97.4%	100%	0%	98.4%	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9.1%	1.3%	0%	0%	1.8%	0%	0%	0%	0%	0%	0	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	1	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.3%	0%	0%	1.2%	0%	2.6%	0%	0%	1.6%	-	-	-	
Pedestrians	-	-	-	-	13	-	-	-	-	-	38	-	-	-	-	-	19	-	-	-	-	82	-	-	-	
Pedestrians%	-	-	-	-	8.5%	-	-	-	-	-	24.8%	-	-	-	-	-	12.4%	-	-	-	-	53.6%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	
Bicycles on Crosswalk%	-	-	-	-	0.7%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	4	0	0	0	-	0	1	2	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)																										
Start Time	N Approach LOGAN AVE						E Approach VICTOR AVE						S Approach LOGAN AVE						W Approach VICTOR AVE						Int. Total (15 min)	
	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total	Right	Thru	Left	U/Turn	Peds	Approach Total		
16:00:00	0	0	0	0	6	0	0	0	0	0	11	0	6	64	0	0	6	70	0	9	4	0	26	13	83	
16:15:00	0	0	0	0	7	0	0	0	0	0	10	0	4	43	0	0	2	47	0	11	7	0	22	18	65	
16:30:00	0	0	0	0	4	0	0	0	0	0	19	0	4	42	0	0	5	46	0	14	1	0	18	15	61	
16:45:00	0	0	0	0	2	0	0	0	0	0	25	0	3	41	0	0	7	44	0	13	10	0	17	23	67	
Grand Total	0	0	0	0	19	0	0	0	0	0	65	0	17	190	0	0	20	207	0	47	22	0	69	69	276	
Approach%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	-	-	8.2%	91.8%	0%	0%	-	-	0%	68.1%	31.9%	0%	-	-	-	
Totals %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6.2%	68.8%	0%	0%	75%	0%	17%	8%	0%	25%	-	-	-	
PHF	0	0	0	0	0	0	0	0	0	0	0	0	0.71	0.74	0	0	0.74	0	0.84	0.55	0	0.75	-	-	-	
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	-	-	-	
Heavy %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.1%	0%	0%	1%	0%	2.1%	0%	0%	1.4%	-	-	-	
Lights	0	0	0	0	0	0	0	0	0	0	0	0	17	188	0	0	205	0	46	22	0	68	-	-	-	
Lights %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	98.9%	0%	0%	99%	0%	97.9%	100%	0%	98.6%	-	-	-	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	-	-	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.5%	0%	2.1%	0%	0%	1.4%	-	-	-	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-	-	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.5%	0%	0%	0%	0%	0%	-	-	-	
Pedestrians	-	-	-	-	19	-	-	-	-	-	65	-	-	-	-	-	20	-	-	-	-	83	-	-	-	
Pedestrians%	-	-	-	-	10.2%	-	-	-	-	-	34.8%	-	-	-	-	-	10.7%	-	-	-	-	44.4%	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	
Bicycles on Road	0	5	0	0	0	-	2	0	0	0	0	-	0	10	0	0	0	-	0	2	1	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Broken Clouds (10.5 °C)



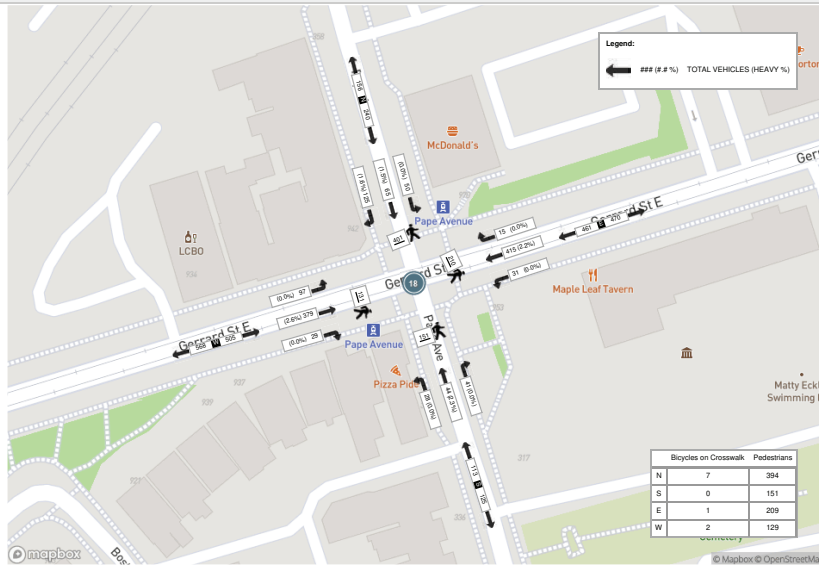


Turning Movement Count (18 . PAPE AVE & GERRARD ST)																											
Start Time	N Approach PAPE AVE						E Approach GERRARD ST E						S Approach PAPE AVE						W Approach GERRARD ST E						Int. Total (15 min)	Int. Total (1 hr)	
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total			
11:00:00	14	7	16	0	56	37	2	81	10	0	31	93	4	8	2	0	32	14	3	96	25	0	24	124	268		
11:15:00	19	15	14	0	72	48	7	95	5	0	38	107	10	10	4	0	27	24	3	79	19	0	20	101	280		
11:30:00	27	10	9	0	56	46	5	105	10	0	40	120	11	15	4	0	31	30	1	89	21	0	23	111	307		
11:45:00	32	13	11	0	59	56	4	84	10	0	27	98	4	6	4	0	39	14	2	90	19	0	20	111	279	1134	
12:00:00	28	19	13	0	76	60	1	102	7	0	37	110	4	8	0	0	30	12	5	80	20	0	34	105	287	1153	
12:15:00	30	13	14	0	69	57	1	112	7	0	52	120	10	10	2	0	36	22	4	99	22	0	20	125	324	1197	
12:30:00	29	8	13	0	69	50	2	90	7	0	27	99	11	13	4	0	21	28	1	86	25	0	10	112	289	1179	
12:45:00	36	9	12	0	86	57	6	114	8	0	40	128	8	11	8	0	49	27	5	75	23	0	35	103	315	1215	
13:00:00	31	10	6	0	83	47	2	105	1	0	51	108	8	11	8	0	47	27	6	95	15	0	30	116	298	1226	
13:15:00	33	13	10	0	100	56	0	96	12	0	44	108	4	20	2	0	43	26	6	84	24	0	22	114	304	1206	
13:30:00	25	15	17	0	67	57	5	94	13	0	50	112	4	13	2	0	48	19	7	98	15	0	30	130	308	1225	
13:45:00	35	11	17	0	78	63	1	87	6	0	61	94	14	10	6	0	31	30	5	81	28	0	24	114	301	1211	
14:00:00	37	16	11	0	149	64	5	110	15	0	52	130	12	10	6	0	36	28	7	95	22	0	59	124	346	1259	
14:15:00	38	18	14	0	93	70	3	97	4	0	40	104	13	9	6	0	39	28	9	100	23	0	20	132	334	1289	
14:30:00	23	15	12	0	78	50	6	109	7	0	48	122	8	10	10	0	26	28	9	90	32	0	20	131	331	1312	
14:45:00	27	16	13	0	81	56	1	99	5	0	70	105	8	15	6	0	50	29	4	94	20	0	32	118	308	1319	
Grand Total	464	208	202	0	1272	874	51	1580	127	0	708	1758	133	179	74	0	585	386	77	1431	353	0	423	1861	4879	-	
Approach%	53.1%	23.8%	23.1%	0%	-	-	-	2.9%	89.9%	7.2%	0%	-	-	34.5%	46.4%	19.2%	0%	-	-	4.1%	76.9%	19%	0%	-	-	-	-
Totals %	9.5%	4.3%	4.1%	0%	17.9%	17.9%	1%	32.4%	2.6%	0%	36%	36%	2.7%	3.7%	1.5%	0%	7.9%	7.9%	1.6%	29.3%	7.2%	0%	38.1%	38.1%	-	-	
Heavy	4	1	4	0	-	-	0	41	0	0	-	-	0	1	2	0	-	-	1	44	1	0	-	-	-	-	
Heavy %	0.9%	0.5%	2%	0%	-	-	0%	2.6%	0%	0%	-	-	0%	0.6%	2.7%	0%	-	-	1.3%	3.1%	0.3%	0%	-	-	-	-	
Bicycles	12	5	0	0	-	-	1	60	4	0	-	-	5	9	1	0	-	-	1	39	4	0	-	-	-	-	
Bicycle %	2.6%	2.4%	0%	0%	-	-	2%	3.8%	3.1%	0%	-	-	3.8%	5%	1.4%	0%	-	-	1.3%	2.7%	1.1%	0%	-	-	-	-	



Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach PAPE AVE						E Approach GERRARD ST E						S Approach PAPE AVE						W Approach GERRARD ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
14:00:00	37	16	11	0	149	64	5	110	15	0	52	130	12	10	6	0	36	28	7	95	22	0	59	124	346
14:15:00	38	18	14	0	93	70	3	97	4	0	40	104	13	9	6	0	39	28	9	100	23	0	20	132	334
14:30:00	23	15	12	0	78	50	6	109	7	0	48	122	8	10	10	0	26	28	9	90	32	0	20	131	331
14:45:00	27	16	13	0	81	56	1	99	5	0	70	105	8	15	6	0	50	29	4	94	20	0	32	118	308
Grand Total	125	65	50	0	401	240	15	415	31	0	210	461	41	44	28	0	151	113	29	379	97	0	131	555	1319
Approach%	52.1%	27.1%	20.8%	0%	-	-	3.3%	90%	6.7%	0%	-	-	36.3%	38.9%	24.8%	0%	-	-	5.7%	79%	19.2%	0%	-	-	-
Totals %	9.5%	4.9%	3.8%	0%	18.2%	18.2%	1.1%	31.5%	2.4%	0%	35%	35%	3.1%	3.3%	2.1%	0%	8.6%	8.6%	2.2%	28.7%	7.4%	0%	38.3%	38.3%	-
PHF	0.82	0.9	0.89	0	0.86	0.86	0.63	0.94	0.52	0	0.89	0.89	0.79	0.73	0.7	0	0.97	0.97	0.81	0.95	0.76	0	0.96	0.96	-
Heavy	2	1	0	0	3	3	0	9	0	0	0	9	0	1	0	0	0	1	1	0	10	0	0	10	-
Heavy %	1.6%	1.5%	0%	0%	1.3%	1.3%	0%	2.2%	0%	0%	0%	2%	0%	2.3%	0%	0%	0.9%	0.9%	0%	2.6%	0%	0%	2%	2%	-
Lights	123	64	50	0	237	237	15	406	31	0	452	452	41	43	28	0	112	112	29	369	97	0	129	495	-
Lights %	98.4%	98.5%	100%	0%	98.8%	98.8%	100%	97.8%	100%	0%	98%	98%	100%	97.7%	100%	0%	99.1%	99.1%	100%	97.4%	100%	0%	98%	98%	-
Single-Unit Trucks	1	1	0	0	2	2	0	1	0	0	0	1	0	1	0	0	0	1	1	0	1	0	0	1	-
Single-Unit Trucks %	0.8%	1.5%	0%	0%	0.8%	0.8%	0%	0.2%	0%	0%	0%	0.2%	0%	2.3%	0%	0%	0.9%	0.9%	0%	0.3%	0%	0%	0.2%	0.2%	-
Buses	1	0	0	0	1	1	0	7	0	0	0	7	0	0	0	0	0	0	0	9	0	0	0	9	-
Buses %	0.8%	0%	0%	0%	0.4%	0.4%	0%	1.7%	0%	0%	0%	1.5%	0%	0%	0%	0%	0%	0%	0%	2.4%	0%	0%	0%	1.8%	-
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	394	-	-	-	-	-	209	-	-	-	-	-	151	-	-	-	-	-	129	-	-
Pedestrians %	-	-	-	-	44.1%	-	-	-	-	-	23.4%	-	-	-	-	-	16.9%	-	-	-	-	-	14.4%	-	-
Bicycles on Crosswalk	-	-	-	-	7	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
Bicycles on Crosswalk %	-	-	-	-	0.8%	-	-	-	-	-	0.1%	-	-	-	-	-	0%	-	-	-	-	-	0.2%	-	-
Bicycles on Road	2	1	0	0	0	-	0	19	0	0	0	-	2	2	0	0	0	-	0	11	0	0	0	-	-
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (18 . PAPE AVE & GERRARD ST)

Turning Movement Count (18 · PAPE AVE & GERRARD ST)																											
Start Time	N Approach PAPE AVE						E Approach GERRARD ST E						S Approach PAPE AVE						W Approach GERRARD ST E						Int. Total (15 min)	Int. Total (1 hr)	
	Right N/W	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total			
07:30:00	4	2	2	0	10	8	0	104	2	0	6	106	4	1	4	0	5	9	0	39	6	0	4	45	168		
07:45:00	16	4	1	0	13	21	2	114	2	0	6	118	3	6	3	0	5	12	0	38	10	0	6	48	199		
08:00:00	12	6	1	0	15	19	1	107	3	0	13	111	3	5	3	0	16	11	1	54	8	0	3	63	204		
08:15:00	7	9	1	0	12	17	0	137	6	0	12	143	2	1	6	0	13	9	6	44	13	0	1	63	232	803	
08:30:00	14	5	7	0	46	26	2	118	7	0	23	127	3	3	2	0	18	8	5	68	13	0	12	86	247	882	
08:45:00	9	4	5	0	88	18	1	152	3	0	30	156	6	7	8	0	29	21	5	101	10	0	14	116	311	994	
09:00:00	19	7	4	0	33	30	0	129	5	0	18	134	6	9	8	0	26	23	5	67	17	0	14	89	276	1066	
09:15:00	22	7	7	0	33	36	2	106	3	0	6	111	11	7	6	0	9	24	3	74	19	0	12	96	267	1101	
BREAK																											
16:00:00	23	11	14	0	89	48	1	83	9	0	66	93	7	10	7	1	33	25	4	106	23	0	24	133	259		
16:15:00	23	8	16	0	66	47	4	87	6	0	43	97	4	9	5	0	25	18	5	131	24	0	17	160	322		
16:30:00	22	11	6	0	80	39	1	86	9	1	40	97	6	4	2	0	20	12	4	127	21	0	23	152	300		
16:45:00	32	13	11	0	62	56	5	74	7	0	55	86	2	8	6	0	33	16	5	123	17	0	15	145	303	1224	
17:00:00	27	8	15	0	90	50	1	81	5	0	56	87	6	6	7	0	27	19	11	110	26	0	32	147	303	1228	
17:15:00	20	6	7	0	91	33	2	77	9	0	62	88	4	9	3	0	47	16	4	118	23	0	29	145	282	1188	
17:30:00	24	10	6	0	60	40	2	92	14	0	60	108	6	11	3	0	38	20	8	115	19	0	41	142	310	1198	
17:45:00	19	12	13	0	82	44	3	94	7	0	70	104	7	7	5	0	59	19	4	91	24	0	24	119	286	1181	
Grand Total	293	123	116	0	870	532	27	1641	97	1	560	1766	80	103	78	1	413	262	70	1406	273	0	271	1749	4309	-	
Approach%	55.1%	23.1%	21.8%	0%	-	-	1.5%	92.9%	5.5%	0.1%	-	-	30.5%	39.3%	29.8%	0.4%	-	-	4%	80.4%	15.6%	0%	-	-	-	-	
Totals %	6.8%	2.9%	2.7%	0%	12.3%	0.6%	38.1%	2.3%	0%	41%	1.9%	2.4%	1.8%	0%	6.1%	1.6%	32.6%	6.3%	0%	40.6%	-	-	-	-	-	-	
Heavy	5	3	5	0	-	-	4	68	7	0	-	-	4	2	1	0	-	-	3	57	2	0	-	-	-	-	
Heavy %	1.7%	2.4%	4.3%	0%	-	-	14.8%	4.1%	7.2%	0%	-	-	5%	1.9%	1.3%	0%	-	-	4.3%	4.1%	0.7%	0%	-	-	-	-	
Bicycles	9	5	0	0	-	-	2	38	2	0	-	-	2	4	2	0	-	-	3	35	2	0	-	-	-	-	
Bicycle %	3.1%	4.1%	0%	0%	-	-	7.4%	2.3%	2.1%	0%	-	-	2.5%	3.9%	2.6%	0%	-	-	4.3%	2.5%	0.7%	0%	-	-	-	-	

Turning Movement
Count

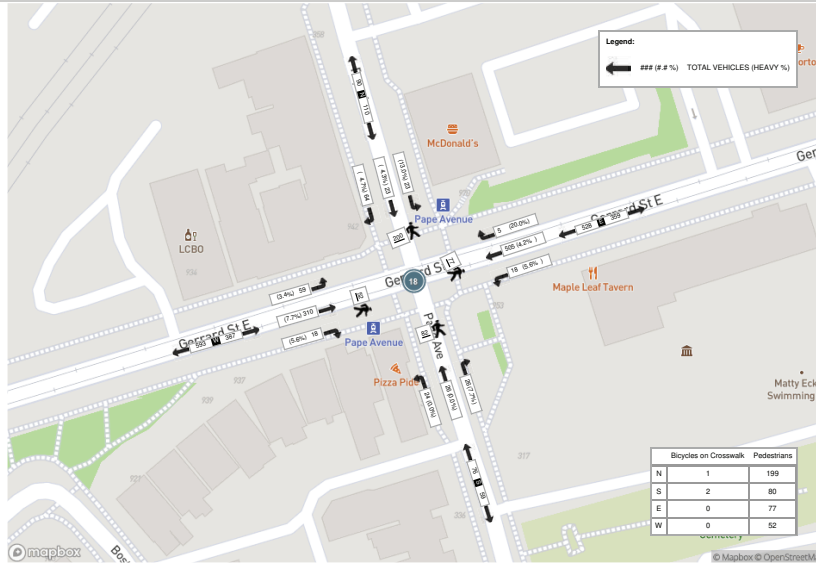
Page 1 of 5

BAC22Y8Z

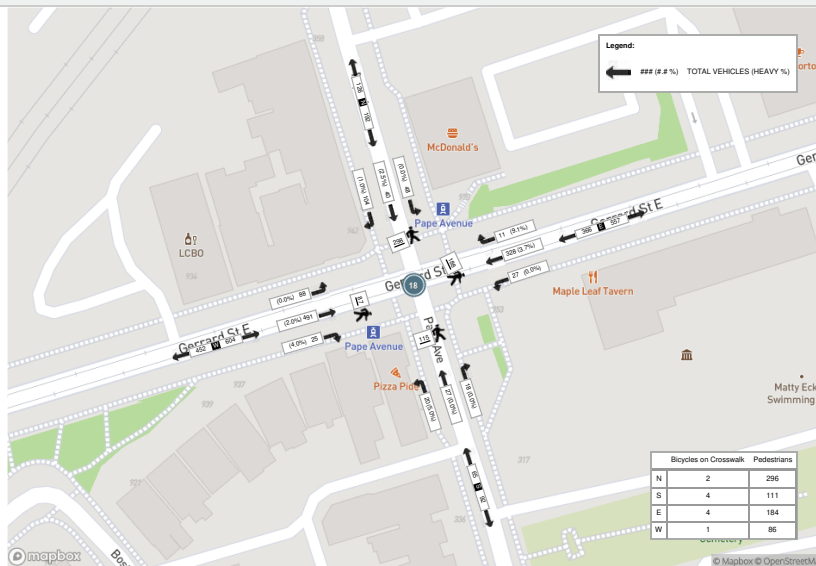
Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)																										
Start Time	N Approach PAPE AVE						E Approach GERRARD ST E						S Approach PAPE AVE						W Approach GERRARD ST E						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
08:30:00	14	5	7	0	46	26	2	118	7	0	23	127	3	3	2	0	18	8	5	68	13	0	12	86	247	
08:45:00	9	4	5	0	88	18	1	152	3	0	30	156	6	7	8	0	29	21	5	101	10	0	14	116	311	
09:00:00	19	7	4	0	33	30	0	129	5	0	18	134	6	9	8	0	26	23	5	67	17	0	14	89	276	
09:15:00	22	7	7	0	33	36	2	106	3	0	6	111	11	7	6	0	9	24	3	74	19	0	12	96	267	
Grand Total	64	23	23	0	200	110	5	505	18	0	77	528	26	26	24	0	82	76	18	310	59	0	52	387	1101	
Approach%	58.2%	20.9%	20.9%	0%	-	-	0.9%	95.6%	3.4%	0%	-	-	34.2%	34.2%	31.6%	0%	-	-	4.7%	80.1%	15.2%	0%	-	-	-	
Totals %	5.8%	2.1%	2.1%	0%	10%	0.5%	45.9%	1.6%	0%	48%	0.85	0.59	0.72%	2.2%	0%	6.9%	1.6%	28.2%	5.4%	0%	35.1%	-	-	-		
PHF	0.73	0.82	0.82	0	0.76	0.63	0.63	0.64	0	0.85	0.59	0.72	0.75	0	0.79	0.5	0.77	0.73	0	0.83	-	-	-	-	-	
Heavy	3	1	3	0	7	1	21	1	0	23	2	0	0	0	2	1	24	2	0	27	-	-	-	-	-	
Heavy %	4.7%	4.3%	13%	0%	6.4%	20%	4.2%	5.6%	0%	4.4%	7.7%	0%	0%	0%	2.6%	5.6%	7.7%	3.4%	0%	7%	-	-	-	-	-	
Lights	61	22	20	0	103	4	484	17	0	505	24	26	24	0	74	17	286	57	0	360	-	-	-	-	-	
Lights %	95.3%	95.7%	87%	0%	93.6%	80%	95.8%	94.4%	0%	95.6%	92.3%	100%	100%	0%	97.4%	94.4%	92.3%	96.6%	0%	93%	-	-	-	-	-	
Single-Unit Trucks	3	0	1	0	4	1	8	1	0	10	1	0	0	0	0	1	0	8	2	0	10	-	-	-	-	
Single-Unit Trucks %	4.7%	0%	4.3%	0%	3.6%	20%	1.6%	5.6%	0%	1.9%	3.8%	0%	0%	0%	0%	1.3%	0%	2.6%	3.4%	0%	2.6%	-	-	-	-	
Buses	0	1	2	0	3	0	11	0	0	11	1	0	0	0	0	1	1	16	0	0	17	-	-	-	-	
Buses %	0%	4.3%	8.7%	0%	2.7%	0%	2.2%	0%	0%	2.1%	3.8%	0%	0%	0%	0%	1.3%	5.6%	5.2%	0%	0%	4.4%	-	-	-	-	
Articulated Trucks	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0.4%	0%	0%	0.4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
Pedestrians	-	-	-	-	199	-	-	-	-	77	-	-	-	-	-	80	-	-	-	-	52	-	-	-	-	
Pedestrians %	-	-	-	-	48.4%	-	-	-	-	18.7%	-	-	-	-	-	19.5%	-	-	-	-	12.7%	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	0	-	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0.2%	-	-	-	-	0%	-	-	-	-	-	0.5%	-	-	-	-	0%	-	-	-	-	
Bicycles on Road	0	0	0	0	0	-	0	9	2	0	0	-	0	1	0	0	0	-	0	5	0	0	0	-	-	
Bicycles on Road %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																										
Start Time	N Approach PAPE AVE						E Approach GERRARD ST E						S Approach PAPE AVE						W Approach GERRARD ST E						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
16:15:00	23	8	16	0	66	47	4	87	6	0	43	97	4	9	5	0	35	18	5	131	24	0	17	160	322	
16:30:00	22	11	6	0	80	39	1	86	9	1	40	97	6	4	2	0	20	12	4	127	21	0	23	152	300	
16:45:00	32	13	11	0	62	56	5	74	7	0	55	86	2	8	6	0	33	16	5	123	17	0	15	145	303	
17:00:00	27	8	15	0	90	50	1	81	5	0	50	87	6	6	7	0	27	19	11	110	26	0	32	147	303	
Grand Total	104	40	48	0	298	192	11	328	27	1	188	367	18	27	20	0	115	65	25	491	88	0	87	604	1228	
Approach%	54.2%	20.8%	25%	0%	-	-	3%	89.4%	7.4%	0.3%	-	-	27.7%	41.5%	30.8%	0%	-	-	4.1%	81.3%	14.6%	0%	-	-	-	
Totals %	8.9%	3.5%	3.9%	0%	15.6%	0.9%	26.7%	2.2%	0.1%	29.9%	1.9%	2.2%	1.6%	0%	5.3%	2%	40%	7.2%	0%	49.2%	-	-	-	49.2%	-	
PHF	0.81	0.77	0.75	0	0	0.86	0.55	0.94	0.75	0.25	0.95	0.75	0.75	0.71	0	0.86	0.57	0.94	0.85	0	0.94	-	-	-	0.94	-
Heavy	1	1	0	0	2	1	12	0	0	13	0	0	1	0	0	1	0	0	1	10	0	0	0	11	-	
Heavy %	1%	2.5%	0%	0%	1%	1%	9.1%	3.7%	0%	0%	3.5%	0%	0%	5%	0%	1.5%	4%	2%	0%	0%	1.8%	-	-	-	1.8%	-
Lights	103	39	48	0	190	10	316	27	1	354	18	27	19	0	64	24	481	88	0	593	-	-	-	593	-	
Lights %	99%	97.5%	100%	0%	99%	90.9%	96.3%	100%	100%	96.5%	100%	100%	95%	0%	98.5%	96%	98%	100%	0%	98.2%	-	-	-	98.2%	-	
Single-Unit Trucks	0	1	0	0	1	1	4	0	0	5	0	0	1	0	1	1	1	0	0	2	-	-	-	2	-	
Single-Unit Trucks %	0%	2.5%	0%	0%	0.5%	9.1%	1.2%	0%	0%	1.4%	0%	0%	5%	0%	1.5%	4%	0.2%	0%	0%	0.3%	-	-	-	0.3%	-	
Buses	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	0	9	0	0	9	-	-	-	9	-	
Buses %	1%	0%	0%	0%	0.5%	0%	2.4%	0%	0%	2.2%	0%	0%	0%	0%	0%	0%	1.8%	0%	0%	1.5%	-	-	-	1.5%	-	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	0	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	0%	-	
Pedestrians	-	-	-	-	296	-	-	-	-	184	-	-	-	-	-	111	-	-	-	-	86	-	-	-	86	-
Pedestrians %	-	-	-	-	43%	-	-	-	-	26.7%	-	-	-	-	-	16.1%	-	-	-	-	12.5%	-	-	-	12.5%	-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	1	-	-	-	1	-
Bicycles on Crosswalk %	-	-	-	-	0.3%	-	-	-	-	0.6%	-	-	-	-	-	0.6%	-	-	-	-	0.1%	-	-	-	0.1%	-
Bicycles on Road	3	3	0	0	0	-	1	5	0	0	0	-	0	0	0	0	0	-	0	13	1	0	0	-	-	
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	0%	-

Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



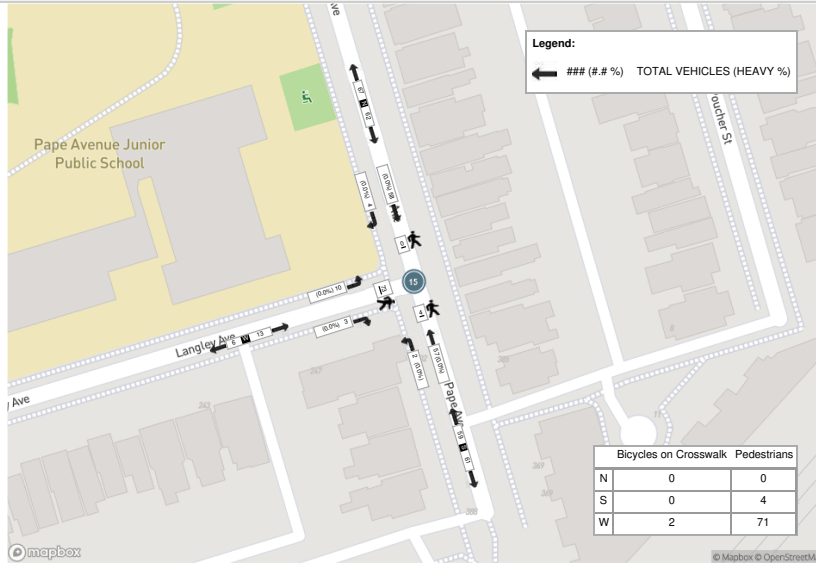
Turning Movement Count (15 . PAPE AVE & LANGLEY AVE)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach LANGLEY AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
11:00:00	2	7	0	0	9	7	1	0	1	8	0	0	0	13	0	17	
11:15:00	0	10	0	0	10	6	0	0	1	6	2	4	0	19	6	22	
11:30:00	1	15	0	0	16	19	0	0	1	19	0	1	0	9	1	36	
11:45:00	1	6	0	2	7	14	1	0	0	15	0	2	0	10	2	24	99
12:00:00	3	12	1	0	16	15	1	0	1	16	1	1	0	15	2	34	116
12:15:00	0	5	0	1	5	10	0	0	1	10	0	5	0	8	5	20	114
12:30:00	0	8	0	0	8	7	1	0	0	8	0	6	0	8	6	22	100
12:45:00	2	13	0	0	15	10	1	0	2	11	0	4	0	19	4	30	106
13:00:00	3	10	0	0	13	10	0	0	0	10	0	5	0	12	5	28	100
13:15:00	1	7	0	3	8	12	0	0	2	12	1	3	0	19	4	24	104
13:30:00	0	16	0	2	16	8	1	0	2	9	0	0	0	18	0	25	107
13:45:00	1	5	0	0	6	16	1	0	1	17	1	0	0	19	1	24	101
14:00:00	1	11	1	0	13	17	0	0	2	17	2	2	0	18	4	34	107
14:15:00	2	17	0	0	19	10	1	0	0	11	0	1	0	22	1	31	114
14:30:00	0	9	0	0	9	16	0	0	0	16	0	3	0	22	3	28	117
14:45:00	1	21	0	0	22	14	1	0	2	15	1	4	0	11	5	42	135
Grand Total	18	172	2	8	192	191	9	0	16	200	8	41	0	242	49	441	-
Approach%	9.4%	89.6%	1%		-	95.5%	4.5%	0%		-	16.3%	83.7%	0%		-	-	-
Totals %	4.1%	39%	0.5%		43.5%	43.3%	2%	0%		45.4%	1.8%	9.3%	0%		11.1%	-	-
Heavy	0	2	1		-	2	0	0		-	0	0	0		-	-	-
Heavy %	0%	1.2%	50%		-	1%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	1	13	0		-	16	4	0		-	0	2	0		-	-	-
Bicycle %	5.6%	7.6%	0%		-	8.4%	44.4%	0%		-	0%	4.9%	0%		-	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach LANGLEY AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
14:00:00	1	11	1	0	13	17	0	0	2	17	2	2	0	18	4	34
14:15:00	2	17	0	0	19	10	1	0	0	11	0	1	0	22	1	31
14:30:00	0	9	0	0	9	16	0	0	0	16	0	3	0	22	3	28
14:45:00	1	21	0	0	22	14	1	0	2	15	1	4	0	11	5	42
Grand Total	4	58	1	0	63	57	2	0	4	59	3	10	0	73	13	135
Approach%	6.3%	92.1%	1.6%		-	96.6%	3.4%	0%		-	23.1%	76.9%	0%		-	-
Totals %	3%	43%	0.7%		46.7%	42.2%	1.5%	0%		43.7%	2.2%	7.4%	0%		9.6%	-
PHF	0.5	0.69	0.25		0.72	0.84	0.5	0		0.87	0.38	0.63	0		0.65	-
Heavy	0	0	0		0	0	0	0		0	0	0	0		0	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Lights	4	58	1		63	57	2	0		59	3	10	0		13	-
Lights %	100%	100%	100%		100%	100%	100%	0%		100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	4	-	-	-	-	71	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	5.2%	-	-	-	-	92.2%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	2.6%	-	-
Bicycles on Road	1	8	0	0	-	7	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)



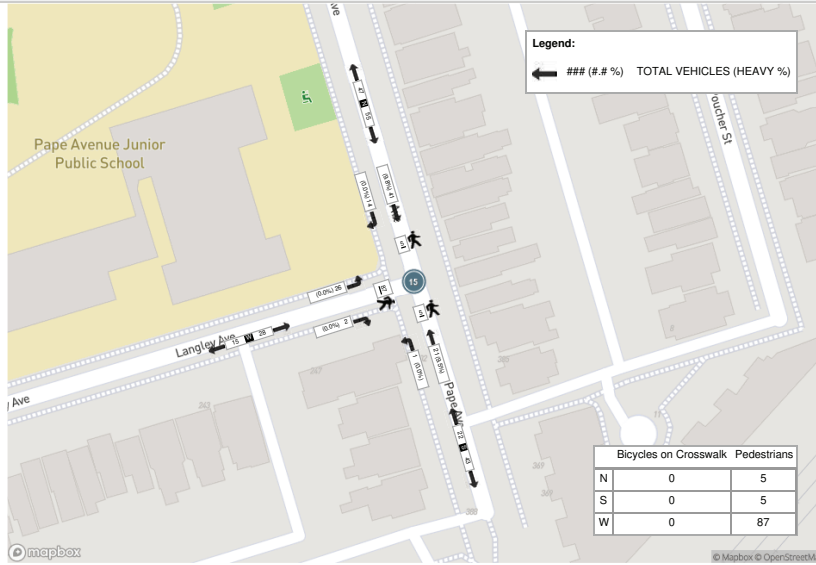
Turning Movement Count (15 . PAPE AVE & LANGLEY AVE)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach LANGLEY AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N-W	Thru N-S	UTurn N-N	Peds N:	Approach Total	Thru S-N	Left S-W	UTurn S-S	Peds S:	Approach Total	Right W-S	Left W-N	UTurn W-W	Peds W:	Approach Total		
07:30:00	1	3	0	0	4	3	1	0	0	4	1	3	0	2	4	12	
07:45:00	0	4	0	0	4	2	0	0	2	2	2	1	0	5	3	9	
08:00:00	1	12	0	0	13	5	0	0	0	5	0	4	0	3	4	22	
08:15:00	1	4	1	1	6	3	0	0	0	3	0	7	0	8	7	16	59
08:30:00	7	7	0	2	14	4	0	0	0	4	0	5	0	14	5	23	70
08:45:00	5	15	0	2	20	7	0	0	5	7	1	9	0	54	10	37	98
09:00:00	1	10	0	1	11	4	1	0	0	5	0	10	0	7	10	26	102
09:15:00	1	9	0	0	10	6	0	0	0	6	1	2	0	12	3	19	105
BREAK																	
16:00:00	0	4	0	1	4	8	0	0	0	8	1	11	0	7	12	24	
16:15:00	0	24	0	0	24	17	0	0	2	17	1	3	0	9	4	45	
16:30:00	2	11	0	4	13	20	1	0	1	21	2	4	0	16	6	40	
16:45:00	1	24	0	1	25	13	1	0	2	14	1	5	0	6	6	45	154
17:00:00	4	12	0	0	16	18	1	0	2	19	0	5	0	23	5	40	170
17:15:00	4	11	0	5	15	21	1	0	0	22	1	7	0	13	8	45	170
17:30:00	2	8	0	1	10	13	0	0	1	13	0	4	0	18	4	27	157
17:45:00	4	9	1	1	14	24	0	0	0	24	1	2	0	14	3	41	153
Grand Total	34	167	2	19	203	168	6	0	15	174	12	82	0	211	94	471	-
Approach%	16.7%	82.3%	1%	-	-	96.6%	3.4%	0%	-	-	12.8%	87.2%	0%	-	-	-	-
Totals %	7.2%	35.5%	0.4%	-	43.1%	35.7%	1.3%	0%	-	36.9%	2.5%	17.4%	0%	-	20%	-	-
Heavy	0	8	0	-	-	4	0	0	-	-	0	3	0	-	-	-	-
Heavy %	0%	4.8%	0%	-	-	2.4%	0%	0%	-	-	0%	3.7%	0%	-	-	-	-
Bicycles	2	6	0	-	-	6	1	0	-	-	0	8	0	-	-	-	-
Bicycle %	5.9%	3.6%	0%	-	-	3.6%	16.7%	0%	-	-	0%	9.8%	0%	-	-	-	-

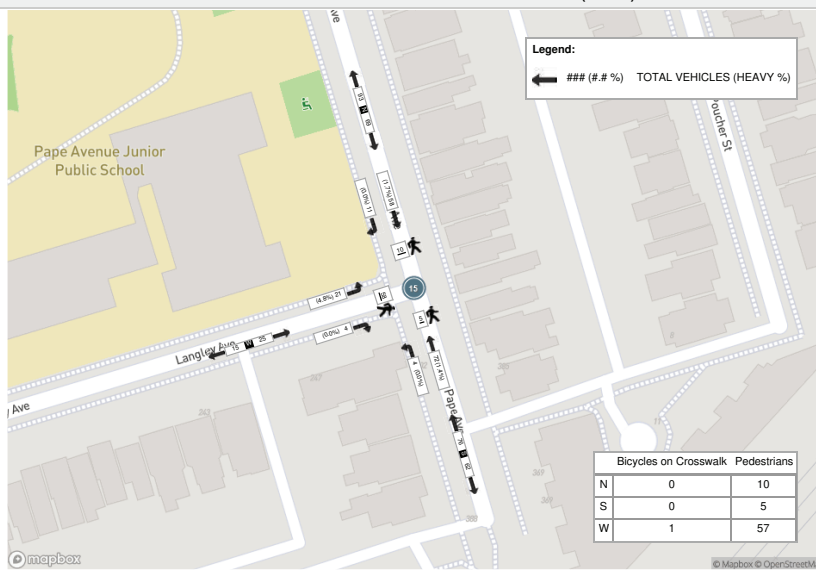
Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach LANGLEY AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:30:00	7	7	0	2	14	4	0	0	0	4	0	5	0	14	5	23
08:45:00	5	15	0	2	20	7	0	0	5	7	1	9	0	54	10	37
09:00:00	1	10	0	1	11	4	1	0	0	5	0	10	0	7	10	26
09:15:00	1	9	0	0	10	6	0	0	0	6	1	2	0	12	3	19
Grand Total	14	41	0	5	55	21	1	0	5	22	2	26	0	87	28	105
Approach%	25.5%	74.5%	0%	-	-	95.5%	4.5%	0%	-	-	7.1%	92.9%	0%	-	-	-
Totals %	13.3%	39%	0%	52.4%	20%	1%	0%	21%	1.9%	24.8%	0%	26.7%	-	-	-	-
PHF	0.5	0.68	0	0.69	0.75	0.25	0	0.79	0.5	0.65	0	0.7	-	-	-	-
Heavy	0	4	0	-	4	2	0	0	-	2	0	0	0	-	0	-
Heavy %	0%	9.8%	0%	7.3%	9.5%	0%	0%	9.1%	0%	0%	0%	0%	0%	0%	0%	-
Lights	14	37	0	51	19	1	0	20	2	26	0	28	-	-	-	-
Lights %	100%	90.2%	0%	92.7%	90.5%	100%	0%	90.9%	100%	100%	0%	100%	-	-	-	-
Single-Unit Trucks	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	-
Single-Unit Trucks %	0%	2.4%	0%	1.8%	4.8%	0%	0%	4.5%	0%	0%	0%	0%	0%	0%	0%	-
Buses	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	-
Buses %	0%	2.4%	0%	1.8%	4.8%	0%	0%	4.5%	0%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	4.9%	0%	3.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	5	-	-	-	-	5	-	-	-	-	87	-	-
Pedestrians%	-	-	-	5.2%	-	-	-	5.2%	-	-	-	-	89.7%	-	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	0	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	0%	-	-	-	-	0%	-	-	-
Bicycles on Road	1	0	0	0	-	0	0	0	0	-	0	2	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	0%	-	-	-	-	0%	-	-	-

Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach LANGLEY AVE					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:30:00	2	11	0	4	13	20	1	0	1	21	2	4	0	16	6	40
16:45:00	1	24	0	1	25	13	1	0	2	14	1	5	0	6	6	45
17:00:00	4	12	0	0	16	18	1	0	2	19	0	5	0	23	5	40
17:15:00	4	11	0	5	15	21	1	0	0	22	1	7	0	13	8	45
Grand Total	11	58	0	10	69	72	4	0	5	76	4	21	0	58	25	170
Approach%	15.9%	84.1%	0%	-	-	94.7%	5.3%	0%	-	-	16%	84%	0%	-	-	-
Totals %	6.5%	34.1%	0%	40.6%	42.4%	2.4%	0%	44.7%	2.4%	12.4%	0%	14.7%	-	-	-	-
PHF	0.69	0.6	0	0.69	0.86	1	0	0.86	0.5	0.75	0	0.78	-	-	-	-
Heavy	0	1	0	-	1	1	0	0	-	1	0	1	0	-	1	-
Heavy %	0%	1.7%	0%	1.4%	1.4%	0%	0%	1.3%	0%	4.8%	0%	4%	0%	4%	-	-
Lights	11	57	0	68	71	4	0	75	4	20	0	24	-	-	-	-
Lights %	100%	98.3%	0%	98.6%	98.6%	100%	0%	98.7%	100%	95.2%	0%	96%	-	-	-	-
Single-Unit Trucks	0	1	0	1	1	0	0	1	0	1	0	1	0	1	1	-
Single-Unit Trucks %	0%	1.7%	0%	1.4%	1.4%	0%	0%	1.3%	0%	4.8%	0%	4%	0%	4%	-	-
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Buses %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	10	-	-	-	-	5	-	-	-	-	57	-	-
Pedestrians%	-	-	-	13.7%	-	-	-	6.8%	-	-	-	-	78.1%	-	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	0	-	-	-	-	1	-	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	0%	-	-	-	-	1.4%	-	-	-
Bicycles on Road	1	4	0	0	-	3	0	0	0	-	0	3	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	0%	-	-	-	-	0%	-	-	-

Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)



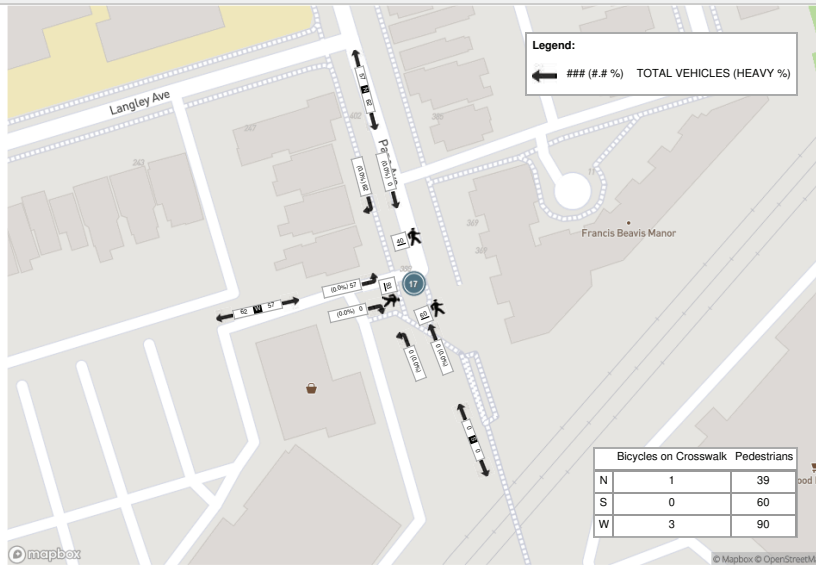
Turning Movement Count (17 - PAPE AVE & NO FRILLS ACCESS)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach NO FRILLS ACCESS					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
11:00:00	9	0	0	8	9	0	0	0	5	0	0	8	0	14	8	17	
11:15:00	9	2	0	5	11	0	0	0	3	0	0	5	0	25	5	16	
11:30:00	18	0	0	2	18	0	0	0	10	0	0	21	0	11	21	39	
11:45:00	7	0	0	14	7	0	0	0	12	0	0	12	0	23	12	19	91
12:00:00	13	0	0	4	13	1	0	0	12	1	0	9	0	13	9	23	97
12:15:00	3	0	1	6	4	0	0	0	6	0	0	6	0	13	6	10	91
12:30:00	8	0	0	5	8	0	0	0	8	0	0	10	0	16	10	18	70
12:45:00	11	0	0	3	11	0	0	0	9	0	0	13	0	16	13	24	75
13:00:00	11	0	0	8	11	0	0	0	11	0	0	8	0	15	8	19	71
13:15:00	9	1	0	4	10	0	0	0	8	0	0	13	0	16	13	23	84
13:30:00	15	0	0	6	15	0	0	0	13	0	0	12	0	25	12	27	93
13:45:00	4	0	0	2	4	0	0	0	13	0	0	18	0	16	18	22	91
14:00:00	16	0	0	9	16	0	0	0	20	0	0	17	0	25	17	33	105
14:15:00	16	0	0	9	16	0	0	0	7	0	0	11	0	23	11	27	109
14:30:00	9	0	0	16	9	0	0	0	25	0	0	16	0	22	16	25	107
14:45:00	21	0	1	6	22	0	0	0	8	0	0	13	0	23	13	35	120
Grand Total	179	3	2	107	184	1	0	0	170	1	0	192	0	296	192	377	-
Approach%	97.3%	1.6%	1.1%		-	100%	0%	0%		-	0%	100%	0%		-	-	-
Totals %	47.5%	0.8%	0.5%		48.8%	0.3%	0%	0%		0.3%	0%	50.9%	0%		50.9%	-	-
Heavy	2	0	0		-	1	0	0		-	0	0	0		-	-	-
Heavy %	1.1%	0%	0%		-	100%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	9	1	0		-	4	0	0		-	0	13	0		-	-	-
Bicycle %	5%	33.3%	0%		-	400%	0%	0%		-	0%	6.8%	0%		-	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach NO FRILLS ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
14:00:00	16	0	0	9	16	0	0	0	20	0	0	17	0	25	17	33
14:15:00	16	0	0	9	16	0	0	0	7	0	0	11	0	23	11	27
14:30:00	9	0	0	16	9	0	0	0	25	0	0	16	0	22	16	25
14:45:00	21	0	1	6	22	0	0	0	8	0	0	13	0	23	13	35
Grand Total	62	0	1	40	63	0	0	0	60	0	0	57	0	93	57	120
Approach%	98.4%	0%	1.6%		-	0%	0%	0%		-	0%	100%	0%		-	-
Totals %	51.7%	0%	0.8%		52.5%	0%	0%	0%		0%	0%	47.5%	0%		47.5%	-
PHF	0.74	0	0.25		0.72	0	0	0		0	0	0.84	0		0.84	-
Heavy	0	0	0		0	0	0	0		0	0	0	0		0	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Lights	62	0	1		63	0	0	0		0	0	57	0		57	-
Lights %	100%	0%	100%		100%	0%	0%	0%		0%	0%	100%	0%		100%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	39	-	-	-	-	60	-	-	-	-	90	-	-
Pedestrians%	-	-	-	20.2%	-	-	-	-	31.1%	-	-	-	-	46.6%	-	-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	3	-	-
Bicycles on Crosswalk%	-	-	-	0.5%	-	-	-	-	0%	-	-	-	-	1.6%	-	-
Bicycles on Road	4	1	0	0	-	2	0	0	0	-	0	5	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)



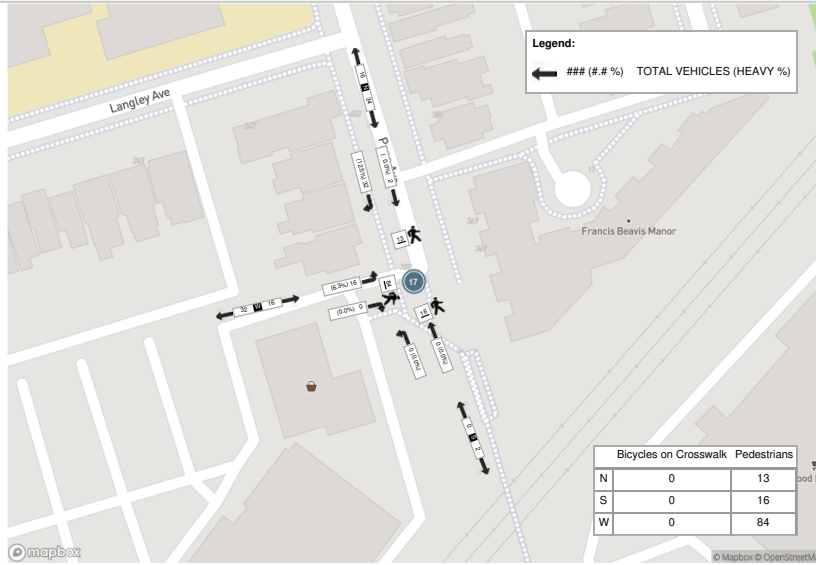
Turning Movement Count (17 . PAPE AVE & NO FRILLS ACCESS)

Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach NO FRILLS ACCESS					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	3	0	0	1	3	0	0	0	5	0	0	4	0	3	4	7	
07:45:00	3	0	0	2	3	0	0	0	1	0	0	1	0	7	1	4	
08:00:00	11	1	0	3	12	0	0	0	1	0	0	2	0	5	2	14	
08:15:00	5	0	0	4	5	0	0	0	8	0	0	3	0	8	3	8	33
08:30:00	5	0	0	1	5	0	0	0	6	0	0	2	0	17	2	7	33
08:45:00	13	0	0	2	13	0	0	0	3	0	0	6	0	48	6	19	48
09:00:00	6	2	1	3	9	0	0	0	3	0	0	2	0	10	2	11	45
09:15:00	8	0	0	7	8	0	0	0	4	0	0	6	0	9	6	14	51
BREAK																	
16:00:00	4	0	0	4	4	0	0	0	7	0	0	9	0	10	9	13	
16:15:00	23	0	0	1	23	0	0	0	11	0	0	16	0	15	16	39	
16:30:00	12	0	1	1	13	0	0	0	12	0	0	19	0	15	19	32	
16:45:00	18	0	0	3	18	0	0	0	13	0	0	14	0	10	14	32	116
17:00:00	11	0	0	7	11	0	0	0	22	0	0	16	0	25	16	27	130
17:15:00	10	0	1	2	11	0	0	0	20	0	0	22	0	18	22	33	124
17:30:00	10	0	0	3	10	0	0	0	10	0	0	12	0	25	12	22	114
17:45:00	11	0	0	9	11	0	0	0	13	0	0	22	0	23	22	33	115
Grand Total	153	3	3	53	159	0	0	0	139	0	0	156	0	248	156	315	-
Approach%	96.2%	1.9%	1.9%	-	-	0%	0%	0%	-	-	0%	100%	0%	-	-	-	-
Totals %	48.6%	1%	1%	-	50.5%	0%	0%	0%	-	0%	0%	49.5%	0%	-	49.5%	-	-
Heavy	8	0	0	-	-	0	0	0	-	-	0	3	0	-	-	-	-
Heavy %	5.2%	0%	0%	-	-	0%	0%	0%	-	-	0%	1.9%	0%	-	-	-	-
Bicycles	4	1	1	-	-	1	0	0	-	-	0	7	0	-	-	-	-
Bicycle %	2.6%	33.3%	33.3%	-	-	0%	0%	0%	-	-	0%	4.5%	0%	-	-	-	-

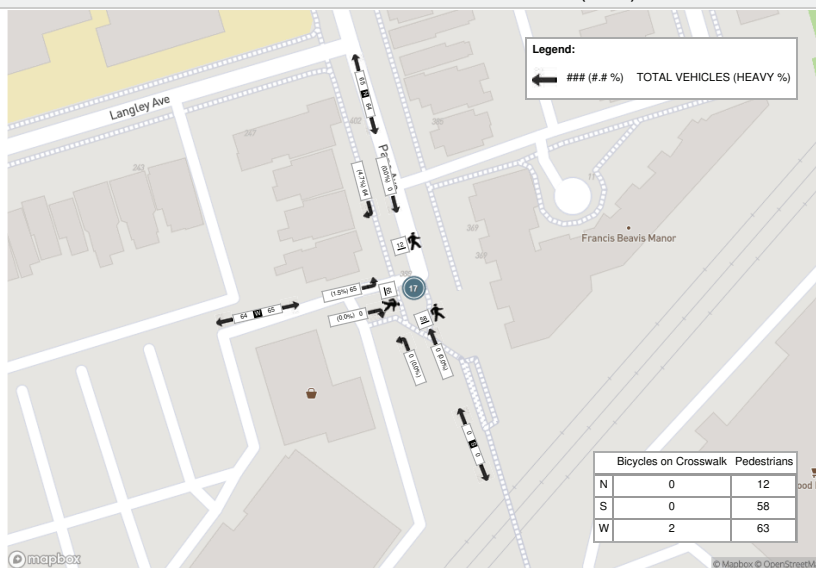
Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach NO FRILLS ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:30:00	5	0	0	1	5	0	0	0	6	0	0	2	0	17	2	7
08:45:00	13	0	0	2	13	0	0	0	3	0	0	6	0	48	6	19
09:00:00	6	2	1	3	9	0	0	0	3	0	0	2	0	10	2	11
09:15:00	8	0	0	7	8	0	0	0	4	0	0	6	0	9	6	14
Grand Total	32	2	1	13	35	0	0	0	16	0	0	16	0	84	16	51
Approach%	91.4%	5.7%	2.9%	-	-	0%	0%	0%	-	-	0%	100%	0%	-	-	-
Totals %	62.7%	3.9%	2%	68.6%	-	0%	0%	0%	-	-	0%	31.4%	0%	31.4%	-	-
PHF	0.62	0.25	0.25	0.67	-	0	0	0	0	-	0	0.67	0	0.67	-	-
Heavy	4	0	0	-	4	0	0	0	-	0	0	1	0	-	1	-
Heavy %	12.5%	0%	0%	11.4%	-	0%	0%	0%	-	0%	0%	6.3%	0%	-	6.3%	-
Lights	28	2	1	-	31	0	0	0	-	0	0	15	0	-	15	-
Lights %	87.5%	100%	100%	88.6%	-	0%	0%	0%	-	0%	0%	93.8%	0%	-	93.8%	-
Single-Unit Trucks	1	0	0	-	1	0	0	0	-	0	0	0	0	-	0	-
Single-Unit Trucks %	3.1%	0%	0%	2.9%	-	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Buses	1	0	0	-	1	0	0	0	-	0	0	1	0	-	1	-
Buses %	3.1%	0%	0%	2.9%	-	0%	0%	0%	-	0%	0%	6.3%	0%	-	6.3%	-
Articulated Trucks	2	0	0	-	2	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	6.3%	0%	0%	5.7%	-	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	13	-	-	-	-	16	-	-	-	-	84	-	-
Pedestrians %	-	-	-	11.5%	-	-	-	-	14.2%	-	-	-	-	74.3%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach PAPE AVE					S Approach PAPE AVE					W Approach NO FRILLS ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:15:00	23	0	0	1	23	0	0	0	11	0	0	16	0	15	16	39
16:30:00	12	0	1	1	13	0	0	0	12	0	0	19	0	15	19	32
16:45:00	18	0	0	3	18	0	0	0	13	0	0	14	0	10	14	32
17:00:00	11	0	0	7	11	0	0	0	22	0	0	16	0	25	16	27
Grand Total	64	0	1	12	65	0	0	0	58	0	0	65	0	65	65	130
Approach%	98.5%	0%	1.5%	-	-	0%	0%	0%	-	-	0%	100%	0%	-	-	-
Totals %	49.2%	0%	0.8%	50%	-	0%	0%	0%	-	-	0%	50%	0%	50%	-	-
PHF	0.7	0	0.25	0.71	-	0	0	0	0	-	0	0.86	0	0.86	-	-
Heavy	3	0	0	-	3	0	0	0	-	0	0	1	0	-	1	-
Heavy %	4.7%	0%	0%	4.6%	-	0%	0%	0%	-	0%	0%	1.5%	0%	-	1.5%	-
Lights	61	0	1	-	62	0	0	0	-	0	0	64	0	-	64	-
Lights %	95.3%	0%	100%	95.4%	-	0%	0%	0%	-	0%	0%	98.5%	0%	-	98.5%	-
Single-Unit Trucks	2	0	0	-	2	0	0	0	-	0	0	1	0	-	1	-
Single-Unit Trucks %	3.1%	0%	0%	3.1%	-	0%	0%	0%	-	0%	0%	1.5%	0%	-	1.5%	-
Buses	1	0	0	-	1	0	0	0	-	0	0	0	0	-	0	-
Buses %	1.6%	0%	0%	1.5%	-	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	0%	0%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	12	-	-	-	-	58	-	-	-	-	63	-	-
Pedestrians %	-	-	-	8.9%	-	-	-	-	43%	-	-	-	-	46.7%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	1.5%	-	-
Bicycles on Road	2	0	1	0	-	0	0	0	0	-	0	3	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



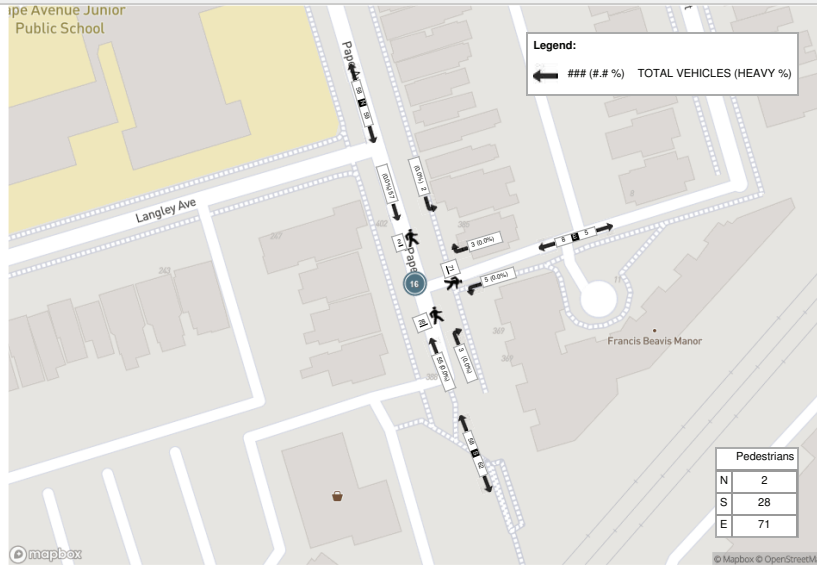
Turning Movement Count (16 . PAPE AVE & POUCHER ST)

Start Time	N Approach PAPE AVE					E Approach POUCHER ST					S Approach PAPE AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
11:00:00	7	0	0	1	7	0	1	0	6	1	0	8	0	5	8	16	
11:15:00	10	0	1	1	11	0	1	0	3	1	0	5	0	2	5	17	
11:30:00	15	1	0	0	16	2	3	0	11	5	4	17	0	4	21	42	
11:45:00	5	0	1	0	6	3	2	0	15	5	0	12	0	5	12	23	98
12:00:00	11	0	0	1	11	2	2	0	16	4	0	9	0	2	9	24	106
12:15:00	4	1	0	0	5	3	0	0	10	3	0	7	0	5	7	15	104
12:30:00	7	1	0	1	8	0	1	0	10	1	2	8	0	2	10	19	81
12:45:00	10	1	1	0	12	1	1	0	6	2	3	10	0	4	13	27	85
13:00:00	10	1	0	1	11	1	1	0	14	2	0	8	0	7	8	21	82
13:15:00	8	0	0	1	8	0	2	0	13	2	1	12	0	3	13	23	90
13:30:00	15	1	0	0	16	1	0	0	19	1	3	8	0	4	11	28	99
13:45:00	5	0	1	0	6	0	0	0	21	0	2	16	0	2	18	24	96
14:00:00	13	0	0	1	13	1	2	0	20	3	1	16	0	4	17	33	108
14:15:00	15	0	1	0	16	0	1	0	13	1	1	10	0	9	11	28	113
14:30:00	9	1	0	0	10	1	0	0	26	1	1	15	0	11	16	27	112
14:45:00	20	1	0	1	21	1	2	0	12	3	0	14	0	4	14	38	126
Grand Total	164	8	5	8	177	16	19	0	215	35	18	175	0	73	193	405	-
Approach%	92.7%	4.5%	2.8%	-	-	45.7%	54.3%	0%	-	-	9.3%	90.7%	0%	-	-	-	-
Totals %	40.5%	2%	1.2%	-	43.7%	4%	4.7%	0%	-	8.6%	4.4%	43.2%	0%	-	47.7%	-	-
Heavy	2	0	0	-	-	1	0	0	-	-	0	1	0	-	-	-	-
Heavy %	1.2%	0%	0%	-	-	6.3%	0%	0%	-	-	0%	0.6%	0%	-	-	-	-
Bicycles	12	0	2	-	-	1	3	0	-	-	5	16	0	-	-	-	-
Bicycle %	7.3%	0%	40%	-	-	6.3%	15.8%	0%	-	-	27.8%	9.1%	0%	-	-	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)

Start Time	N Approach PAPE AVE					E Approach POUCHER ST					S Approach PAPE AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
14:00:00	13	0	0	1	13	1	2	0	20	3	1	16	0	4	17	33
14:15:00	15	0	1	0	16	0	1	0	13	1	1	10	0	9	11	28
14:30:00	9	1	0	0	10	1	0	0	26	1	1	15	0	11	16	27
14:45:00	20	1	0	1	21	1	2	0	12	3	0	14	0	4	14	38
Grand Total	57	2	1	2	60	3	5	0	71	8	3	55	0	28	58	126
Approach%	95%	3.3%	1.7%	-	-	37.5%	62.5%	0%	-	-	5.2%	94.8%	0%	-	-	-
Totals %	45.2%	1.6%	0.8%	-	47.6%	2.4%	4%	0%	-	6.3%	2.4%	43.7%	0%	-	46%	-
PHF	0.71	0.5	0.25	-	0.71	0.75	0.63	0	-	0.67	0.75	0.86	0	-	0.85	-
Heavy	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Heavy %	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Lights	57	2	1	-	60	3	5	0	-	8	3	55	0	-	58	-
Lights %	100%	100%	100%	-	100%	100%	100%	0%	-	100%	100%	100%	0%	-	100%	-
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Single-Unit Trucks %	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	-
Articulated Trucks %	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	2	-	-	-	-	71	-	-	-	-	28	-	-
Pedestrians %	-	-	-	2%	-	-	-	-	70.3%	-	-	-	-	27.7%	-	-
Bicycles on Road	8	0	0	0	-	0	0	0	0	-	2	7	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 02:00 PM - 03:00 PM Weather: Scattered Clouds (3.45 °C)



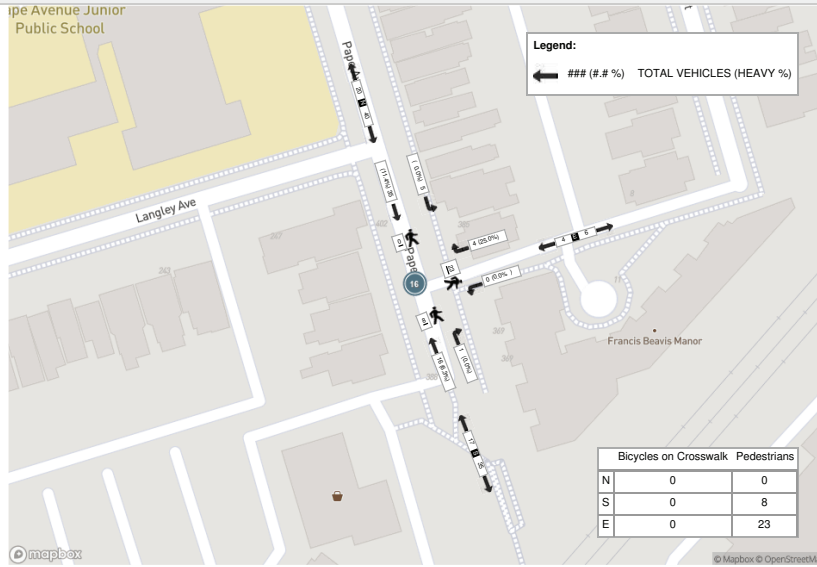
Turning Movement Count (16 . PAPE AVE & POUCHER ST)

Start Time	N Approach PAPE AVE					E Approach POUCHER ST					S Approach PAPE AVE					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:30:00	3	1	0	0	4	1	0	0	6	1	1	3	0	0	4	9	
07:45:00	4	1	0	0	5	0	0	0	3	0	0	1	0	3	1	6	
08:00:00	10	1	0	1	11	3	1	0	3	4	0	2	0	4	2	17	
08:15:00	4	0	0	1	4	1	1	0	13	2	1	2	0	2	3	9	41
08:30:00	5	1	1	0	7	1	0	0	5	1	0	2	0	1	2	10	42
08:45:00	13	3	2	0	18	1	0	0	8	1	1	5	0	2	6	25	61
09:00:00	9	0	0	0	9	2	0	0	7	2	0	3	0	2	3	14	58
09:15:00	8	1	0	0	9	0	0	0	3	0	0	6	0	3	6	15	64
BREAK																	
16:00:00	4	1	0	0	5	0	1	0	13	1	2	8	0	5	10	16	
16:15:00	22	2	0	0	24	1	0	0	20	1	1	17	0	2	18	43	
16:30:00	13	2	0	0	15	1	0	0	13	1	1	19	0	0	20	36	
16:45:00	17	0	0	0	17	1	1	0	9	2	2	12	0	5	14	33	128
17:00:00	11	0	1	0	12	2	0	0	21	2	0	16	0	8	16	30	142
17:15:00	12	0	0	0	12	0	0	0	16	0	1	23	0	4	24	36	135
17:30:00	7	0	0	1	7	1	3	0	12	4	0	12	0	3	12	23	122
17:45:00	11	0	0	2	11	0	0	0	10	0	0	22	0	8	22	33	122
Grand Total	153	13	4	5	170	15	7	0	162	22	10	153	0	52	163	355	-
Approach%	90%	7.6%	2.4%		-	68.2%	31.8%	0%		-	6.1%	93.9%	0%		-	-	-
Totals %	43.1%	3.7%	1.1%		47.9%	4.2%	2%	0%		6.2%	2.8%	43.1%	0%		45.9%	-	-
Heavy	8	0	0		-	1	0	0		-	0	3	0		-	-	-
Heavy %	5.2%	0%	0%		-	6.7%	0%	0%		-	0%	2%	0%		-	-	-
Bicycles	6	1	0		-	0	2	4		-	3	7	0		-	-	-
Bicycle %	3.9%	7.7%	0%		-	0%	28.6%	0%		-	30%	4.6%	0%		-	-	-

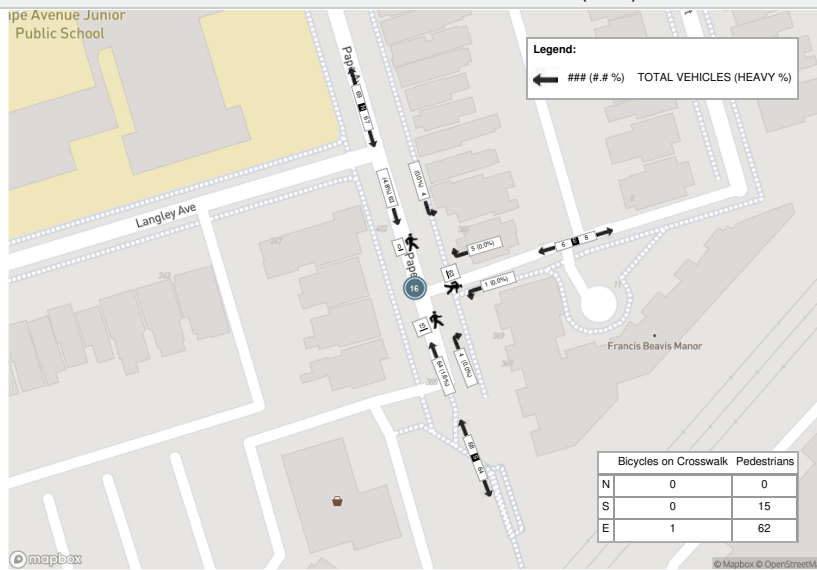
Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)																
Start Time	N Approach PAPE AVE					E Approach POUCHER ST					S Approach PAPE AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:30:00	5	1	1	0	7	1	0	0	5	1	0	2	0	1	2	10
08:45:00	13	3	2	0	18	1	0	0	8	1	1	5	0	2	6	25
09:00:00	9	0	0	0	9	2	0	0	7	2	0	3	0	2	3	14
09:15:00	8	1	0	0	9	0	0	0	3	0	0	6	0	3	6	15
Grand Total	35	5	3	0	43	4	0	0	23	4	1	16	0	8	17	64
Approach%	81.4%	11.6%	7%	-	-	100%	0%	0%	-	-	5.9%	94.1%	0%	-	-	-
Totals %	54.7%	7.8%	4.7%	67.2%	6.3%	0%	0%	6.3%	1.6%	25%	0%	26.6%	-	-	-	-
PHF	0.67	0.42	0.38	0.6	0.5	0	0	0.5	0.25	0.67	0	0.71	-	-	-	-
Heavy	4	0	0	4	1	0	0	0	1	0	0	1	0	0	1	-
Heavy %	11.4%	0%	0%	9.3%	25%	0%	0%	25%	0%	6.3%	0%	5.9%	-	-	-	-
Lights	31	5	3	39	3	0	0	3	1	15	0	16	-	-	-	-
Lights %	88.6%	100%	100%	90.7%	75%	0%	0%	75%	100%	93.8%	0%	94.1%	-	-	-	-
Single-Unit Trucks	1	0	0	1	1	0	0	1	0	0	0	0	-	-	-	-
Single-Unit Trucks %	2.9%	0%	0%	2.3%	25%	0%	0%	25%	0%	0%	0%	0%	-	-	-	-
Buses	1	0	0	1	0	0	0	0	0	1	0	1	-	-	-	-
Buses %	2.9%	0%	0%	2.3%	0%	0%	0%	0%	0%	6.3%	0%	5.9%	-	-	-	-
Articulated Trucks	2	0	0	2	0	0	0	0	0	0	0	0	-	-	-	-
Articulated Trucks %	5.7%	0%	0%	4.7%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	23	-	-	-	8	-	-	-	-
Pedestrians %	-	-	-	0%	-	-	-	74.2%	-	-	-	25.8%	-	-	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	0%	-	-	-	0%	-	-	-	-
Bicycles on Road	0	0	0	0	-	0	0	0	-	0	0	0	-	-	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	0%	-	-	-	0%	-	-	-	-

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)																
Start Time	N Approach PAPE AVE					E Approach POUCHER ST					S Approach PAPE AVE					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:15:00	22	2	0	0	24	1	0	0	20	1	1	17	0	2	18	43
16:30:00	13	2	0	0	15	1	0	0	13	1	1	19	0	0	20	36
16:45:00	17	0	0	0	17	1	1	0	9	2	2	12	0	5	14	33
17:00:00	11	0	1	0	12	2	0	0	21	2	0	16	0	8	16	30
Grand Total	63	4	1	0	68	5	1	0	63	6	4	64	0	15	68	142
Approach%	92.6%	5.9%	1.5%	-	-	83.3%	16.7%	0%	-	-	5.9%	94.1%	0%	-	-	-
Totals %	44.4%	2.8%	0.7%	47.9%	3.5%	0.7%	0%	4.2%	2.8%	45.1%	0%	47.9%	-	-	-	-
PHF	0.72	0.5	0.25	0.71	0.63	0.25	0	0.75	0.5	0.84	0	0.85	-	-	-	-
Heavy	3	0	0	3	0	0	0	0	0	0	0	1	0	0	1	-
Heavy %	4.8%	0%	0%	4.4%	0%	0%	0%	0%	0%	1.6%	0%	1.5%	-	-	-	-
Lights	60	4	1	65	5	1	0	6	4	63	0	67	-	-	-	-
Lights %	95.2%	100%	100%	95.6%	100%	100%	0%	100%	100%	98.4%	0%	98.5%	-	-	-	-
Single-Unit Trucks	2	0	0	2	0	0	0	0	0	1	0	1	-	-	-	-
Single-Unit Trucks %	3.2%	0%	0%	2.9%	0%	0%	0%	0%	0%	1.6%	0%	1.5%	-	-	-	-
Buses	1	0	0	1	0	0	0	0	0	0	0	0	-	-	-	-
Buses %	1.6%	0%	0%	1.5%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	62	-	-	-	15	-	-	-	-
Pedestrians %	-	-	-	0%	-	-	-	79.5%	-	-	-	19.2%	-	-	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	1	-	-	-	0	-	-	-	-
Bicycles on Crosswalk %	-	-	-	0%	-	-	-	1.3%	-	-	-	0%	-	-	-	-
Bicycles on Road	3	1	0	0	-	0	1	4	0	-	1	1	0	0	-	-
Bicycles on Road %	-	-	-	0%	-	-	-	0%	-	-	-	0%	-	-	-	-

Peak Hour: 08:30 AM - 09:30 AM Weather: Light Rain (3.78 °C)



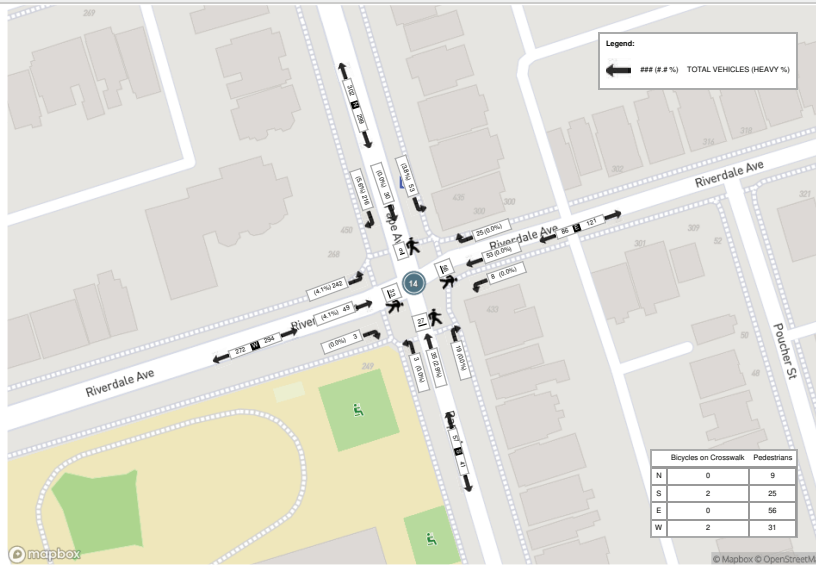
Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (10.5 °C)



Turning Movement Count (14 . PAPE AVE & RIVERDALE AVE)																										
Start Time	N Approach PAPE AVE						E Approach RIVERDALE AVE						S Approach PAPE AVE						W Approach RIVERDALE AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right NW	Thru NS	Left NE	UTurn NN	Peds N	Approach Total	Right EN	Thru EW	Left ES	UTurn EE	Peds E	Approach Total	Right SE	Thru SN	Left SW	UTurn SS	Peds S	Approach Total	Right WS	Thru WE	Left WN	UTurn WW	Peds W	Approach Total		
11:00:00	61	7	9	0	5	77	5	7	3	0	7	15	2	5	0	7	7	7	0	10	53	0	10	63	162	
11:15:00	53	9	14	0	1	76	2	10	2	0	8	14	3	8	1	0	9	12	0	10	61	0	13	71	173	
11:30:00	46	10	3	0	4	59	5	9	5	0	14	19	5	12	3	0	5	20	1	15	41	0	9	57	155	
11:45:00	54	5	12	0	8	71	2	12	0	0	15	14	7	7	1	0	10	15	1	8	44	0	13	53	153	643
12:00:00	51	13	6	0	7	70	5	9	2	0	15	16	5	10	1	0	6	16	1	9	48	0	13	58	160	641
12:15:00	52	5	6	0	1	63	13	7	1	0	11	21	4	9	1	0	5	14	0	13	67	0	8	80	178	646
12:30:00	52	6	19	0	2	77	1	15	1	0	18	17	4	10	0	0	10	14	0	12	72	0	7	84	192	683
12:45:00	62	10	15	0	3	87	7	15	4	0	12	26	6	8	0	0	2	14	2	12	50	0	9	64	191	721
13:00:00	50	9	13	0	3	72	4	16	2	0	15	22	5	8	2	0	10	15	1	12	53	0	9	66	175	736
13:15:00	52	5	13	0	3	70	3	11	4	0	11	18	5	8	1	0	9	14	0	17	47	0	8	64	166	724
13:30:00	55	13	6	0	2	74	2	10	2	0	18	14	5	4	0	0	4	9	0	10	60	0	12	70	167	699
13:45:00	51	3	14	0	4	68	8	17	2	0	26	27	9	6	0	0	10	15	2	12	55	0	14	69	179	687
14:00:00	55	10	12	0	12	77	5	8	3	0	20	16	6	12	2	0	7	20	0	14	57	0	11	71	184	696
14:15:00	54	11	7	0	3	72	8	11	5	0	12	24	3	7	0	0	3	10	2	17	64	0	17	83	189	719
14:30:00	49	4	16	0	2	69	5	4	2	0	21	11	7	10	2	0	9	19	3	15	61	0	21	79	178	730
14:45:00	46	15	4	0	5	65	1	9	6	0	20	16	8	7	1	0	2	16	1	8	63	0	11	72	169	720
Grand Total	843	135	169	0	65	1147	76	170	44	0	243	290	84	131	15	0	108	230	14	194	696	0	185	1104	2771	-
Approach%	73.5%	11.8%	14.7%	0%	-	-	26.2%	58.6%	15.2%	0%	-	-	36.5%	57%	6.5%	0%	-	-	1.3%	17.6%	81.2%	0%	-	-	-	-
Totals %	30.4%	4.9%	6.1%	0%	4.1%	41.4%	2.7%	6.1%	1.6%	0%	-	10.5%	3%	4.7%	0.5%	0%	-	8.3%	0.5%	7%	32.3%	0%	39.8%	-	-	
Heavy	33	2	2	0	-	-	0	0	0	0	-	-	0	2	1	0	-	-	1	3	40	0	-	-	-	-
Heavy %	3.9%	1.5%	1.2%	0%	-	-	0%	0%	0%	0%	-	-	0%	1.5%	6.7%	0%	-	-	7.1%	1.5%	4.5%	0%	-	-	-	-
Bicycles	12	9	7	0	-	-	0	6	2	0	-	-	1	17	0	0	-	-	2	3	14	0	-	-	-	-
Bicycle %	1.4%	6.7%	4.1%	0%	-	-	0%	3.5%	4.5%	0%	-	-	1.2%	13%	0%	0%	-	-	14.3%	1.5%	1.6%	0%	-	-	-	-

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)																									
Start Time	N Approach PAPE AVE						E Approach RIVERDALE AVE						S Approach PAPE AVE						W Approach RIVERDALE AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
12:15:00	52	5	6	0	1	63	13	7	1	0	11	21	4	9	1	0	5	14	0	13	67	0	8	80	178
12:30:00	52	6	19	0	2	77	1	15	1	0	18	17	4	10	0	0	10	14	0	12	72	0	7	84	192
12:45:00	62	10	15	0	3	87	7	15	4	0	12	26	6	8	0	0	2	14	2	12	50	0	9	64	191
13:00:00	50	9	13	0	3	72	4	16	2	0	15	22	5	8	2	0	10	15	1	12	53	0	9	66	175
Grand Total	216	30	53	0	9	299	25	53	8	0	56	86	19	35	3	0	27	57	3	49	242	0	33	294	736
Approach%	72.2%	10%	17.7%	0%	-	-	29.1%	61.6%	9.3%	0%	-	-	33.3%	61.4%	5.3%	0%	-	-	1%	16.7%	82.3%	0%	-	-	-
Totals %	29.3%	4.1%	7.2%	0%	-	40.6%	3.4%	7.2%	1.1%	0%	-	11.7%	2.6%	4.8%	0.4%	0%	-	7.7%	0.4%	6.7%	32.9%	0%	-	39.9%	-
PHF	0.87	0.75	0.7	0	-	0.86	0.48	0.83	0.5	0	-	0.83	0.79	0.88	0.38	0	-	0.95	0.38	0.94	0.84	0	-	0.88	-
Heavy	12	0	2	0	-	14	0	0	0	0	-	-	0	0	1	0	0	-	1	0	2	10	0	-	-
Heavy %	5.6%	0%	3.8%	0%	-	4.7%	0%	0%	0%	0%	-	-	0%	0%	2.5%	0%	0%	-	1.8%	0%	4.1%	4.1%	0%	-	4.1%
Lights	204	30	51	0	-	285	25	53	8	0	-	86	19	34	3	0	-	56	3	47	232	0	-	282	-
Lights %	94.4%	100%	96.2%	0%	-	95.3%	100%	100%	100%	0%	-	100%	100%	97.1%	100%	0%	-	98.2%	100%	95.9%	95.9%	0%	-	95.9%	-
Single-Unit Trucks	5	0	2	0	-	7	0	0	0	0	-	-	0	0	1	0	0	-	1	0	2	4	0	-	6
Single-Unit Trucks %	2.3%	0%	3.8%	0%	-	2.3%	0%	0%	0%	0%	-	-	0%	0%	2.9%	0%	0%	-	1.8%	0%	4.1%	1.7%	0%	-	2%
Buses	7	0	0	0	-	7	0	0	0	0	-	-	0	0	0	0	0	-	0	0	0	6	0	-	6
Buses %	3.2%	0%	0%	0%	-	2.3%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	-	0%	0%	2.5%	0%	-	-	2%
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	-	0	0	0	0	0	-	0	0	0	0	0	-	0
Articulated Trucks %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	9	-	-	-	-	-	56	-	-	-	-	-	25	-	-	-	-	-	31	-	-
Pedestrians%	-	-	-	-	7.2%	-	-	-	-	-	44.8%	-	-	-	-	-	20%	-	-	-	-	-	24.8%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	1.6%	-	-	-	-	-	1.6%	-	-
Bicycles on Road	2	0	1	0	0	-	0	1	0	0	0	-	1	2	0	0	0	-	0	1	4	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 12:15 PM - 01:15 PM Weather: Scattered Clouds (3.45 °C)

Turning Movement
Count

Page 3 of 3

BAC22Y8Z

Turning Movement Count (14 . PAPE AVE & RIVERDALE AVE)																																														
Start Time	N Approach PAPE AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach PAPE AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)	Int. Total (1 hr)																				
	Right NW	Thru NS	Left NE	UTurn WN	Peds N		Right EN	Thru EW	Left ES	UTurn EE	Peds E		Right SE	Thru SN	Left SW	UTurn SS	Peds S		Right WS	Thru WE	Left WN	UTurn WW	Peds W																							
07:30:00	33	3	5	0	3	41	1	6	0	0	3	7	2	4	0	0	6	0	2	23	0	2	25	79																						
07:45:00	56	3	6	0	4	65	6	9	1	0	5	16	1	2	0	0	3	3	0	4	32	0	4	36	120																					
08:00:00	54	12	13	0	3	79	5	8	3	0	11	16	4	4	1	0	13	9	1	9	27	0	6	37	141																					
08:15:00	62	6	12	0	6	80	12	15	4	0	14	31	4	7	3	0	14	14	1	12	36	0	12	49	174	514																				
08:30:00	46	8	19	0	6	73	6	18	8	0	31	32	2	8	2	0	30	12	4	16	28	0	20	48	165	600																				
08:45:00	49	10	15	0	5	74	6	19	7	0	31	32	4	12	3	0	44	19	3	12	36	0	38	51	176	656																				
09:00:00	48	6	9	1	2	64	10	11	3	0	7	24	2	8	1	0	6	11	2	5	36	0	8	43	142	657																				
09:15:00	42	7	7	0	2	56	5	8	2	0	5	15	2	4	1	0	4	7	2	3	41	0	6	46	124	607																				
BREAK																																														
16:00:00	43	6	8	0	5	57	6	9	4	0	18	19	6	15	0	0	10	21	0	22	50	0	2	112	209																					
16:15:00	47	17	8	0	2	72	12	12	4	0	26	28	10	13	0	0	10	23	4	15	77	0	12	96	219																					
16:30:00	38	9	6	0	1	53	7	11	3	0	9	21	12	11	2	0	4	25	2	18	73	0	13	93	192																					
16:45:00	55	9	15	0	3	79	9	10	6	0	11	25	9	9	2	0	8	20	4	16	66	0	8	86	210	830																				
17:00:00	46	11	11	0	6	68	7	7	8	0	27	22	8	14	4	0	14	26	4	17	76	0	21	97	213	834																				
17:15:00	53	14	15	0	7	82	10	4	3	0	27	17	12	20	1	0	9	33	1	23	70	0	15	94	226	841																				
17:30:00	45	4	16	0	2	65	6	5	3	0	17	14	7	7	3	0	16	17	2	17	72	0	16	91	187	836																				
17:45:00	39	10	14	0	4	63	8	4	2	0	9	14	10	17	2	0	5	29	2	16	63	0	11	81	187	813																				
Grand Total	756	135	179	1	61	1071	116	156	61	0	251	333	95	155	25	0	190	275	32	207	846	0	194	1085	2764	-																				
Approach%	70.6%	12.6%	16.7%	0.1%	-	-	34.8%	46.8%	18.3%	0%	-	-	34.5%	56.4%	9.1%	0%	-	2.9%	15.1%	78%	0%	-	-	-	-	-																				
Totals %	27.4%	4.9%	6.5%	0%	-	38.7%	4.2%	5.6%	2.2%	0%	12%	3.4%	5.6%	0.9%	0%	9.9%	1.2%	7.5%	30.6%	0%	39.3%	-	-	-	-																					
Heavy	57	5	5	0	-	2	14	1	0	-	2	5	0	0	0	-	-	2	2	58	0	-	-	-	-																					
Heavy %	7.5%	3.7%	2.8%	0%	-	1.7%	9%	1.6%	0%	-	2.1%	3.2%	0%	0%	-	-	6.3%	1%	6.9%	0%	-	-	-	-	-																					
Bicycles	11	8	3	0	-	2	9	0	0	-	5	12	0	0	-	-	0	2	7	0	-	-	-	-	-																					
Bicycle %	1.5%	5.9%	1.7%	0%	-	1.7%	5.8%	0%	0%	-	5.3%	7.7%	0%	0%	-	-	0%	1%	0.8%	0%	-	-	-	-	-																					

Turning Movement
Count

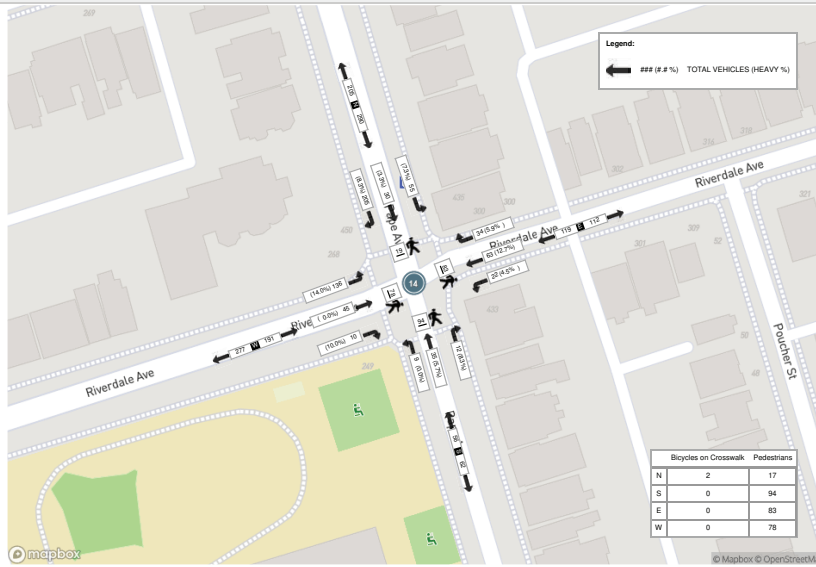
Page 1 of 5

BAC22Y8Z

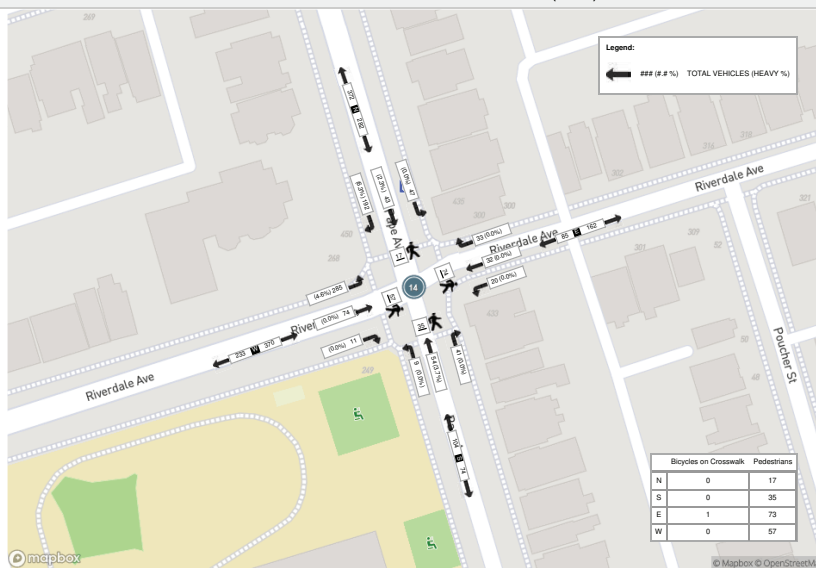
Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)																									
Start Time	N Approach PAPE AVE					E Approach RIVERDALE AVE					S Approach PAPE AVE					W Approach RIVERDALE AVE					Int. Total (15 min)				
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru		Left	UTurn	Peds	Approach Total
08:15:00	62	6	12	0	6	80	12	15	4	0	14	31	4	7	3	0	14	14	1	12	36	0	12	49	174
08:30:00	46	8	19	0	6	73	6	18	8	0	31	32	2	8	2	0	30	12	4	16	28	0	20	48	165
08:45:00	49	10	15	0	5	74	6	19	7	0	31	32	4	12	3	0	44	19	3	12	36	0	38	51	176
09:00:00	48	6	9	1	2	64	10	11	3	0	7	24	2	8	1	0	6	11	2	5	36	0	8	43	142
Grand Total	205	30	55	1	19	291	34	63	22	0	83	119	12	35	9	0	94	56	10	45	136	0	78	191	657
Approach%	70.4%	10.3%	18.9%	0.3%	-	-	28.6%	52.9%	18.5%	0%	-	21.4%	62.5%	16.1%	0%	-	5.2%	23.6%	71.2%	0%	-	-	-	-	-
Totals %	31.2%	4.6%	8.4%	0.2%	44.3%	5.2%	9.6%	3.3%	0%	18.1%	1.8%	5.3%	1.4%	0%	8.5%	1.5%	6.8%	20.7%	0%	29.1%	-	-	-	-	
PHF	0.83	0.75	0.72	0.25	-	-	0.91	0.71	0.63	0.69	0	0	0.93	0.75	0.73	0.75	0	0.63	0.7	0.94	0	0	0.54	-	-
Heavy	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy %	8.3%	3.3%	7.3%	0%	-	-	7.6%	5.9%	12.7%	4.5%	0%	-	9.2%	8.3%	5.7%	0%	0%	5.4%	10%	0%	14%	0%	10.5%	-	-
Lights	-	-	-	-	-	-	269	30	51	1	0	108	11	33	9	0	53	9	45	117	0	19	0	171	-
Lights %	91.7%	96.7%	92.7%	100%	-	92.4%	94.1%	87.3%	95.5%	0%	-	90.8%	91.3%	94.3%	100%	0%	94.6%	90%	100%	86%	0%	89.5%	-	-	-
Single-Unit Trucks	5	1	2	0	8	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	4	0	4	0	-
Single-Unit Trucks %	2.4%	3.3%	3.6%	0%	2.7%	0%	0%	1.6%	0%	0%	0%	0.8%	0%	2.9%	0%	0%	1.8%	0%	0%	2.9%	0%	2.1%	-	-	-
Buses	12	0	2	0	14	2	7	1	0	0	10	1	1	1	0	0	2	0	0	15	0	15	0	-	-
Buses %	5.9%	0%	3.6%	0%	4.8%	5.9%	11.1%	4.5%	0%	0%	8.4%	8.3%	2.9%	0%	0%	0%	3.6%	0%	0%	11%	0%	7.9%	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0.5%	-	-
Pedestrians	-	-	-	-	17	-	-	-	-	-	83	-	-	-	-	-	94	-	-	-	-	-	78	-	-
Pedestrians%	-	-	-	-	6.2%	-	-	-	-	-	30.3%	-	-	-	-	-	34.3%	-	-	-	-	-	28.5%	-	-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0.7%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	5	1	0	0	0	-	0	3	0	0	0	0	-	1	1	0	0	0	-	0	0	0	0	0	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-

Peak Hour: 04:30 PM - 05:30 PM																									Weather: Broken Clouds (10.5 °C)				
Start Time	N Approach PAPE AVE					Approach Total	E Approach RIVERDALE AVE					Approach Total	S Approach PAPE AVE					Approach Total	W Approach RIVERDALE AVE					Approach Total	Int. Total (15 min)				
	Right	Thru	Left	U/Turn	Peds		Right	Thru	Left	U/Turn	Peds		Right	Thru	Left	U/Turn	Peds		Right	Thru	Left	U/Turn	Peds						
16:30:00	38	9	6	0	1	53	7	11	3	0	9	21	12	11	2	0	4	25	2	18	73	0	13	93	192				
16:45:00	55	9	15	0	3	79	9	10	6	0	11	25	9	9	2	0	8	20	4	16	66	0	8	86	210				
17:00:00	46	11	11	0	6	68	7	7	8	0	27	22	8	14	4	0	14	26	4	17	76	0	21	97	213				
17:15:00	53	14	15	0	7	82	10	4	3	0	27	17	12	20	1	0	9	33	1	23	70	0	15	94	226				
Grand Total	192	43	47	0	17	282	33	32	20	0	74	85	41	54	9	0	35	104	11	74	285	0	57	370	841				
Approach%	68.1%	15.2%	16.7%	0%	-	-	38.8%	37.6%	23.5%	0%	-	-	39.4%	51.9%	8.7%	0%	-	-	3%	20%	77%	0%	-	-	-				
Totals %	22.8%	5.1%	5.6%	0%	33.5%	3.9%	3.8%	2.4%	0%	10.1%	4.9%	6.4%	1.1%	0%	12.4%	1.3%	8.8%	33.9%	0%	44%	-	-	-	-					
PHF	0.87	0.77	0.78	0	0.86	0.83	0.73	0.63	0	0.85	0.85	0.68	0.56	0	0.79	0.69	0.8	0.94	0	0.95	-	-	-	-					
Heavy	12	1	0	0	13	0	0	0	0	0	0	2	0	0	0	2	0	0	13	0	13	-	-	-					
Heavy %	6.3%	2.3%	0%	0%	4.6%	0%	0%	0%	0%	0%	0%	3.7%	0%	0%	1.9%	0%	0%	4.6%	0%	3.5%	-	-	-	-					
Lights	180	42	47	0	269	33	32	20	0	85	41	52	9	0	102	11	74	272	0	357	-	-	-	-					
Lights %	93.8%	97.7%	100%	0%	95.4%	100%	100%	100%	0%	100%	100%	96.3%	100%	0%	98.1%	100%	100%	95.4%	0%	96.5%	-	-	-	-					
Single-Unit Trucks	2	1	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	-	-	-	-					
Single-Unit Trucks %	1%	2.3%	0%	0%	1.1%	0%	0%	0%	0%	0%	0%	3.7%	0%	0%	1.9%	0%	0%	0.7%	0%	0.5%	-	-	-	-					
Buses	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	-	-	-	-					
Buses %	5.2%	0%	0%	0%	3.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3.9%	0%	3%	-	-	-	-					
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-					
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-					
Pedestrians	-	-	-	-	17	-	-	-	-	73	-	-	-	-	35	-	-	-	-	57	-	-	-	-					
Pedestrians %	-	-	-	-	9.3%	-	-	-	-	39.9%	-	-	-	-	19.1%	-	-	-	-	31.1%	-	-	-	-					
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-					
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0.5%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-					
Bicycles on Road	3	5	2	0	0	-	2	3	0	0	0	-	1	5	0	0	0	-	0	1	3	0	0	-					
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-					

Peak Hour: 08:15 AM - 09:15 AM Weather: Light Rain (3.78 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Broken Clouds (10.5 °C)



Appendix G: Existing Signal Timing Plans




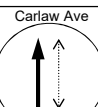


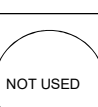
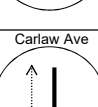










List of Abbreviations for Traffic Signal Operations

January 25, 2021

System		Signal Mode of Operation		Intersection Features	
TransSuite TCS		FA	Fully Actuated	APS	Accessible Pedestrian Signal
SCOOT		FT	Fixed Time	AAWB	Active Advanced Warning Beacons
SCATS		SA1	Semi Actuated 1 (Pedestrian Fixed Time)	LBI	Leading Bicycle Interval
		SA2	Semi-Actuated 2 (with vehicle extensions)	LBO	LED Blank-Out Sign
		SAP	Semi-Actuated Pedestrian (without vehicle extensions)	LPI	Leading Pedestrian Interval
		SAV	Semi-Actuated Vehicle (no side street pedestrians phase)	PE	Pre-emption
		PA-IPS	Pedestrian Actuated at Intersection Pedestrian Signals	PPP	Pedestrian Priority Phase
		PA-MPS	Pedestrian Actuated at Midblock Pedestrian Signals	PR	Pedestrian Recycle
				TSP	Transit Signal Priority
				WRM	Walk Rest Modifier
Intersection Identification					
TCS#	Intersection Number				
SCN	UTC/SCOOT Number				
Special Facility (SCOOT)		Communication			
SF#1	Special Facility #1	AC	Awaiting Communication		
SF#2	Special Facility #2	LOCAL	Not On Computer Control		
SF#3	Special Facility #3				
SF#4	Special Facility #4				

Phase Aspect		All Directions	North/South	East/West	Northbound	Southbound	Eastbound	Westbound
1. Normal Phase								
	Green		NSG	EWG	NBG	SBG	EBG	WBG
	Amber (Yellow)		NSY	EWY	NBY	SBY	EBY	WBY
	Red		NSR	EWR	NBR	SBR	EBR	WBR
	All	ALR						
2. Priority Phase (Arrow)								
	Straight-Through Green		NSSA	EWSA	NBSA	SBSA	EBSA	WBSA
	Left-Turn Green		NSLA	EWLA	NBLA	SBLA	EBLA	WBLA
	Left-Turn Amber		NSYA	EWYA	NBYA	SBYA	EBYA	WBYA
	Left-Turn Amber Ball		NSLY	EWLY	NBLY	SBLY	EBLY	WBLY
	Left-Turn Red Ball		NSLR	EWLR	NBLR	SBLR	EBLR	WBLR
	Right-Turn Green				NBRA	SBRA	EBRA	WBRA
	Right-Turn Amber				NRYA	SBYA	ERYA	WRYA
	Right-Turn Amber Ball				NBRY	SBRY	EBRY	WBRY
	Right-Turn Red Ball				NBRR	SBRR	EBRR	WBRR
3. Pedestrian								
	Walk	WK	NSWK	EWWK	NBWK	SBWK	EBWK	WBWK
	Flashing Don't Walk	FDW	NSFDW	EWFDW	NBFDW	SBFDW	EBFDW	WBFDW
	Don't Walk	DW	NSDW	EWDW	NBDW	SBDW	EBDW	WBDW
4. Transit								
	Green		NSTG	EWTG	NBTG	SBTG	EBTG	WBTG
	Straight-Through Green Arrow		NSTGA	EWTGA	NBTGA	SBTGA	EBTGA	WBTGA
	Amber (Yellow)		NSTY	EWTY	NBTY	SBTY	EBTY	WBTY
	Bar		NSTB	EWTB	NBTB	SBTB	EBTB	WBTB
	Red		NSTR	EWTR	NBTR	SBTR	EBTR	WBTR
5. Bike								
	Green		NSBG	EWBG	NBBG	SBBG	EBBG	WBBG
	Amber (Yellow)		NSBY	EWBY	NBBY	SBBY	EBBY	WBBY
	Red		NSBR	EWBR	NBBR	SBBR	EBBR	WBBR

LOCATION: Dundas St E & Carlaw Ave MODE/COMMENT: FT with 2-Wire Polara APS & LPI TCS: 289 PREPARED BY/DATE: CIMA+ / May 19, 2021 CHECKED BY/DATE: Ameneh Dialameh / June 23, 2021 IMPLEMENTATION DATE: August 19, 2021		ATO / DISTRICT / WARD: 1 / (Toronto & East York) / 14 N COMPUTER SYSTEM: TransSuite CONTROLLER/CABINET TYPE: Peek ATC-1000 / TS2T1 CONFLICT FLASH: Red & Red DESIGN WALK SPEED: 1.0 m/s (FDW based on full crossing at 1.2 m/s) CHANNEL/DROP: 4076/38 CONTROLLER FIRMWARE: 3.018.1.2976						
NEMA Phase		OFF All Other Times	AM 06:30-09:30 M-F	PM 15:00-19:00 M-F	NIGHT 23:00-06:30 Daily	WKND 10:00-19:00 Sat & Sun	Phase Mode (Fixed/Demanded/Callable)	Remarks
		Local Plan Split Table	Pattern 1 Split 1	Pattern 2 Split 2	Pattern 3 Split 3	Pattern 4 Split 4	Pattern 5 Split 5	
1		WLK FDW MIN MAX1 AMB ALR SPLIT						Pedestrian Minimums: EWWK = 7 sec, EWFD = 13 sec NSWK = 7 sec, NSFD = 16 sec APS on during FULL WALK of NSWK and EWWK periods when activated by pushbuttons Extended push activation = 3 sec EW Leading Pedestrian Interval -EWWK comes up 5 seconds before EW vehicle green. NS Leading Pedestrian Interval -NSWK comes up 5 seconds before NS vehicle green. Following grades were used to calculate amber intervals: Carlaw Ave (NB): 0.9 % Carlaw Ave (SB): -1.8 % Dundas St E (EB): -0.5 % Dundas St E (WB): -1.2 %
2	Dundas St E 	WLK DLY 5 WLK 7 FDW 13 MIN 15 MAX1 26 AMB 3.0 ALR 2.6 SPLIT					Fixed Split shown includes 5 sec of EW LPI	
3		WLK FDW MIN MAX1 AMB ALR SPLIT						
4	Carlaw Ave 	WLK DLY 5 WLK 7 FDW 16 MIN 18 MAX1 22 AMB 3.5 ALR 2.4 SPLIT					Fixed Split shown includes 5 sec of NS LPI	
5		WLK FDW MIN MAX1 AMB ALR SPLIT						
6	Dundas St E 	WLK DLY 5 WLK 7 FDW 13 MIN 15 MAX1 26 AMB 3.0 ALR 2.6 SPLIT					Fixed Split shown includes 5 sec of EW LPI	
7		WLK FDW MIN MAX1 AMB ALR SPLIT						
8	Carlaw Ave 	WLK DLY 5 WLK 7 FDW 16 MIN 18 MAX1 22 AMB 3.5 ALR 2.4 SPLIT					Fixed Split shown includes 5 sec of NS LPI	
	CL OF		70 30	76 70	76 18	60 53	80 35	

LOCATION: MODE/COMMENT: TCS: PREPARED BY/ DATE: CHECKED BY/ DATE: IMPLEMENTATION DATE:		Gerrard St E & Carlaw Ave FT with Firehall Pre-emption (EBLA), TSP* & 2-Wire Porala APS 372 HDR / January 14, 2022 Amir Suifipour / Ihtesham Ahmad / February 1, 2022 February 28, 2022					ATO / DISTRICT / WARD: COMPUTER SYSTEM: CONTROLLER/CABINET TYPE: CONFLICT FLASH: DESIGN WALK SPEED: CHANNEL/DROP: CONTROLLER FIRMWARE:	Area 1 / Toronto & East York / Ward 14 TransSuite Peek ATC 1000 / TS2 T1 Red & Red 1.0 m/s (FDW based on full crossing at 1.2 m/s) 4022/16 3.018.1.2976
NEMA Phase		OFF	AM	PM	NGHT	WKND	Phase Mode (Fixed/Demanded/Callable)	Remarks
		All Other Times	06:30-09:30 M-F	15:00-19:00 M-F	23:00-06:30 Daily	10:00-19:00 Sat & Sun		
	Local Plan Split Table	Pattern 1 Split 1	Pattern 2 Split 2	Pattern 3 Split 3	Pattern 4 Split 4	Pattern 5 Split 5		
1	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							Pedestrian Minimums: EWWK = 7 secs; EWFD = 14 secs NSWK = 7 secs; NSFD = 14 secs Firehall Preemption Instructions: • If preemption is received in phase 2/6: Time to Preemption Sequence = 0 - 28 secs • If preemption is received in phase 4/7/8: Time to Preemption Sequence = 0 - 28 secs • Signals go to All Red display before going into preemption sequence Preemption Sequence: Serve 60.0 seconds EBLA/EBG/EWDW Serve 3.0 seconds EBY/EWDW Serve 2.6 second of ALLR Return to normal operation in EWG/EWWK.
2	Gerrard St E  WLK 7 FDW 14 MIN 21 MAX1 42 AMB 3.0 ALR 2.6 SPLIT						Fixed POZ activated by Request Loop (max extension of 30 secs in Green/Walk)	Polara APS to emit voice message during FH Pre-emption calls "Emergency vehicle approaching, clear intersection immediately." APS on during 7 seconds of NSWK and EWWK when activated by APS pushbuttons and no arrows displayed. Extended Push activation = 3 sec *See back for TSP Instructions. TSP disabled - TSP activation pending new firmware testing & field validation.
3	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							
4	Carlaw Ave  WLK 7 FDW 14 MIN 21 MAX1 22 AMB 3.0 ALR 2.7 SPLIT						Fixed (truncations allowable but not to pedestrian minimum)	The following grades were used to calculate the AMB intervals: North Leg = -2.5% South Leg = -1.4% East Leg = -0.6% West Leg = -2.5%
5	 WLK FDW MIN MAX1 AMB ALR SPLIT						Only Displayed during Firehall Preemption	
6	Gerrard St E  WLK 7 FDW 14 MIN 21 MAX1 42 AMB 3.0 ALR 2.6 SPLIT						Fixed POZ activated by Request Loop (max extension of 30 secs in Green/Walk)	
7	 WLK FDW MIN 6 MAX1 6 AMB 3.0 ALR 3.6 SPLIT						Demanded	
8	Carlaw Ave  WLK 7 FDW 14 MIN 21 MAX1 22 AMB 3.0 ALR 2.7 SPLIT						Fixed (truncations allowable but not to pedestrian minimum)	
	CL OF	76 58	80 35	80 5	74 60	74 30		

NOTES:

LOC: Gerrard St E & Carlaw Ave
MODE: FT with Firehall Pre-emption (EBLA), TSP* & 2-Wire Porala APS
TCS: 372 PREPARATION DATE (TIMING CARD): January 14, 2022

OFFSET CORRECTION PARAMETERS

2.3.4 O.C. Extend / Reduce (Max. time added & subtracted in sec.) From page 1
[Cycle] [Slop]

OFF												Pattern 1
Split 1	Ext.	--	14	--	14	--	14	--	14	76	10	19 S [25 %]
	Rdc.	--	10	--	--	--	10	--	--			
AM												
Split 2	Ext.	--	15	--	15	--	15	--	15	80	10	20 S [25 %]
	Rdc.	--	6	--	4	--	6	--	4			
PM												
Split 3	Ext.	--	15	--	15	--	15	--	15	80	10	20 S [25 %]
	Rdc.	--	9	--	1	--	9	--	1			
NGHT												
Split 4	Ext.	--	14	--	14	--	14	--	14	74	10	19 S [25 %]
	Rdc.	--	10	--	--	--	10	--	--			
WKND												
Split 5	Ext.	--	14	--	14	--	14	--	14	74	10	19 S [25 %]
	Rdc.	--	5	--	5	--	5	--	5			

2.3.2.x
O.C.
Thres.

T.S.P. PARAMETERS

PREPARED: HDR

TSP RUN # 2	TSP RUN # 6
EB Thru	WB Thru

2.8.2 Transit Run Parameters

ATC Green Extend Mode (Equivalent TTC Algorithm)	Mode 2 A	Mode 2 A
---	-------------	-------------

2.8.3 Transit Action Plan 1 (Used for all Patterns)

Run Enable (X = Yes)	X	X
Run Config = 1	Recovery = 2 (O.C. with delay)	

2.8.4 Transit Run Configuration 1

Delay / Extend / Fail	-- / -- / 235	7 / -- / 235
Max Req During Offset Corr	1	1
CALLS (and Extends)	Ø 2/6	Ø 2/6
Skips	--	--
Reduces (Truncates)	Ø 4/8	Ø 4/8

Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
----	----	----	----	----	----	----	----

2.8.6 TSP Split Tables: 1

GRN EXT (SDW Extension)	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	--	--	--	--	--
WLK EXT (Walk Extension)	--	30	--	--	30	--	--

2.8.6 TSP Split Tables: 2

GRN EXT (SDW Extension)	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	4	--	--	4	--
WLK EXT (Walk Extension)	--	30	--	--	30	--	--

2.8.6 TSP Split Tables: 3

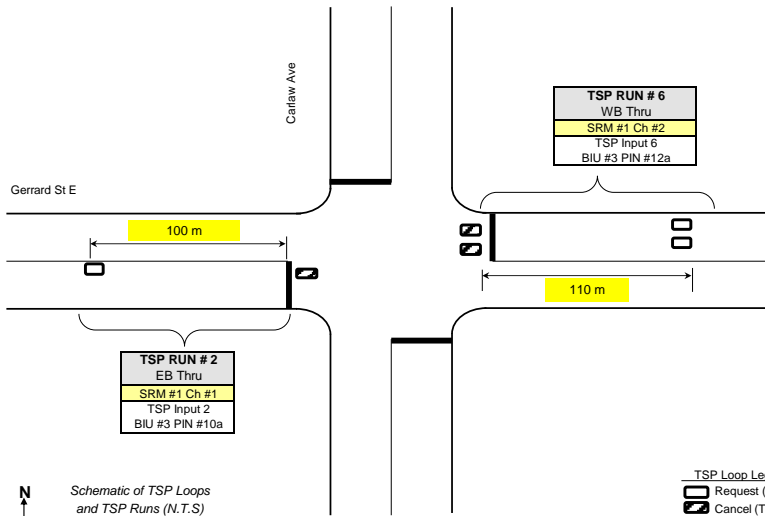
GRN EXT (SDW Extension)	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	1	--	--	1	--
WLK EXT (Walk Extension)	--	30	--	--	30	--	--

2.8.6 TSP Split Tables: 4

GRN EXT (SDW Extension)	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	--	--	--	--	--
WLK EXT (Walk Extension)	--	30	--	--	30	--	--

2.8.6 TSP Split Tables: 5

GRN EXT (SDW Extension)	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	7	--	--	7	--
WLK EXT (Walk Extension)	--	30	--	--	30	--	--



Notes:


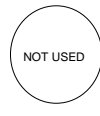
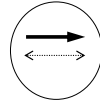
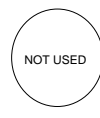
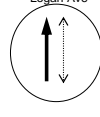
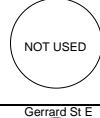
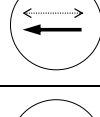

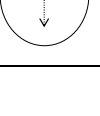
TSP Truncations and OC reductions must not reduce Phase 4/8 to the minimum due to firmware 3.18.1.2976 issue with long left turn clearances on the sidestreet.

ATC Mode	0	2	3	4
TTC Algor'm	B-2	A	C	D
Extensions	SDW	Walk	W/SDW	W/SDW

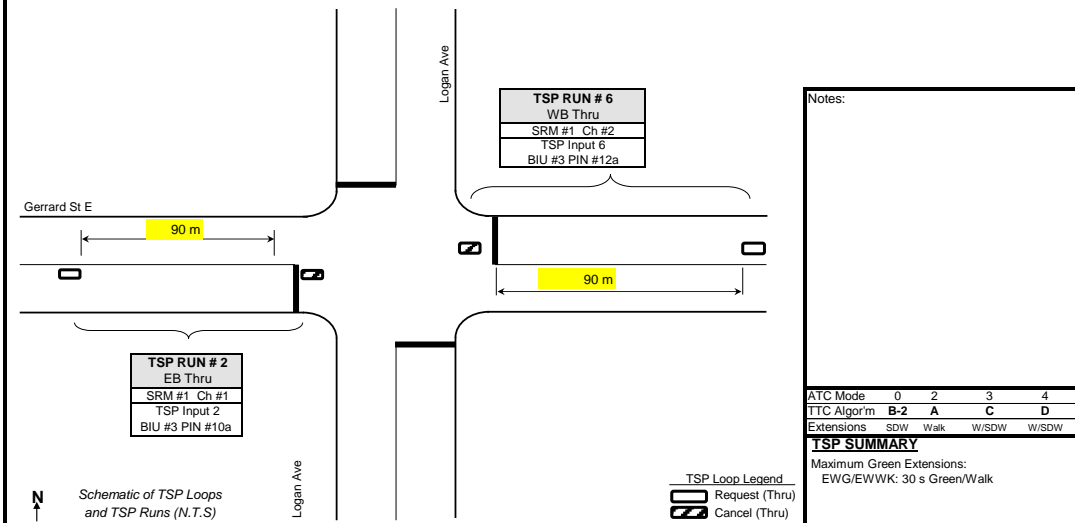
TSP SUMMARY

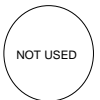
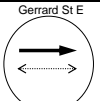



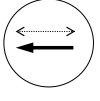
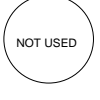
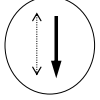
EW: 30 secs EWG/EWWK Max Extensions

NS: Truncate but not to pedestrian minimum

LOCATION: Gerrard St E & Logan Ave MODE/COMMENT: SAP with PR & TSP* & LPI TCS: 373 PREPARED BY / DATE: HDR / January 14, 2022 CHECKED BY / DATE: Amir Sufipour / Ihtesham Ahmad / February 1, 2022 IMPLEMENTATION DATE: February 28, 2022		ATO / DISTRICT / WARD: Area 1 / Toronto & East York / Ward 14 COMPUTER SYSTEM: TransSuite CONTROLLER/CABINET TYPE: Peek ATC 1000 / TS2 T1 CONFLICT FLASH: Red & Red DESIGN WALK SPEED: 1.0 m/s (FDW based on full crossing at 1.2 m/s) CHANNEL/DROP: 4022/ 20 CONTROLLER FIRMWARE: 3.018.1.2976						
NEMA Phase	Local Plan Split Table	OFF	AM	PM	NGHT	WKND	Phase Mode (Fixed/Demanded or Callable)	Remarks
		All Other Times	06:30-09:30 M-F	15:00-19:00 M-F	23:00-06:30 Daily	10:00-19:00 Sat & Sun		
		Pattern 1 Split 1	Pattern 2 Split 2	Pattern 3 Split 3	Pattern 4 Split 4	Pattern 5 Split 5		
1 	WLK FDW MIN MAX1 AMB ALR SPLIT							Pedestrian Minimums: EWWK = 12 sec, EWFD = 14 sec NSWK = 12 sec, NSFDD = 13 sec NS phase is callable by vehicle or pedestrian actuation. If a vehicle call and/or a pedestrian call is received, the pedestrian minimum will be served. The NSWK and NSFDD are only display on the pedestrian signal heads if a vehicle and/or pedestrian call is received.
2 Gerrard St E 	WLK 5 WLK 12 FDW 14 MIN 21 MAX1 34 AMB 3 ALR 2.5 SPLIT						Fixed POZ activated by Request Loop Split shown includes 5 secs of EW LPI (max extension of 30 secs in Green/Walk)	*See back for TSP Instructions. EB & WB TSP enabled on September 12, 2018. NS and EW Leading Pedestrian Interval - NSWK and EWWK comes up 5 seconds before NS and EW vehicle green. The following grades were used to calculate the AMB intervals: North Leg = 0.6% South Leg = 0.6% East Leg = 1.1% West Leg = -2.0% Script #2 used to mitigate firmware 3.18.1.2976 issue with SA2 and TSP.
3 	WLK FDW MIN MAX1 AMB ALR SPLIT							
4 Logan Ave 	WLK 5 WLK 12 FDW 13 MIN 20 MAX1 20 AMB 3 ALR 2.5 SPLIT						Callable by Wavetronix and/or Pushbutton; Split shown includes 5 secs of NS LPI	
5 	WLK FDW MIN MAX1 AMB ALR SPLIT							
6 Gerrard St E 	WLK 5 WLK 12 FDW 14 MIN 21 MAX1 34 AMB 3 ALR 2.5 SPLIT						Fixed POZ activated by Request Loop Split shown includes 5 secs of EW LPI (max extension of 30 secs in Green/Walk)	
7 	WLK FDW MIN MAX1 AMB ALR SPLIT							
8 Logan Ave 	WLK 5 WLK 12 FDW 13 MIN 20 MAX1 20 AMB 3 ALR 2.5 SPLIT						Callable by Pushbutton Split shown includes 5 secs of NS LPI	
	CL OF	76 19	80 60	80 70	74 22	74 63		

Notes: North leg is One-Way Northbound



LOCATION: Gerrard St E & Pape Ave MODE/COMMENT: FT with TSP* & LPI TCS: 371 PREPARED BY / DATE: HDR / January 14, 2022 CHECKED BY / DATE: Amir Sufipour / Intesham Ahmad / February 1, 2022 IMPLEMENTATION DATE: February 28, 2022		ATO / DISTRICT / WARD: Area 1 / Toronto & East York / Ward 14 COMPUTER SYSTEM: TransSuite CONTROLLER/CABINET TYPE: Peek ATC 1000 / TS2 T1 CONFLICT FLASH: Red & Red DESIGN WALK SPEED: 0.9 m/s (FDW based on full crossing at 1.1 m/s) CHANNEL/DROP: 4022/15 CONTROLLER FIRMWARE: 3.018.1.2976					Phase Mode (Fixed/Demanded or Callable)	Remarks
	OFF All Other Times AM 06:30-09:30 M-F PM 15:00-19:00 M-F NGHT 23:00-06:30 WKND 10:00-19:00							
	Local Plan Split Table Pattern 1 Split 1 Pattern 2 Split 2 Pattern 3 Split 3 Pattern 4 Split 4 Pattern 5 Split 5							
1	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							Pedestrian Minimums: EWWK = 13 sec, EWFD = 13 sec NSWK = 13 sec, NSFD = 15 sec *See back for TSP Instructions. EB & WB TSP enabled on September 12, 2018. NS and EW Leading Pedestrian Interval - NSWK and EWWK comes up 5 seconds before NS and EW vehicle green.
2	 Gerrard St E WLK DLY 5 WLK 13 FDW 13 MIN 21 MAX1 30 AMB 3.0 ALR 2.5 SPLIT						Fixed POZ activated by Request Loop Split shown includes 5 secs of EW LPI (max extension of 30 secs in Green/Walk)	The following grades were used to calculate the AMB intervals: North Leg = -3.3 % South Leg = 0.3 % East Leg = -0.7 % West Leg = 3.4 %
3	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							
4	 Pape Ave WLK DLY 5 WLK 13 FDW 15 MIN 23 MAX1 23 AMB 3.0 ALR 4.0 SPLIT						Fixed Split shown includes 5 secs of NS LPI	
5	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							
6	 Gerrard St E WLK DLY 5 WLK 13 FDW 13 MIN 21 MAX1 30 AMB 3.0 ALR 2.5 SPLIT						Fixed POZ activated by Request Loop Split shown includes 5 secs of EW LPI (max extension of 30 secs in Green/Walk)	
7	 NOT USED WLK FDW MIN MAX1 AMB ALR SPLIT							
8	 Pape Ave WLK DLY 5 WLK 13 FDW 15 MIN 23 MAX1 23 AMB 3.0 ALR 4.0 SPLIT						Fixed Split shown includes 5 secs of NS LPI	
	CL OF							

Notes:

LOC: Gerrard St & Pape Ave
MODE: FT with TSP* & LPI
TCS: 371 PREPARATION DATE (TIMING CARD): January 14, 2022

OFFSET CORRECTION PARAMETERS

2.3.4 O.C. Extend / Reduce (Max. time added & subtracted in sec.)										From page 1		O.C. Thres.	
		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	[Cycle]	[Slop]		
OFF													
Split 1	Ext.	--	16	--	16	--	16	--	16	76	4	12	s
	Rdc.	--	4	--	4	--	4	--	4			16	s
AM													
Split 2	Ext.	--	15	--	15	--	15	--	15	80	8	20	s
	Rdc.	--	8	--	8	--	8	--	8			25	s
PM													
Split 3	Ext.	--	15	--	15	--	15	--	15	80	8	20	s
	Rdc.	--	8	--	8	--	8	--	8			25	s
NIGHT													
Split 4	Ext.	--	17	--	17	--	17	--	17	74	2	6	s
	Rdc.	--	2	--	2	--	2	--	2			8	s
WKND													
Split 5	Ext.	--	17	--	17	--	17	--	17	74	2	6	s
	Rdc.	--	2	--	2	--	2	--	2			8	s

Pattern 1, 4 and 5 OC Thres set to 3x OC Rdc due to limited slop. Controller could take up to 3 cycles to get back in sync from -TSP Recovery.

T.S.P. PARAMETERS

PREPARED: HDR

TSP RUN # 2	TSP RUN # 6
EB Thru	WB Thru

ATC Green Extend Mode (Equivalent TTC Algorithm)	Mode 2	Mode 2
	A	A

2.8.3 Transit Action Plan 1 (Used for all Patterns)

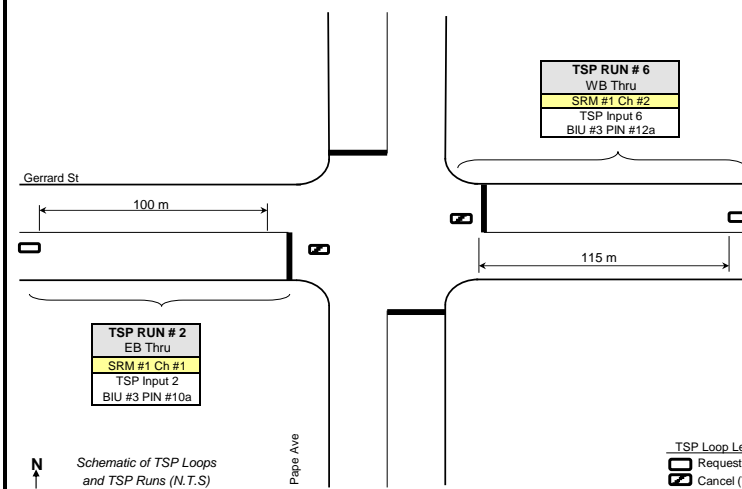
Run Enable (X = Yes)	X	X
Run Config = 1		
Recovery = 2 (O.C. with delay)		

2.8.4 Transit Run Configuration 1

Delay / Extend / Fail	-- / -- / 235	-- / -- / 235
Max Req During Offset Corr	1	1
CALLS (and Extends)	Ø 2/6	Ø 2/6
Skips	--	--
Reduces (Truncates)	--	--

2.8.6 TSP Split Tables: 1,2,3,4 & 5

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
GRN EXT (SDW Extension)	--	--	--	--	--	--	--	--
GRN RDC (Reduction)	--	--	--	--	--	--	--	--
WLK EXT (Walk Extension)	--	30	--	--	--	30	--	--



Notes:

Truncation of Phases 4 and 8 permitted to the pedestrian minimum, but there is currently no slop available.

ATC Mode	0	2	3	4
TTC Algorim	B-2	A	C	D
Extensions	SDW	Walk	W/SDW	W/SDW

TSP SUMMARY















Maximum Green Extensions:
EWG: 30 s Green/Walk

Appendix H: Synchro Analysis Worksheets



HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

EXAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Future Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	34	40	0	0	0	0	0	213	29	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	74	242										
Volume Left (vph)	34	0										
Volume Right (vph)	0	29										
Hadj (s)	0.14	-0.03										
Departure Headway (s)	4.6	4.1										
Degree Utilization, x	0.09	0.27										
Capacity (veh/h)	739	867										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay			8.4									
Level of Service			A									
Intersection Capacity Utilization			30.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
2: Logan Ave & Langley Ave

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↷				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Future Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	72	50	17	178	0	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	122		195									
Volume Left (vph)	0		17									
Volume Right (vph)	50		0									
Hadj (s)	-0.20		0.06									
Departure Headway (s)	4.1		4.2									
Degree Utilization, x	0.14		0.23									
Capacity (veh/h)	830		823									
Control Delay (s)	7.8		8.5									
Approach Delay (s)	7.8		8.5									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization			33.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Future Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	47	0	0	0	0	0	182	12	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	76	194										
Volume Left (vph)	29	0										
Volume Right (vph)	0	12										
Hadj (s)	0.11	0.02										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.22										
Capacity (veh/h)	777	856										
Control Delay (s)	7.9	8.3										
Approach Delay (s)	7.9	8.3										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		30.6%										
Analysis Period (min)		15										

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Volume (vph)	15	255	45	40	490	25	50	100	30	0	0	0
Future Volume (vph)	15	255	45	40	490	25	50	100	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.97			
Flpb, ped/bikes		1.00			0.99			0.97	1.00			
Frt		0.98			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3073			3275			1729	1416			
Flt Permitted		0.92			0.90			0.98	1.00			
Satd. Flow (perm)		2825			2967			1729	1416			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	15	260	46	41	500	26	51	102	31	0	0	0
RTOR Reduction (vph)	0	27	0	0	7	0	0	0	12	0	0	0
Lane Group Flow (vph)	0	294	0	0	560	0	0	153	19	0	0	0
Confl. Peds. (#/hr)	85		80	80		85	85		20	20		85
Confl. Bikes (#/hr)			5			10			5			
Heavy Vehicles (%)	0%	8%	19%	5%	5%	4%	2%	5%	3%	0%	0%	0%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		21.3			21.3			47.7	47.7			
Effective Green, g (s)		22.3			22.3			48.7	48.7			
Actuated g/C Ratio		0.28			0.28			0.61	0.61			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		787			827			1052	861			
v/s Ratio Prot												
v/s Ratio Perm		0.10			0.19			0.09	0.01			
v/c Ratio		0.37			0.68			0.15	0.02			
Uniform Delay, d1		23.2			25.6			6.7	6.2			
Progression Factor		1.00			1.22			1.00	1.00			
Incremental Delay, d2		0.3			2.0			0.3	0.0			
Delay (s)		23.5			33.3			7.0	6.3			
Level of Service		C			C			A	A			
Approach Delay (s)		23.5			33.3			6.9			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		25.8										
HCM 2000 Volume to Capacity ratio		0.31										
Actuated Cycle Length (s)		80.0							9.0			
Intersection Capacity Utilization		73.5%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔					↔		↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	30	35	275	0	0	0	0	160	15	195	0
Future Volume (vph)	0	30	35	275	0	0	0	0	160	15	195	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	34	39	309	0	0	0	0	180	17	219	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	73	309	180	236								
Volume Left (vph)	0	309	0	17								
Volume Right (vph)	39	0	180	0								
Hadj (s)	-0.27	0.35	-0.40	0.06								
Departure Headway (s)	5.3	5.5	5.0	5.3								
Degree Utilization, x	0.11	0.47	0.25	0.35								
Capacity (veh/h)	599	621	664	630								
Control Delay (s)	8.9	13.2	9.6	11.1								
Approach Delay (s)	8.9	13.2	9.6	11.1								
Approach LOS	A	B	A	B								
Intersection Summary												
Delay			11.4									
Level of Service			B									
Intersection Capacity Utilization			47.6%									
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

EXAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	10	10	205	20	5	450
Future Volume (Veh/h)	10	10	205	20	5	450
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	11	11	233	23	6	511
Pedestrians	90					100
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	7					8
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	602	318			346	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	602	318			346	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	97	98			99	
cM capacity (veh/h)	402	582			1135	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	22	155	101	176	341	
Volume Left	11	0	0	6	0	
Volume Right	11	0	23	0	0	
cSH	476	1700	1700	1135	1700	
Volume to Capacity	0.05	0.09	0.06	0.01	0.20	
Queue Length 95th (m)	1.2	0.0	0.0	0.1	0.0	
Control Delay (s)	12.9	0.0	0.0	0.3	0.0	
Lane LOS	B			A		
Approach Delay (s)	12.9	0.0		0.1		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			35.6%			
Analysis Period (min)			15			










HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

EXAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	30	5	0	0	0	215	10	15	440	0
Future Volume (Veh/h)	5	0	30	5	0	0	0	215	10	15	440	0
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	0	34	6	0	0	0	244	11	17	500	0
Pedestrians	75			90								
Lane Width (m)	3.5			3.5								
Walking Speed (m/s)	1.2			1.2								
Percent Blockage	6			7								
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (m)	164											
pX, platoon unblocked												
vC, conflicting volume	731	954	325	658	948	218	575				345	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	731	954	325	658	948	218	575				345	
IC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1				4.1	
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	98	100	95	98	100	100	100				99	
cM capacity (veh/h)	262	224	627	276	225	735	947				1136	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	40	6	163	92	184	333						
Volume Left	6	6	0	0	17	0						
Volume Right	34	0	0	11	0	0						
cSH	519	276	1700	1700	1136	1700						
Volume to Capacity	0.08	0.02	0.10	0.05	0.01	0.20						
Queue Length 95th (m)	2.0	0.5	0.0	0.0	0.4	0.0						
Control Delay (s)	12.5	18.3	0.0	0.0	0.9	0.0						
Lane LOS	B	C					A					
Approach Delay (s)	12.5	18.3	0.0	0.3								
Approach LOS	B	C										
Intersection Summary												
Average Delay				0.9								
Intersection Capacity Utilization				Err%			ICU Level of Service			H		
Analysis Period (min)				15								







HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

EXAM
07-19-2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	25	210	65	25	435
Future Volume (Veh/h)	70	25	210	65	25	435
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	80	29	241	75	29	500
Pedestrians	80				10	
Lane Width (m)	3.0				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	6				1	
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)	147					
pX, platoon unblocked						
vC, conflicting volume	666	248			396	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	666	248			396	
IC, single (s)	6.9	7.1			4.2	
IC, 2 stage (s)						
IF (s)	3.6	3.4			2.2	
p0 queue free %	77	96			97	
cM capacity (veh/h)	352	685			1081	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	109	161	155	196	333	
Volume Left	80	0	0	29	0	
Volume Right	29	0	75	0	0	
cSH	405	1700	1700	1081	1700	
Volume to Capacity	0.27	0.09	0.09	0.03	0.20	
Queue Length 95th (m)	8.6	0.0	0.0	0.7	0.0	
Control Delay (s)	17.1	0.0	0.0	1.5	0.0	
Lane LOS	C			A		
Approach Delay (s)	17.1	0.0	0.5			
Approach LOS	C					
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			43.6%		ICU Level of Service	
Analysis Period (min)			15		A	







HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

EXAM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	270	515	0
Future Volume (Veh/h)	0	0	0	270	515	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	314	599	0
Pedestrians	85			5		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	6			0		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	841	390	684			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	841	390	684			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	289	576	864			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	105	209	399	200	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	864	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.12	0.23	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		25.8%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

EXAM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	5	65	275	445	65
Future Volume (Veh/h)	0	5	65	275	445	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	6	73	309	500	73
Pedestrians	95			10		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	7			1		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked						
vC, conflicting volume	932	392	668			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	932	392	668			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	92			
cM capacity (veh/h)	230	568	870			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	6	176	206	333	240	
Volume Left	0	73	0	0	0	
Volume Right	6	0	0	0	73	
cSH	568	870	1700	1700	1700	
Volume to Capacity	0.01	0.08	0.12	0.20	0.14	
Queue Length 95th (m)	0.3	2.2	0.0	0.0	0.0	
Control Delay (s)	11.4	4.4	0.0	0.0	0.0	
Lane LOS	B	A				
Approach Delay (s)	11.4	2.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.9				
Intersection Capacity Utilization		40.8%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
11: Carlaw Ave & Gerrard St E

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	45	205	25	55	435	125	40	175	50	95	280	75
Future Volume (vph)	45	205	25	55	435	125	40	175	50	95	280	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.96			0.97			0.98	
Flpb, ped/bikes		0.99			0.99			0.99			0.98	
Frt		0.99			0.97			0.97			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3116			3091			3092			3079	
Flt Permitted		0.79			0.89			0.83			0.80	
Satd. Flow (perm)		2497			2766			2582			2484	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	228	28	61	483	139	44	194	56	106	311	83
RTOR Reduction (vph)	0	10	0	0	28	0	0	26	0	0	20	0
Lane Group Flow (vph)	0	296	0	0	655	0	0	268	0	0	480	0
Confl. Peds. (#/hr)	180		85	85		180	85		110	110		85
Confl. Bikes (#/hr)						10						10
Heavy Vehicles (%)	2%	10%	4%	7%	4%	5%	0%	10%	6%	2%	9%	11%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.4			42.4			26.3			26.3	
Effective Green, g (s)		43.4			43.4			27.3			27.3	
Actuated g/C Ratio		0.54			0.54			0.34			0.34	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1354			1500			881			847	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.24			0.10			c0.19	
v/c Ratio		0.22			0.44			0.30			0.57	
Uniform Delay, d1		9.5			11.0			19.4			21.5	
Progression Factor		0.20			0.62			1.00			1.00	
Incremental Delay, d2		0.4			0.9			0.9			2.7	
Delay (s)		2.3			7.7			20.3			24.3	
Level of Service		A			A			C			C	
Approach Delay (s)		2.3			7.7			20.3			24.3	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay		13.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		87.1%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Signalized Intersection Capacity Analysis
12: Carlaw Ave & Dundas St E

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	35	300	35	95	560	50	35	155	65	45	220	75
Future Volume (vph)	35	300	35	95	560	50	35	155	65	45	220	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00	0.99		1.00	0.99		0.96			0.97	
Flpb, ped/bikes		0.98	1.00		0.95	1.00		0.99			0.99	
Frt		1.00	0.98		1.00	0.99		0.96			0.97	
Flt Protected		0.95	1.00		0.95	1.00		0.99			0.99	
Satd. Flow (prot)		1605	1716		1569	1806		2980			3016	
Flt Permitted		0.26	1.00		0.49	1.00		0.87			0.88	
Satd. Flow (perm)		437	1716		814	1806		2609			2662	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	36	312	36	99	583	52	36	161	68	47	229	78
RTOR Reduction (vph)	0	5	0	0	4	0	0	44	0	0	34	0
Lane Group Flow (vph)	36	344	0	99	631	0	0	221	0	0	320	0
Confl. Peds. (#/hr)	65		80	80		65	60		85	85		60
Confl. Bikes (#/hr)			10			65						5
Heavy Vehicles (%)	3%	6%	12%	2%	2%	0%	8%	12%	2%	9%	10%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	10	0	0	0	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.4			38.4			26.1			26.1	
Effective Green, g (s)		39.4			39.4			27.1			27.1	
Actuated g/C Ratio		0.52			0.52			0.36			0.36	
Clearance Time (s)		5.6			5.6			5.9			5.9	
Lane Grp Cap (vph)		226	889		421	936		930			949	
v/s Ratio Prot			0.20			c0.35						
v/s Ratio Perm		0.08			0.12			0.08			c0.12	
v/c Ratio		0.16	0.39		0.24	0.67		0.24			0.34	
Uniform Delay, d1		9.6	11.0		10.0	13.5		17.2			17.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		1.5	1.3		1.3	3.9		0.6			1.0	
Delay (s)		11.1	12.3		11.3	17.4		17.8			18.8	
Level of Service		B	B		B	B		B			B	
Approach Delay (s)		12.2			16.6			17.8			18.8	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		16.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.54										
Actuated Cycle Length (s)		76.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		91.2%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												











HCM Unsignalized Intersection Capacity Analysis
13: Laneway W & Langley Ave

EXAM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	20	0	0	15	0	0
Future Volume (Veh/h)	20	0	0	15	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	28	0	0	21	0	0
Pedestrians	20			5	30	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		99	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		99	63
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)			1527		872	982
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	28	21	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1527	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS				A		
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS				A		
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			21.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

EXAM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (veh/h)	25	0	0	15	5	0
Future Volume (Veh/h)	25	0	0	15	5	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	36	0	0	21	7	0
Pedestrians	10			10	20	
Lane Width (m)	3.5			3.5	3.0	
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)						
pX, platoon unblocked						
vC, conflicting volume			56		87	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			56		87	66
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1540		899	981
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	36	21	7			
Volume Left	0	0	7			
Volume Right	0	0	0			
cSH	1700	1540	899			
Volume to Capacity	0.02	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.2			
Control Delay (s)	0.0	0.0	9.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	9.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			21.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	135	45	10	20	65	35	10	35	10	55	30	205
Future Volume (vph)	135	45	10	20	65	35	10	35	10	55	30	205
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	145	48	11	22	70	38	11	38	11	59	32	220
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	204	130	60	311								
Volume Left (vph)	145	22	11	59								
Volume Right (vph)	11	38	11	220								
Hadj (s)	0.29	0.02	0.02	-0.26								
Departure Headway (s)	5.3	5.1	5.2	4.6								
Degree Utilization, x	0.30	0.19	0.09	0.40								
Capacity (veh/h)	632	639	619	733								
Control Delay (s)	10.5	9.3	8.7	10.7								
Approach Delay (s)	10.5	9.3	8.7	10.7								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay		10.2										
Level of Service		B										
Intersection Capacity Utilization		51.3%			ICU Level of Service			A				
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

EXAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	
Traffic Volume (veh/h)	25	0	0	20	40	15
Future Volume (Veh/h)	25	0	0	20	40	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	35	0	0	28	56	21
Pedestrians	85			5	5	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	7			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	184	156	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	184	156	162			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	751	829	1331			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	35	28	77			
Volume Left	35	0	0			
Volume Right	0	0	21			
cSH	751	1331	1700			
Volume to Capacity	0.05	0.00	0.05			
Queue Length 95th (m)	1.2	0.0	0.0			
Control Delay (s)	10.0	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.0	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		2.5				
Intersection Capacity Utilization		24.4%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

EXAM
07-19-2022

	←	↙	↑	↘	→	↗
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		S	T
Traffic Volume (veh/h)	0	5	15	0	5	35
Future Volume (Veh/h)	0	5	15	0	5	35
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	0	8	23	0	8	55
Pedestrians	25		10			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	2		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	129	48			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	48			48	
IC, single (s)	6.4	6.5			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.5			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	841	940			1540	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	23	63			
Volume Left	0	0	8			
Volume Right	8	0	0			
cSH	940	1700	1540			
Volume to Capacity	0.01	0.01	0.01			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	8.9	0.0	1.0			
Lane LOS	A		A			
Approach Delay (s)	8.9	0.0	1.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utilization		19.0%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
18: Pape Ave & Existing Site Access

EXAM
07-19-2022

	↖	↗	←	↑	↓	↘
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (veh/h)	15	0	0	0	0	30
Future Volume (Veh/h)	15	0	0	0	0	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	22	0	0	0	0	45
Pedestrians	85			15	15	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	7			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	122	122	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	122	130			
IC, single (s)	6.5	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.6	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	794	859	1367			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	22	0	45			
Volume Left	22	0	0			
Volume Right	0	0	45			
cSH	794	1700	1700			
Volume to Capacity	0.03	0.00	0.03			
Queue Length 95th (m)	0.7	0.0	0.0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization		26.9%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	60	310	20	20	505	5	25	25	25	25	25	65
Future Volume (vph)	60	310	20	20	505	5	25	25	25	25	25	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			0.97			0.97	
Flpb, ped/bikes		0.98			1.00			0.99			0.99	
Frt		0.99			1.00			0.95			0.92	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		3152			3347			1657			1543	
Flt Permitted		0.80			0.93			0.90			0.94	
Satd. Flow (perm)		2547			3125			1522			1468	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	67	348	22	22	567	6	28	28	28	28	28	73
RTOR Reduction (vph)	0	5	0	0	1	0	0	17	0	0	44	0
Lane Group Flow (vph)	0	432	0	0	594	0	0	67	0	0	85	0
Confl. Peds. (#/hr)	200		80	80		200	50		75	75		50
Confl. Bikes (#/hr)			5			10						
Heavy Vehicles (%)	3%	8%	6%	6%	4%	20%	0%	0%	8%	13%	4%	5%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1321			1621			599			578	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.19			0.04			c0.06	
v/c Ratio		0.33			0.37			0.11			0.15	
Uniform Delay, d1		11.2			11.4			15.4			15.6	
Progression Factor		0.81			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.6			0.4			0.5	
Delay (s)		9.7			12.1			15.8			16.1	
Level of Service		A			B			B			B	
Approach Delay (s)		9.7			12.1			15.8			16.1	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		11.9										
HCM 2000 Volume to Capacity ratio		0.27										
Actuated Cycle Length (s)		80.0						7.0				
Intersection Capacity Utilization		76.7%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

EXAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Future Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	0	115	38	16	137	11	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	153		164									
Volume Left (vph)	0		16									
Volume Right (vph)	38		11									
Hadj (s)	-0.14		0.05									
Departure Headway (s)	4.1		4.3									
Degree Utilization, x	0.18		0.20									
Capacity (veh/h)	838		808									
Control Delay (s)	8.0		8.3									
Approach Delay (s)	8.0		8.3									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization	31.6%				ICU Level of Service		A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

EXAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕↕	↕↕	
Traffic Volume (veh/h)	0	0	55	155	455	5
Future Volume (Veh/h)	0	0	55	155	455	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	62	176	517	6
Pedestrians	60					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	792	322	583			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	792	322	583			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	94			
cM capacity (veh/h)	306	674	1001			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	121	117	345	178		
Volume Left	62	0	0	0		
Volume Right	0	0	0	6		
cSH	1001	1700	1700	1700		
Volume to Capacity	0.06	0.07	0.20	0.10		
Queue Length 95th (m)	1.6	0.0	0.0	0.0		
Control Delay (s)	4.8	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	2.4		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			25.8%		ICU Level of Service	A
Analysis Period (min)			15			















HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕				
Sign Control	Stop			Stop			Stop				Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	40	75	0	0	0	0	0	213	34	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	115	247										
Volume Left (vph)	40	0										
Volume Right (vph)	0	34										
Hadj (s)	0.07	-0.07										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.14	0.28										
Capacity (veh/h)	750	851										
Control Delay (s)	8.3	8.7										
Approach Delay (s)	8.3	8.7										
Approach LOS	A	A										
Intersection Summary												
Delay		8.6										
Level of Service		A										
Intersection Capacity Utilization		32.6%										
Analysis Period (min)		15										



HCM Unsignalized Intersection Capacity Analysis 2: Logan Ave & Langley Ave

EXPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Future Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	0	29	29	23	215	0	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	58	238										
Volume Left (vph)	0	23										
Volume Right (vph)	29	0										
Hadj (s)	-0.30	0.03										
Departure Headway (s)	4.1	4.1										
Degree Utilization, x	0.07	0.27										
Capacity (veh/h)	824	868										
Control Delay (s)	7.4	8.6										
Approach Delay (s)	7.4	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay				8.3								
Level of Service				A								
Intersection Capacity Utilization				34.1%		ICU Level of Service				A		
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Future Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	24	54	0	0	0	0	0	229	18	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	78	247										
Volume Left (vph)	24	0										
Volume Right (vph)	0	18										
Hadj (s)	0.09	-0.03										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.10	0.28										
Capacity (veh/h)	746	866										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay			8.5									
Level of Service			A									
Intersection Capacity Utilization			31.5%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
4: Logan Ave & Gerrard St E

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔			
Traffic Volume (vph)	15	495	45	35	350	40	40	130	65	0	0	0
Future Volume (vph)	15	495	45	35	350	40	40	130	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.98			1.00	0.94			
Flpb, ped/bikes		1.00			0.99			0.98	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.99	1.00			
Satd. Flow (prot)		3340			3251			1813	1418			
Flt Permitted		0.94			0.82			0.99	1.00			
Satd. Flow (perm)		3129			2669			1813	1418			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	16	532	48	38	376	43	43	140	70	0	0	0
RTOR Reduction (vph)	0	13	0	0	16	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	583	0	0	441	0	0	183	47	0	0	0
Confl. Peds. (#/hr)	105		115	115		105	105		45	45		105
Confl. Bikes (#/hr)			15			10			15			5
Heavy Vehicles (%)	0%	2%	0%	0%	4%	3%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		21.2			21.2			47.8	47.8			
Effective Green, g (s)		22.2			22.2			48.8	48.8			
Actuated g/C Ratio		0.28			0.28			0.61	0.61			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		868			740			1105	864			
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.17			0.10	0.03			
v/c Ratio		0.67			0.60			0.17	0.05			
Uniform Delay, d1		25.7			25.0			6.8	6.3			
Progression Factor		1.00			0.61			1.00	1.00			
Incremental Delay, d2		2.1			1.2			0.3	0.1			
Delay (s)		27.7			16.5			7.1	6.4			
Level of Service		C			B			A	A			
Approach Delay (s)		27.7			16.5			6.9			0.0	
Approach LOS		C			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		19.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.32										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		67.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 4

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔			
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	55	50	230	0	0	0	0	310	10	155	0
Future Volume (vph)	0	55	50	230	0	0	0	0	310	10	155	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	57	52	240	0	0	0	0	323	10	161	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	109	240	323	171								
Volume Left (vph)	0	240	0	10								
Volume Right (vph)	52	0	323	0								
Hadj (s)	-0.27	0.27	-0.53	0.02								
Departure Headway (s)	5.3	5.6	4.6	5.4								
Degree Utilization, x	0.16	0.37	0.42	0.26								
Capacity (veh/h)	595	596	719	613								
Control Delay (s)	9.3	11.9	10.9	10.2								
Approach Delay (s)	9.3	11.9	10.9	10.2								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay		10.8										
Level of Service		B										
Intersection Capacity Utilization		52.6%			ICU Level of Service			A				
Analysis Period (min)		15										

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 5

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

EXPM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	5	0	325	20	0	400
Future Volume (Veh/h)	5	0	325	20	0	400
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	342	21	0	421
Pedestrians	65		5			45
Lane Width (m)	3.5		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	5		0			4
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	633	292			428	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	633	292			428	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	393	649			1082	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	228	135	140	281	
Volume Left	5	0	0	0	0	
Volume Right	0	0	21	0	0	
cSH	393	1700	1700	1082	1700	
Volume to Capacity	0.01	0.13	0.08	0.00	0.17	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.3	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.3	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←			←	↔			↑↑			↑↑	
Traffic Volume (veh/h)	20	5	40	5	0	5	0	325	25	15	395	0
Future Volume (Veh/h)	20	5	40	5	0	5	0	325	25	15	395	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	21	5	41	5	0	5	0	335	26	15	407	0
Pedestrians		55			55			5				
Lane Width (m)		3.5			3.5			3.5				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		4			4			0				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								164				
pX, platoon unblocked												
vC, conflicting volume	664	908	264	685	895	236	462			416		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	664	908	264	685	895	236	462			416		
IC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	98	94	98	100	99	100			99		
cM capacity (veh/h)	307	250	696	276	254	738	1060			1102		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	62	10	223	138	151	271						
Volume Left	21	5	0	0	15	0						
Volume Right	41	5	0	26	0	0						
cSH	487	401	1700	1700	1102	1700						
Volume to Capacity	0.13	0.02	0.13	0.08	0.01	0.16						
Queue Length 95th (m)	3.5	0.6	0.0	0.0	0.3	0.0						
Control Delay (s)	13.5	14.2	0.0	0.0	0.9	0.0						
Lane LOS	B	B			A							
Approach Delay (s)	Err	14.2	0.0		0.3							
Approach LOS	F	B										
Intersection Summary												
Average Delay					Err							
Intersection Capacity Utilization					Err%		ICU Level of Service			H		
Analysis Period (min)					15							

HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

EXPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	130	45	310	110	35	400
Future Volume (Veh/h)	130	45	310	110	35	400
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	134	46	320	113	36	412
Pedestrians	55		5			10
Lane Width (m)	3.0		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	4		0			1
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			147			
pX, platoon unblocked						
vC, conflicting volume	714	282			488	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	714	282			488	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	60	93			97	
cM capacity (veh/h)	338	688			1044	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	180	213	220	173	275	
Volume Left	134	0	0	36	0	
Volume Right	46	0	113	0	0	
cSH	389	1700	1700	1044	1700	
Volume to Capacity	0.46	0.13	0.13	0.03	0.16	
Queue Length 95th (m)	19.0	0.0	0.0	0.9	0.0	
Control Delay (s)	22.0	0.0	0.0	2.0	0.0	
Lane LOS	C			A		
Approach Delay (s)	22.0	0.0		0.8		
Approach LOS	C					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			46.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

EXPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	415	540	0
Future Volume (Veh/h)	0	0	0	415	540	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	0	432	562	0
Pedestrians	75				5	
Lane Width (m)	3.0				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	858	356	637			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	858	356	637			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	283	613	907			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	144	288	375	187	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	907	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.17	0.22	0.11	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			18.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

EXPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	5	5	40	410	485	50
Future Volume (Veh/h)	5	5	40	410	485	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	5	42	427	505	52
Pedestrians	70			15		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	5			1		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked	0.99					
vC, conflicting volume	898	364	627			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	876	364	627			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	95			
cM capacity (veh/h)	262	601	918			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	10	184	285	337	220	
Volume Left	5	42	0	0	0	
Volume Right	5	0	0	0	52	
cSH	365	918	1700	1700	1700	
Volume to Capacity	0.03	0.05	0.17	0.20	0.13	
Queue Length 95th (m)	0.7	1.1	0.0	0.0	0.0	
Control Delay (s)	15.1	2.4	0.0	0.0	0.0	
Lane LOS	C	A				
Approach Delay (s)	15.1	1.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			45.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
11: Carlaw Ave & Gerrard St E

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑			↑↑	
Traffic Volume (vph)	85	445	50	50	275	135	40	240	55	120	275	90
Future Volume (vph)	85	445	50	50	275	135	40	240	55	120	275	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.92			0.97			0.97	
Flpb, ped/bikes		0.98			1.00			0.99			0.98	
Frt		0.99			0.96			0.98			0.97	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3245			2961			3219			3156	
Flt Permitted		0.80			0.84			0.87			0.76	
Satd. Flow (perm)		2628			2486			2818			2441	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	459	52	52	284	139	41	247	57	124	284	93
RTOR Reduction (vph)	0	9	0	0	57	0	0	20	0	0	24	0
Lane Group Flow (vph)	0	590	0	0	418	0	0	325	0	0	477	0
Conf. Peds. (#/hr)	240		105	105		240	130		125	125		130
Conf. Bikes (#/hr)			10			5			5			5
Heavy Vehicles (%)	1%	3%	4%	0%	5%	0%	5%	5%	0%	1%	4%	3%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.4			32.4			36.3			23.3	
Effective Green, g (s)		33.4			33.4			37.3			24.3	
Actuated g/C Ratio		0.42			0.42			0.47			0.30	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1097			1037			1349			741	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		c0.22			0.17			0.09			c0.20	
v/c Ratio		0.54			0.40			0.24			0.64	
Uniform Delay, d1		17.5			16.3			12.8			24.1	
Progression Factor		1.92			2.09			1.00			1.00	
Incremental Delay, d2		1.8			1.1			0.4			4.3	
Delay (s)		35.5			35.3			13.3			28.4	
Level of Service		D			D			B			C	
Approach Delay (s)		35.5			35.3			13.3			28.4	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay		29.6			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			15.1				
Intersection Capacity Utilization		85.5%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			↰	↱	↰	↱	
Traffic Volume (vph)	75	565	30	50	390	50	35	250	100	60	240	75
Future Volume (vph)	75	565	30	50	390	50	35	250	100	60	240	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	4.6	4.6		4.6	4.6			4.9			4.9	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			0.94			0.96	
Flpb, ped/bikes	0.95	1.00		0.97	1.00			0.99			0.98	
Frt	1.00	0.99		1.00	0.98			0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1592	1832		1639	1800			3019			3063	
Flt Permitted	0.39	1.00		0.26	1.00			0.89			0.82	
Satd. Flow (perm)	661	1832		457	1800			2690			2546	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	595	32	53	411	53	37	263	105	63	253	79
RTOR Reduction (vph)	0	2	0	0	6	0	0	46	0	0	29	0
Lane Group Flow (vph)	79	625	0	53	458	0	0	359	0	0	366	0
Confl. Peds. (#/hr)	115		90	90		115	110		140	140		110
Confl. Bikes (#/hr)			50			20			5			5
Heavy Vehicles (%)	0%	1%	3%	0%	1%	0%	0%	7%	1%	5%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	9	0	0	9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		6			
Actuated Green, G (s)	38.4	38.4		38.4	38.4			26.1			26.1	
Effective Green, g (s)	39.4	39.4		39.4	39.4			27.1			27.1	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.36			0.36	
Clearance Time (s)	5.6	5.6		5.6	5.6			5.9			5.9	
Lane Grp Cap (vph)	342	949		236	933			959			907	
v/s Ratio Prot		c0.34			0.25							
v/s Ratio Perm	0.12			0.12				0.13			c0.14	
v/c Ratio	0.23	0.66		0.22	0.49			0.37			0.40	
Uniform Delay, d1	10.0	13.4		10.0	11.8			18.2			18.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.6	3.6		2.2	1.8			1.1			1.3	
Delay (s)	11.6	16.9		12.2	13.7			19.3			19.7	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		16.3			13.5			19.3			19.7	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		16.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		76.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		90.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 12

HCM Unsignalized Intersection Capacity Analysis 13: Laneway W & Langley Ave

EXPM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	0	0	14	0	0
Pedestrians	5				20	
Lane Width (m)	3.5				3.0	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			54		73	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			54		73	54
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1543		919	1005
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	34	14	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1543	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		11.5%		ICU Level of Service		A
Analysis Period (min)		15				

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 13

HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

EXPM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
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)	33	0	0	13	0	0
Pedestrians	5			5	25	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		76	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		76	63
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1532		912	986
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	33	13	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1532	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩			↩			↩			↩	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	285	75	10	20	30	35	10	55	40	45	45	190
Future Volume (vph)	285	75	10	20	30	35	10	55	40	45	45	190
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	306	81	11	22	32	38	11	59	43	48	48	204
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	398	92	113	300								
Volume Left (vph)	306	22	11	48								
Volume Right (vph)	11	38	43	204								
Hadji (s)	0.20	-0.20	-0.17	-0.30								
Departure Headway (s)	5.4	5.5	5.6	5.2								
Degree Utilization, x	0.60	0.14	0.18	0.43								
Capacity (veh/h)	639	575	560	646								
Control Delay (s)	16.0	9.4	9.8	12.0								
Approach Delay (s)	16.0	9.4	9.8	12.0								
Approach LOS	C	A	A	B								
Intersection Summary												
Delay				13.2								
Level of Service				B								
Intersection Capacity Utilization				59.8%				ICU Level of Service				B
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

EXPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			U	U	
Traffic Volume (veh/h)	20	5	5	70	60	10
Future Volume (Veh/h)	20	5	5	70	60	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	21	5	5	74	64	11
Pedestrians	60			5	10	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	224	134	135			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224	134	135			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	713	872	1391			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	26	79	75			
Volume Left	21	5	0			
Volume Right	5	0	11			
cSH	739	1391	1700			
Volume to Capacity	0.04	0.00	0.04			
Queue Length 95th (m)	0.9	0.1	0.0			
Control Delay (s)	10.1	0.5	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.1	0.5	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		1.7				
Intersection Capacity Utilization		23.7%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

EXPM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		U			U
Traffic Volume (veh/h)	0	5	65	5	5	65
Future Volume (Veh/h)	0	5	65	5	5	65
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	0	6	78	6	6	78
Pedestrians	65		15			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	5		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	251	146			149	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	251	146			149	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	691	859			1369	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	6	84	84			
Volume Left	0	0	6			
Volume Right	6	6	0			
cSH	859	1700	1369			
Volume to Capacity	0.01	0.05	0.00			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	9.2	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	9.2	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay		0.6				
Intersection Capacity Utilization		22.3%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 18: Pape Ave & Existing Site Access

EXPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			U	U	
Traffic Volume (veh/h)	65	0	0	0	0	65
Future Volume (Veh/h)	65	0	0	0	0	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	78	0	0	0	0	78
Pedestrians	65			60	10	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			5	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	114	164	143			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114	164	143			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	100			
cM capacity (veh/h)	829	798	1376			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	78	0	78			
Volume Left	78	0	0			
Volume Right	0	0	78			
cSH	829	1700	1700			
Volume to Capacity	0.09	0.00	0.05			
Queue Length 95th (m)	2.5	0.0	0.0			
Control Delay (s)	9.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		4.9				
Intersection Capacity Utilization		31.5%		ICU Level of Service	A	
Analysis Period (min)		15				

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 18

HCM Signalized Intersection Capacity Analysis 19: Pape Ave & Gerrard St E

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		U			U			U			U	
Traffic Volume (vph)	90	490	25	25	330	10	20	25	20	50	40	105
Future Volume (vph)	90	490	25	25	330	10	20	25	20	50	40	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			0.95			0.95	
Flpb, ped/bikes		0.96			1.00			0.98			0.96	
Frt		0.99			1.00			0.96			0.93	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		3244			3296			1629			1561	
Flt Permitted		0.83			0.90			0.90			0.92	
Satd. Flow (perm)		2706			2966			1493			1453	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	516	26	26	347	11	21	26	21	53	42	111
RTOR Reduction (vph)	0	4	0	0	2	0	0	13	0	0	53	0
Lane Group Flow (vph)	0	633	0	0	382	0	0	55	0	0	153	0
Confl. Peds. (#/hr)	300		115	115		300	85		190	190		85
Confl. Bikes (#/hr)			15			5						5
Heavy Vehicles (%)	0%	2%	4%	0%	4%	9%	5%	0%	0%	0%	3%	1%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1403			1538			587			572	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.13			0.04			c0.11	
v/c Ratio		0.45			0.25			0.09			0.27	
Uniform Delay, d1		12.1			10.6			15.3			16.4	
Progression Factor		0.83			1.00			1.00			1.00	
Incremental Delay, d2		0.9			0.4			0.3			1.1	
Delay (s)		10.9			11.0			15.6			17.6	
Level of Service		B			B			B			B	
Approach Delay (s)		10.9			11.0			15.6			17.6	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.37										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			7.0				
Intersection Capacity Utilization		76.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 19

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

EXPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↶				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Future Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	0	67	39	11	191	11	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	106	213										
Volume Left (vph)	0	11										
Volume Right (vph)	39	11										
Hadj (s)	-0.22	-0.01										
Departure Headway (s)	4.2	4.1										
Degree Utilization, x	0.12	0.24										
Capacity (veh/h)	815	846										
Control Delay (s)	7.7	8.5										
Approach Delay (s)	7.7	8.5										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		33.2%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

EXPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↶	↶	
Traffic Volume (veh/h)	0	0	15	310	400	40
Future Volume (Veh/h)	0	0	15	310	400	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	15	320	412	41
Pedestrians	60					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	682	286	513			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	682	286	513			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	382	716	1063			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	122	213	275	178		
Volume Left	15	0	0	0		
Volume Right	0	0	0	41		
cSH	1063	1700	1700	1700		
Volume to Capacity	0.01	0.13	0.16	0.10		
Queue Length 95th (m)	0.3	0.0	0.0	0.0		
Control Delay (s)	1.2	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	0.4		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			23.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱						↱				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	43	80	0	0	0	0	0	247	31	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	123	278										
Volume Left (vph)	43	0										
Volume Right (vph)	0	31										
Hadj (s)	0.07	-0.05										
Departure Headway (s)	4.6	4.2										
Degree Utilization, x	0.16	0.32										
Capacity (veh/h)	734	843										
Control Delay (s)	8.4	9.1										
Approach Delay (s)	8.4	9.1										
Approach LOS	A	A										
Intersection Summary												
Delay		8.9										
Level of Service		A										
Intersection Capacity Utilization		32.8%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
2: Logan Ave & Langley Ave

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↱			↱				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Future Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	0	36	62	15	186	0	0	0	0
Direction, Lane #		WB 1			NB 1							
Volume Total (vph)		98			201							
Volume Left (vph)		0			15							
Volume Right (vph)		62			0							
Hadj (s)		-0.36			0.04							
Departure Headway (s)		4.0			4.1							
Degree Utilization, x		0.11			0.23							
Capacity (veh/h)		859			844							
Control Delay (s)		7.5			8.4							
Approach Delay (s)		7.5			8.4							
Approach LOS		A			A							
Intersection Summary												
Delay					8.1							
Level of Service					A							
Intersection Capacity Utilization		34.7%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

EXSAT
07-19-2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔						↔				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Future Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	26	46	0	0	0	0	0	180	5	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	72	185										
Volume Left (vph)	26	0										
Volume Right (vph)	0	5										
Hadj (s)	0.09	0.00										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.21										
Capacity (veh/h)	785	863										
Control Delay (s)	7.8	8.1										
Approach Delay (s)	7.8	8.1										
Approach LOS	A	A										
Intersection Summary												
Delay		8.1										
Level of Service		A										
Intersection Capacity Utilization		31.9%			ICU Level of Service			A				
Analysis Period (min)		15										

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

EXSAT
07-19-2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔				
Traffic Volume (vph)	25	350	40	40	420	35	65	120	60	0	0	0
Future Volume (vph)	25	350	40	40	420	35	65	120	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.93			
Flpb, ped/bikes		1.00			0.99			0.96	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3245			3286			1754	1372			
Flt Permitted		0.90			0.88			0.98	1.00			
Satd. Flow (perm)		2924			2906			1754	1372			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	376	43	43	452	38	70	129	65	0	0	0
RTOR Reduction (vph)	0	17	0	0	12	0	0	0	22	0	0	0
Lane Group Flow (vph)	0	429	0	0	521	0	0	199	43	0	0	0
Confl. Peds. (#/hr)	100		160	160		100	120		65	65		120
Confl. Bikes (#/hr)			10			20			10			5
Heavy Vehicles (%)	0%	4%	0%	5%	3%	0%	2%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		19.1			19.1			43.9	43.9			
Effective Green, g (s)		20.1			20.1			44.9	44.9			
Actuated g/C Ratio		0.27			0.27			0.61	0.61			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		794			789			1064	832			
v/s Ratio Prot												
v/s Ratio Perm		0.15			0.18			0.11	0.03			
v/c Ratio		0.54			0.66			0.19	0.05			
Uniform Delay, d1		23.0			23.9			6.5	5.9			
Progression Factor		1.00			1.00			1.00	1.00			
Incremental Delay, d2		0.8			1.9			0.4	0.1			
Delay (s)		23.8			25.8			6.8	6.0			
Level of Service		C			C			A	A			
Approach Delay (s)		23.8			25.8			6.6			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		21.0			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.33										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		72.5%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔					↔		↔	
Sign Control	Stop			Stop				Stop			Stop	
Traffic Volume (vph)	0	50	40	250	0	0	0	0	245	10	175	0
Future Volume (vph)	0	50	40	250	0	0	0	0	245	10	175	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	42	263	0	0	0	0	258	11	184	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	95	263	258	195								
Volume Left (vph)	0	263	0	11								
Volume Right (vph)	42	0	258	0								
Hadj (s)	-0.27	0.20	-0.60	0.01								
Departure Headway (s)	5.2	5.4	4.6	5.3								
Degree Utilization, x	0.14	0.39	0.33	0.29								
Capacity (veh/h)	605	622	725	630								
Control Delay (s)	9.1	11.8	9.8	10.4								
Approach Delay (s)	9.1	11.8	9.8	10.4								
Approach LOS	A	B	A	B								
Intersection Summary												
Delay			10.5									
Level of Service			B									
Intersection Capacity Utilization			50.9%									
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

EXSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	5	0	315	20	0	415
Future Volume (Veh/h)	5	0	315	20	0	415
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	5	0	339	22	0	446
Pedestrians	70					40
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	6					3
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	643	290			431	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	643	290			431	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	387	650			1075	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	226	135	149	297	
Volume Left	5	0	0	0	0	
Volume Right	0	0	22	0	0	
cSH	387	1700	1700	1075	1700	
Volume to Capacity	0.01	0.13	0.08	0.00	0.17	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.4	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.4	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.3%			
Analysis Period (min)			15			
ICU Level of Service						A










HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

EXSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	45	0	0	5	0	310	25	10	400	0
Future Volume (Veh/h)	10	5	45	0	0	5	0	310	25	10	400	0
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	5	49	0	0	5	0	341	27	11	440	0
Pedestrians	40			70						5		
Lane Width (m)	3.5			3.5						3.5		
Walking Speed (m/s)	1.2			1.2						1.2		
Percent Blockage	3			6						0		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (m)	164											
pX, platoon unblocked												
vC, conflicting volume	682	940	260	718	926	259	480				438	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	682	940	260	718	926	259	480				438	
IC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	96	98	93	100	100	99	100				99	
cM capacity (veh/h)	301	240	715	256	244	701	1058				1068	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	60	5	227	141	158	293						
Volume Left	11	0	0	0	11	0						
Volume Right	49	5	0	27	0	0						
cSH	571	701	1700	1700	1068	1700						
Volume to Capacity	0.11	0.01	0.13	0.08	0.01	0.17						
Queue Length 95th (m)	2.8	0.2	0.0	0.0	0.2	0.0						
Control Delay (s)	12.0	10.2	0.0	0.0	0.7	0.0						
Lane LOS	B	B				A						
Approach Delay (s)	Err	10.2	0.0	0.2								
Approach LOS	F	B										
Intersection Summary												
Average Delay				Err								
Intersection Capacity Utilization				Err%			ICU Level of Service			H		
Analysis Period (min)				15								













HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

EXSAT
07-19-2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	120	40	260	110	35	425
Future Volume (Veh/h)	120	40	260	110	35	425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	124	41	268	113	36	438
Pedestrians	80		5			5
Lane Width (m)	3.0		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	6		0			0
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			147			
pX, platoon unblocked						
vC, conflicting volume	700	276			461	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	700	276			461	
IC, single (s)	6.8	7.0			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	64	94			97	
cM capacity (veh/h)	343	676			1049	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	165	179	202	182	292	
Volume Left	124	0	0	36	0	
Volume Right	41	0	113	0	0	
cSH	391	1700	1700	1049	1700	
Volume to Capacity	0.42	0.11	0.12	0.03	0.17	
Queue Length 95th (m)	16.3	0.0	0.0	0.9	0.0	
Control Delay (s)	20.8	0.0	0.0	1.9	0.0	
Lane LOS	C			A		
Approach Delay (s)	20.8	0.0		0.7		
Approach LOS	C					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			45.9%	ICU Level of Service		A
Analysis Period (min)			15			













HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

EXSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	370	550	0
Future Volume (Veh/h)	0	0	0	370	550	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	0	394	585	0
Pedestrians	65			5	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	852	362	650			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	362	650			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	288	609	903			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	131	263	390	195	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	903	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.15	0.23	0.11	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		26.7%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

EXSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	25	385	470	60
Future Volume (Veh/h)	0	0	25	385	470	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	27	418	511	65
Pedestrians	50			20	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	3			2	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked						
vC, conflicting volume	862	358	626			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	862	358	626			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	97			
cM capacity (veh/h)	279	612	932			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	166	279	341	235	
Volume Left	0	27	0	0	0	
Volume Right	0	0	0	0	65	
cSH	1700	932	1700	1700	1700	
Volume to Capacity	0.00	0.03	0.16	0.20	0.14	
Queue Length 95th (m)	0.0	0.7	0.0	0.0	0.0	
Control Delay (s)	0.0	1.7	0.0	0.0	0.0	
Lane LOS	A	A				
Approach Delay (s)	0.0	0.6		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization		44.3%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis 11: Carlaw Ave & Gerrard St E

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	55	325	55	80	345	135	40	190	65	115	305	75
Future Volume (vph)	55	325	55	80	345	135	40	190	65	115	305	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.98			0.94			0.96			0.98	
Flpb, ped/bikes		0.99			0.99			0.99			0.98	
Frt		0.98			0.96			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3250			3050			3190			3234	
Flt Permitted		0.83			0.82			0.84			0.78	
Satd. Flow (perm)		2702			2517			2707			2566	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	339	57	83	359	141	42	198	68	120	318	78
RTOR Reduction (vph)	0	16	0	0	41	0	0	35	0	0	19	0
Lane Group Flow (vph)	0	437	0	0	542	0	0	273	0	0	497	0
Confl. Peds. (#/hr)	220		160	160		220	105		140	140		105
Confl. Bikes (#/hr)			10			15			5			5
Heavy Vehicles (%)	2%	2%	0%	4%	3%	0%	3%	4%	0%	2%	3%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.4			33.4			29.3			29.3	
Effective Green, g (s)		34.4			34.4			30.3			30.3	
Actuated g/C Ratio		0.46			0.46			0.41			0.41	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1256			1170			1108			1050	
v/s Ratio Prot												
v/s Ratio Perm		0.16			c0.22			0.10			c0.19	
v/c Ratio		0.35			0.46			0.25			0.47	
Uniform Delay, d1		12.6			13.5			14.3			16.0	
Progression Factor		0.32			0.69			1.00			1.00	
Incremental Delay, d2		0.7			1.3			0.5			1.5	
Delay (s)		4.8			10.6			14.9			17.5	
Level of Service		A			B			B			B	
Approach Delay (s)		4.8			10.6			14.9			17.5	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		11.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.47										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		86.1%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												











HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	55	415	55	70	435	40	50	205	75	60	280	95
Future Volume (vph)	55	415	55	70	435	40	50	205	75	60	280	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00	0.98		1.00	0.98		0.94			0.95	
Flpb, ped/bikes		0.93	1.00		0.96	1.00		0.98			0.98	
Frt		1.00	0.98		1.00	0.99		0.97			0.97	
Flt Protected		0.95	1.00		0.95	1.00		0.99			0.99	
Satd. Flow (prot)		1542	1802		1594	1805		3087			3091	
Flt Permitted		0.37	1.00		0.38	1.00		0.83			0.85	
Satd. Flow (perm)		605	1802		633	1805		2574			2638	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	432	57	73	453	42	52	214	78	62	292	99
RTOR Reduction (vph)	0	6	0	0	4	0	0	34	0	0	32	0
Lane Group Flow (vph)	57	483	0	73	491	0	0	310	0	0	422	0
Confl. Peds. (#/hr)	145		95	95		145	130		140	140		130
Confl. Bikes (#/hr)			25			35			5			5
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	4%	0%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.4	41.4		41.4	41.4		27.1			27.1		
Effective Green, g (s)	42.4	42.4		42.4	42.4		28.1			28.1		
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.35			0.35		
Clearance Time (s)	5.6	5.6		5.6	5.6		5.9			5.9		
Lane Grp Cap (vph)	320	955		335	956		904			926		
v/s Ratio Prot		0.27			c0.27							
v/s Ratio Perm	0.09			0.12			0.12			c0.16		
v/c Ratio	0.18	0.51		0.22	0.51		0.34			0.46		
Uniform Delay, d1	9.8	12.1		10.0	12.1		19.1			20.0		
Progression Factor	1.00	1.00		1.00	1.00		1.00			1.00		
Incremental Delay, d2	1.2	1.9		1.5	2.0		1.0			1.6		
Delay (s)	11.0	14.0		11.5	14.1		20.2			21.7		
Level of Service	B	B		B	B		C			C		
Approach Delay (s)		13.7			13.8		20.2			21.7		
Approach LOS		B			B		C			C		
Intersection Summary												
HCM 2000 Control Delay		16.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		84.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Unsignalized Intersection Capacity Analysis
13: Laneway W & Langley Ave

EXSAT
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (veh/h)	15	0	0	10	0	5
Future Volume (Veh/h)	15	0	0	10	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	0	0	11	0	6
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			27		38	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		38	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1576		967	1041
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	17	11	6			
Volume Left	0	0	0			
Volume Right	0	0	6			
cSH	1700	1576	1041			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			16.2%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

EXSAT
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	15	5	0	5	0	0
Future Volume (Veh/h)	15	5	0	5	0	0
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)	16	5	0	5	0	0
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			31		34	28
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			31		34	28
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1571		973	1039
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	21	5	0			
Volume Left	0	0	0			
Volume Right	5	0	0			
cSH	1700	1571	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			9.5%	ICU Level of Service	A	
Analysis Period (min)			15			




HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

EXSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	240	50	5	10	55	25	5	35	20	55	30	215
Future Volume (vph)	240	50	5	10	55	25	5	35	20	55	30	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	250	52	5	10	57	26	5	36	21	57	31	224
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	307	93	62	312								
Volume Left (vph)	250	10	5	57								
Volume Right (vph)	5	26	21	224								
Hadj (s)	0.22	-0.15	-0.16	-0.38								
Departure Headway (s)	5.2	5.2	5.3	4.7								
Degree Utilization, x	0.44	0.13	0.09	0.41								
Capacity (veh/h)	656	629	598	720								
Control Delay (s)	12.3	9.0	8.8	10.9								
Approach Delay (s)	12.3	9.0	8.8	10.9								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay	11.0											
Level of Service	B											
Intersection Capacity Utilization	56.3%			ICU Level of Service			B					
Analysis Period (min)	15											


HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

EXSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	5	0	55	60	5
Future Volume (Veh/h)	10	5	0	55	60	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	6	0	69	75	6
Pedestrians	75					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	222	153	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	222	153	156			
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	99	100			
cM capacity (veh/h)	724	844	1349			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	69	81			
Volume Left	12	0	0			
Volume Right	6	0	6			
cSH	760	1349	1700			
Volume to Capacity	0.02	0.00	0.05			
Queue Length 95th (m)	0.6	0.0	0.0			
Control Delay (s)	9.9	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.9	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	22.6%			ICU Level of Service		A
Analysis Period (min)	15					


HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

EXSAT
07-19-2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		R			R
Traffic Volume (veh/h)	5	5	55	5	0	55
Future Volume (Veh/h)	5	5	55	5	0	55
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	6	6	66	6	0	66
Pedestrians	70					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	205	139			142	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	205	139			142	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	743	863			1371	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	72	66			
Volume Left	6	0	0			
Volume Right	6	6	0			
cSH	799	1700	1371			
Volume to Capacity	0.02	0.04	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	9.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization		22.4%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
18: Pape Ave & Existing Site Access

EXSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			R	R	
Traffic Volume (veh/h)	55	0	0	0	0	60
Future Volume (Veh/h)	55	0	0	0	0	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	64	0	0	0	0	70
Pedestrians	95				95	
Lane Width (m)	3.5				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	8				8	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	225	130	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225	130	165			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	90	100	100			
cM capacity (veh/h)	654	854	1316			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	64	0	70			
Volume Left	64	0	0			
Volume Right	0	0	70			
cSH	654	1700	1700			
Volume to Capacity	0.10	0.00	0.04			
Queue Length 95th (m)	2.6	0.0	0.0			
Control Delay (s)	11.1	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	11.1	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization		23.2%		ICU Level of Service	A	
Analysis Period (min)		15				















HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

EXSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	95	380	30	30	415	15	30	45	40	50	65	125
Future Volume (vph)	95	380	30	30	415	15	30	45	40	50	65	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Flpb, ped/bikes		0.99			0.98			0.94			0.94	
Flpb, ped/bikes		0.95			0.99			0.98			0.97	
Frt		0.99			1.00			0.95			0.93	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3171			3342			1619			1556	
Flt Permitted		0.78			0.90			0.89			0.92	
Satd. Flow (perm)		2504			3024			1467			1452	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	400	32	32	437	16	32	47	42	53	68	132
RTOR Reduction (vph)	0	6	0	0	3	0	0	24	0	0	18	0
Lane Group Flow (vph)	0	526	0	0	482	0	0	97	0	0	235	0
Confl. Peds. (#/hr)	400		150	150		400	130		210	210		130
Heavy Vehicles (%)	0%	3%	0%	0%	2%	0%	0%	2%	0%	0%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.5			34.5			30.5			30.5	
Effective Green, g (s)		35.5			35.5			31.5			31.5	
Actuated g/C Ratio		0.48			0.48			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1201			1450			624			618	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.16			0.07			c0.16	
v/c Ratio		0.44			0.33			0.16			0.38	
Uniform Delay, d1		12.7			11.9			13.1			14.6	
Progression Factor		0.81			1.00			1.00			1.00	
Incremental Delay, d2		1.1			0.6			0.5			1.8	
Delay (s)		11.4			12.5			13.6			16.3	
Level of Service		B			B			B			B	
Approach Delay (s)		11.4			12.5			13.6			16.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.9			HCM 2000 Level of Service						B	
HCM 2000 Volume to Capacity ratio		0.41										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)						7.0	
Intersection Capacity Utilization		76.7%			ICU Level of Service						D	
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

EXSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Future Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	67	17	11	194	11	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	84		216									
Volume Left (vph)	0		11									
Volume Right (vph)	17		11									
Hadj (s)	-0.12		-0.01									
Departure Headway (s)	4.3		4.1									
Degree Utilization, x	0.10		0.25									
Capacity (veh/h)	795		859									
Control Delay (s)	7.7		8.4									
Approach Delay (s)	7.7		8.4									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization	30.8%		ICU Level of Service						A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

EXSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕↕	↕↕	
Traffic Volume (veh/h)	0	0	60	255	415	45
Future Volume (Veh/h)	0	0	60	255	415	45
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)	0	0	66	280	456	49
Pedestrians	55					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	808	308	560			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	808	308	560			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	94			
cM capacity (veh/h)	302	694	1021			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	159	187	304	201		
Volume Left	66	0	0	0		
Volume Right	0	0	0	49		
cSH	1021	1700	1700	1700		
Volume to Capacity	0.06	0.11	0.18	0.12		
Queue Length 95th (m)	1.7	0.0	0.0	0.0		
Control Delay (s)	4.0	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	1.8		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			28.8%		ICU Level of Service	A
Analysis Period (min)			15			















HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕				
Sign Control	Stop			Stop			Stop				Stop	
Traffic Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Future Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	34	40	0	0	0	0	0	213	29	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	74	242										
Volume Left (vph)	34	0										
Volume Right (vph)	0	29										
Hadj (s)	0.14	-0.03										
Departure Headway (s)	4.6	4.1										
Degree Utilization, x	0.09	0.27										
Capacity (veh/h)	739	867										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay		8.4										
Level of Service		A										
Intersection Capacity Utilization		30.8%										
Analysis Period (min)		15										



HCM Unsignalized Intersection Capacity Analysis 2: Logan Ave & Langley Ave

FBAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Future Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	72	50	17	178	0	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	122	195										
Volume Left (vph)	0	17										
Volume Right (vph)	50	0										
Hadj (s)	-0.20	0.06										
Departure Headway (s)	4.1	4.2										
Degree Utilization, x	0.14	0.23										
Capacity (veh/h)	830	823										
Control Delay (s)	7.8	8.5										
Approach Delay (s)	7.8	8.5										
Approach LOS	A	A										
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization			33.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Future Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	47	0	0	0	0	0	182	12	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	76	194										
Volume Left (vph)	29	0										
Volume Right (vph)	0	12										
Hadj (s)	0.11	0.02										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.22										
Capacity (veh/h)	777	856										
Control Delay (s)	7.9	8.3										
Approach Delay (s)	7.9	8.3										
Approach LOS	A	A										
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization			30.6%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

FBAM
07-19-2022

















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔			
Traffic Volume (vph)	15	275	45	40	540	25	50	100	30	0	0	0
Future Volume (vph)	15	275	45	40	540	25	50	100	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.97			
Flpb, ped/bikes		1.00			1.00			0.97	1.00			
Frt		0.98			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3085			3282			1729	1416			
Flt Permitted		0.92			0.90			0.98	1.00			
Satd. Flow (perm)		2836			2980			1729	1416			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	15	281	46	41	551	26	51	102	31	0	0	0
RTOR Reduction (vph)	0	25	0	0	6	0	0	0	13	0	0	0
Lane Group Flow (vph)	0	317	0	0	612	0	0	153	18	0	0	0
Confl. Peds. (#/hr)	85		80	80		85	85		20	20		85
Confl. Bikes (#/hr)			5			10			5			
Heavy Vehicles (%)	0%	8%	19%	5%	5%	4%	2%	5%	3%	0%	0%	0%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		22.9			22.9			46.1	46.1			
Effective Green, g (s)		23.9			23.9			47.1	47.1			
Actuated g/C Ratio		0.30			0.30			0.59	0.59			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		847			890			1017	833			
v/s Ratio Prot												
v/s Ratio Perm		0.11			0.21			0.09	0.01			
v/c Ratio		0.37			0.69			0.15	0.02			
Uniform Delay, d1		22.2			24.8			7.4	6.9			
Progression Factor		1.00			1.26			1.00	1.00			
Incremental Delay, d2		0.3			2.0			0.3	0.0			
Delay (s)		22.4			33.1			7.7	6.9			
Level of Service		C			C			A	A			
Approach Delay (s)		22.4			33.1			7.6		0.0		
Approach LOS		C			C			A		A		
Intersection Summary												
HCM 2000 Control Delay		25.8			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.33										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		73.6%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 4

HCM Unsignalized Intersection Capacity Analysis 5: Carlaw Ave & Rivedale Ave

FBAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	30	35	275	0	0	0	0	180	15	225	0
Future Volume (vph)	0	30	35	275	0	0	0	0	180	15	225	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	34	39	309	0	0	0	0	202	17	253	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	73	309	202	270								
Volume Left (vph)	0	309	0	17								
Volume Right (vph)	39	0	202	0								
Hadj (s)	-0.27	0.35	-0.40	0.06								
Departure Headway (s)	5.5	5.6	5.1	5.4								
Degree Utilization, x	0.11	0.48	0.28	0.40								
Capacity (veh/h)	568	600	642	624								
Control Delay (s)	9.2	13.8	10.1	12.0								
Approach Delay (s)	9.2	13.8	10.1	12.0								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			12.0									
Level of Service			B									
Intersection Capacity Utilization			49.2%	ICU Level of Service				A				
Analysis Period (min)			15									

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 5

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FBAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	10	5	220	20	5	480
Future Volume (Veh/h)	10	5	220	20	5	480
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	11	6	250	23	6	545
Pedestrians	90					100
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	7					8
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	636	326			363	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	636	326			363	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			99	
cM capacity (veh/h)	383	575			1119	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	17	167	106	188	363	
Volume Left	11	0	0	6	0	
Volume Right	6	0	23	0	0	
cSH	434	1700	1700	1119	1700	
Volume to Capacity	0.04	0.10	0.06	0.01	0.21	
Queue Length 95th (m)	1.0	0.0	0.0	0.1	0.0	
Control Delay (s)	13.6	0.0	0.0	0.3	0.0	
Lane LOS	B			A		
Approach Delay (s)	13.6	0.0		0.1		
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			36.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←			←	↔			↕			↕	
Traffic Volume (veh/h)	5	0	30	5	0	0	0	235	10	15	470	0
Future Volume (Veh/h)	5	0	30	5	0	0	0	235	10	15	470	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	0	34	6	0	0	0	267	11	17	534	0
Pedestrians		75			90							
Lane Width (m)		3.5			3.5							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		6			7							
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								164				
pX, platoon unblocked												
vC, conflicting volume	776	1011	342	698	1006	229	609			368		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	776	1011	342	698	1006	229	609			368		
IC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	94	98	100	100	100			98		
cM capacity (veh/h)	243	207	611	258	209	723	920			1114		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	40	6	178	100	195	356						
Volume Left	6	6	0	0	17	0						
Volume Right	34	0	0	11	0	0						
cSH	498	258	1700	1700	1114	1700						
Volume to Capacity	0.08	0.02	0.10	0.06	0.02	0.21						
Queue Length 95th (m)	2.1	0.6	0.0	0.0	0.4	0.0						
Control Delay (s)	12.9	19.3	0.0	0.0	0.9	0.0						
Lane LOS	B	C			A							
Approach Delay (s)	12.9	19.3	0.0		0.3							
Approach LOS	B	C										
Intersection Summary												
Average Delay					0.9							
Intersection Capacity Utilization				Err%		ICU Level of Service				H		
Analysis Period (min)					15							

HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

FBAM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	70	25	230	65	25	465
Future Volume (Veh/h)	70	25	230	65	25	465
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	80	29	264	75	29	534
Pedestrians	80					10
Lane Width (m)	3.0					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	6					1
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			147			
pX, platoon unblocked						
vC, conflicting volume	706	260			419	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	706	260			419	
IC, single (s)	6.9	7.1			4.2	
IC, 2 stage (s)						
IF (s)	3.6	3.4			2.2	
p0 queue free %	76	96			97	
cM capacity (veh/h)	332	673			1060	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	109	176	163	207	356	
Volume Left	80	0	0	29	0	
Volume Right	29	0	75	0	0	
cSH	384	1700	1700	1060	1700	
Volume to Capacity	0.28	0.10	0.10	0.03	0.21	
Queue Length 95th (m)	9.2	0.0	0.0	0.7	0.0	
Control Delay (s)	18.1	0.0	0.0	1.4	0.0	
Lane LOS	C			A		
Approach Delay (s)	18.1	0.0		0.5		
Approach LOS	C					
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization		44.5%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FBAM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	290	545	0
Future Volume (Veh/h)	0	0	0	290	545	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	337	634	0
Pedestrians	85			5		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	6			0		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	888	407	719			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	888	407	719			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	270	561	839			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	112	225	423	211	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	839	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.13	0.25	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		26.6%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 10: Carlaw Ave & Simpson Ave

FBAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	5	65	295	475	65
Future Volume (Veh/h)	0	5	65	295	475	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	6	73	331	534	73
Pedestrians	95			10		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	7			1		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked						
vC, conflicting volume	977	408	702			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	977	408	702			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	91			
cM capacity (veh/h)	215	554	845			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	6	183	221	356	251	
Volume Left	0	73	0	0	0	
Volume Right	6	0	0	0	73	
cSH	554	845	1700	1700	1700	
Volume to Capacity	0.01	0.09	0.13	0.21	0.15	
Queue Length 95th (m)	0.3	2.3	0.0	0.0	0.0	
Control Delay (s)	11.6	4.4	0.0	0.0	0.0	
Lane LOS	B	A				
Approach Delay (s)	11.6	2.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			42.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis 11: Carlaw Ave & Gerrard St E

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑			↑↑	
Traffic Volume (vph)	45	225	25	55	485	125	40	195	50	95	310	75
Future Volume (vph)	45	225	25	55	485	125	40	195	50	95	310	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.96			0.98			0.98	
Flpb, ped/bikes		0.99			0.99			0.99			0.98	
Frt		0.99			0.97			0.97			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3125			3113			3104			3093	
Flt Permitted		0.79			0.89			0.83			0.80	
Satd. Flow (perm)		2494			2789			2593			2484	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	250	28	61	539	139	44	217	56	106	344	83
RTOR Reduction (vph)	0	9	0	0	25	0	0	22	0	0	19	0
Lane Group Flow (vph)	0	319	0	0	714	0	0	295	0	0	514	0
Confl. Peds. (#/hr)	180		85	85		180	85		110	110		85
Confl. Bikes (#/hr)							10					10
Heavy Vehicles (%)	2%	10%	4%	7%	4%	5%	0%	10%	6%	2%	9%	11%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.4			42.4			26.3			26.3	
Effective Green, g (s)		43.4			43.4			27.3			27.3	
Actuated g/C Ratio		0.54			0.54			0.34			0.34	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1352			1513			884			847	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.26			0.11			c0.21	
v/c Ratio		0.24			0.47			0.33			0.61	
Uniform Delay, d1		9.6			11.3			19.6			21.9	
Progression Factor		0.21			0.61			1.00			1.00	
Incremental Delay, d2		0.4			1.0			1.0			3.2	
Delay (s)		2.4			7.9			20.6			25.1	
Level of Service		A			A			C			C	
Approach Delay (s)		2.4			7.9			20.6			25.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay		13.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		88.4%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			↰	↱	↰	↱	
Traffic Volume (vph)	35	300	35	95	560	50	35	175	65	45	250	75
Future Volume (vph)	35	300	35	95	560	50	35	175	65	45	250	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	4.6	4.6		4.6	4.6			4.9			4.9	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.96			0.98	
Flpb, ped/bikes	0.98	1.00		0.95	1.00			0.99			0.99	
Frt	1.00	0.98		1.00	0.99			0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1605	1716		1569	1806			2996			3035	
Flt Permitted	0.26	1.00		0.49	1.00			0.87			0.88	
Satd. Flow (perm)	437	1716		814	1806			2623			2683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	36	312	36	99	583	52	36	182	68	47	260	78
RTOR Reduction (vph)	0	5	0	0	4	0	0	39	0	0	30	0
Lane Group Flow (vph)	36	344	0	99	631	0	0	247	0	0	355	0
Confl. Peds. (#/hr)	65		80	80		65	60		85	85		60
Confl. Bikes (#/hr)			10			65						5
Heavy Vehicles (%)	3%	6%	12%	2%	2%	0%	8%	12%	2%	9%	10%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	9	0	0	9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.4	38.4		38.4	38.4			26.1			26.1	
Effective Green, g (s)	39.4	39.4		39.4	39.4			27.1			27.1	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.36			0.36	
Clearance Time (s)	5.6	5.6		5.6	5.6			5.9			5.9	
Lane Grp Cap (vph)	226	889		421	936			935			956	
v/s Ratio Prot		0.20			c0.35							
v/s Ratio Perm	0.08			0.12			0.09				c0.13	
v/c Ratio	0.16	0.39		0.24	0.67		0.26				0.37	
Uniform Delay, d1	9.6	11.0		10.0	13.5		17.4				18.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00				1.00	
Incremental Delay, d2	1.5	1.3		1.3	3.9		0.7				1.1	
Delay (s)	11.1	12.3		11.3	17.4		18.1				19.2	
Level of Service	B	B		B	B		B				B	
Approach Delay (s)		12.2			16.6		18.1				19.2	
Approach LOS		B			B		B				B	
Intersection Summary												
HCM 2000 Control Delay		16.5			HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		76.0			Sum of lost time (s)		9.5					
Intersection Capacity Utilization		91.2%			ICU Level of Service		F					
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis 13: Laneway W & Langley Ave

FBAM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	20	0	0	15	0	0
Future Volume (Veh/h)	20	0	0	15	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	28	0	0	21	0	0
Pedestrians	20			5	30	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		99	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		99	63
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1527		872	982
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	28	21	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1527	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		21.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FBAM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Traffic Volume (veh/h)	25	0	0	15	5	0
Future Volume (Veh/h)	25	0	0	15	5	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	36	0	0	21	7	0
Pedestrians	10			10	20	
Lane Width (m)	3.5			3.5	3.0	
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)						
pX, platoon unblocked						
vC, conflicting volume			56		87	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			56		87	66
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1540		899	981
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	36	21	7			
Volume Left	0	0	7			
Volume Right	0	0	0			
cSH	1700	1540	899			
Volume to Capacity	0.02	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.2			
Control Delay (s)	0.0	0.0	9.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	9.0			
Approach LOS			A			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			21.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩			↩			↩			↩	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	155	45	10	20	65	35	10	35	10	55	30	205
Future Volume (vph)	155	45	10	20	65	35	10	35	10	55	30	205
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	167	48	11	22	70	38	11	38	11	59	32	220
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	226	130	60	311								
Volume Left (vph)	167	22	11	59								
Volume Right (vph)	11	38	11	220								
Hadj (s)	0.30	0.02	0.02	-0.26								
Departure Headway (s)	5.3	5.2	5.3	4.7								
Degree Utilization, x	0.33	0.19	0.09	0.40								
Capacity (veh/h)	631	631	607	721								
Control Delay (s)	11.0	9.4	8.8	10.8								
Approach Delay (s)	11.0	9.4	8.8	10.8								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay				10.5								
Level of Service				B								
Intersection Capacity Utilization				52.4%								
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FBAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			U	U	
Traffic Volume (veh/h)	25	0	0	20	40	15
Future Volume (Veh/h)	25	0	0	20	40	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	35	0	0	28	56	21
Pedestrians	85			5	5	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	7			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	184	156	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	184	156	162			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	751	829	1331			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	35	28	77			
Volume Left	35	0	0			
Volume Right	0	0	21			
cSH	751	1331	1700			
Volume to Capacity	0.05	0.00	0.05			
Queue Length 95th (m)	1.2	0.0	0.0			
Control Delay (s)	10.0	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.0	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		2.5				
Intersection Capacity Utilization		24.4%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FBAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		U			U
Traffic Volume (veh/h)	0	5	15	0	5	35
Future Volume (Veh/h)	0	5	15	0	5	35
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	0	8	23	0	8	55
Pedestrians	25		10			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	2		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	129	48			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	48			48	
IC, single (s)	6.4	6.5			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.5			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	841	940			1540	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	23	63			
Volume Left	0	0	8			
Volume Right	8	0	0			
cSH	940	1700	1540			
Volume to Capacity	0.01	0.01	0.01			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	8.9	0.0	1.0			
Lane LOS	A		A			
Approach Delay (s)	8.9	0.0	1.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.4				
Intersection Capacity Utilization		19.0%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
18: Pape Ave & Existing Site Access

FBAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Volume (veh/h)	15	0	0	0	0	30
Future Volume (Veh/h)	15	0	0	0	0	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	22	0	0	0	0	45
Pedestrians	85			15	15	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	7			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	122	122	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	122	130			
IC, single (s)	6.5	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.6	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	794	859	1367			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	22	0	45			
Volume Left	22	0	0			
Volume Right	0	0	45			
cSH	794	1700	1700			
Volume to Capacity	0.03	0.00	0.03			
Queue Length 95th (m)	0.7	0.0	0.0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		3.2				
Intersection Capacity Utilization		26.9%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		W			W			W			W	
Traffic Volume (vph)	60	330	20	20	550	5	25	30	25	25	25	70
Future Volume (vph)	60	330	20	20	550	5	25	30	25	25	25	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.98			0.97	
Flpb, ped/bikes		0.98			1.00			0.99			0.99	
Frt		0.99			1.00			0.96			0.92	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		3162			3350			1671			1540	
Flt Permitted		0.80			0.93			0.91			0.94	
Satd. Flow (perm)		2540			3130			1540			1466	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	67	371	22	22	618	6	28	34	28	28	28	79
RTOR Reduction (vph)	0	4	0	0	1	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	456	0	0	645	0	0	73	0	0	88	0
Confl. Peds. (#/hr)	200		80	80		200	50		75	75		50
Confl. Bikes (#/hr)			5			10						
Heavy Vehicles (%)	3%	8%	6%	6%	4%	20%	0%	0%	8%	13%	4%	5%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1317			1623			606			577	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.21			0.05			c0.06	
v/c Ratio		0.35			0.40			0.12			0.15	
Uniform Delay, d1		11.3			11.7			15.4			15.6	
Progression Factor		0.79			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.7			0.4			0.6	
Delay (s)		9.6			12.4			15.8			16.2	
Level of Service		A			B			B			B	
Approach Delay (s)		9.6			12.4			15.8			16.2	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.0			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.29										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			7.0				
Intersection Capacity Utilization		76.7%			ICU Level of Service			D				
Analysis Period (min)		15										
Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FBAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↶				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Future Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	0	115	38	16	137	11	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	153	164										
Volume Left (vph)	0	16										
Volume Right (vph)	38	11										
Hadj (s)	-0.14	0.05										
Departure Headway (s)	4.1	4.3										
Degree Utilization, x	0.18	0.20										
Capacity (veh/h)	838	808										
Control Delay (s)	8.0	8.3										
Approach Delay (s)	8.0	8.3										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		31.6%										
ICU Level of Service												A
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FBAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↶	↶	
Traffic Volume (veh/h)	0	0	50	175	485	55
Future Volume (Veh/h)	0	0	50	175	485	55
Sign Control		Stop		Free	Free	
Grade		0%		0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	57	199	551	62
Pedestrians		60				
Lane Width (m)		0.0				
Walking Speed (m/s)		1.2				
Percent Blockage		0				
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	856	366	673			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	856	366	673			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	94			
cM capacity (veh/h)	279	630	927			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	123	133	367	246		
Volume Left	57	0	0	0		
Volume Right	0	0	0	62		
cSH	927	1700	1700	1700		
Volume to Capacity	0.06	0.08	0.22	0.14		
Queue Length 95th (m)	1.6	0.0	0.0	0.0		
Control Delay (s)	4.5	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	2.2		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			28.6%			
ICU Level of Service						A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗						↖				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	40	75	0	0	0	0	0	213	34	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	115	247										
Volume Left (vph)	40	0										
Volume Right (vph)	0	34										
Hadj (s)	0.07	-0.07										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.14	0.28										
Capacity (veh/h)	750	851										
Control Delay (s)	8.3	8.7										
Approach Delay (s)	8.3	8.7										
Approach LOS	A	A										
Intersection Summary												
Delay		8.6										
Level of Service		A										
Intersection Capacity Utilization		32.6%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
2: Logan Ave & Langley Ave

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↖			↗				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Future Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	0	29	29	23	215	0	0	0	0
Direction, Lane #		WB 1			NB 1							
Volume Total (vph)		58			238							
Volume Left (vph)		0			23							
Volume Right (vph)		29			0							
Hadj (s)		-0.30			0.03							
Departure Headway (s)		4.1			4.1							
Degree Utilization, x		0.07			0.27							
Capacity (veh/h)		824			868							
Control Delay (s)		7.4			8.6							
Approach Delay (s)		7.4			8.6							
Approach LOS		A			A							
Intersection Summary												
Delay					8.3							
Level of Service					A							
Intersection Capacity Utilization		34.1%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔				
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Future Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	24	54	0	0	0	0	0	229	18	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	78	247										
Volume Left (vph)	24	0										
Volume Right (vph)	0	18										
Hadj (s)	0.09	-0.03										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.10	0.28										
Capacity (veh/h)	746	866										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay		8.5										
Level of Service		A										
Intersection Capacity Utilization		31.5%							A			
Analysis Period (min)		15										

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Volume (vph)	15	545	45	35	385	40	40	130	65	0	0	0
Future Volume (vph)	15	545	45	35	385	40	40	130	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.98			1.00	0.94			
Flpb, ped/bikes		1.00			1.00			0.98	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.99	1.00			
Satd. Flow (prot)		3349			3262			1813	1418			
Flt Permitted		0.94			0.82			0.99	1.00			
Satd. Flow (perm)		3140			2675			1813	1418			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	16	586	48	38	414	43	43	140	70	0	0	0
RTOR Reduction (vph)	0	12	0	0	14	0	0	0	24	0	0	0
Lane Group Flow (vph)	0	638	0	0	481	0	0	183	46	0	0	0
Confl. Peds. (#/hr)	105		115	115		105	105		45	45		105
Confl. Bikes (#/hr)			15			10			15			5
Heavy Vehicles (%)	0%	2%	0%	0%	4%	3%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		22.8			22.8			46.2	46.2			
Effective Green, g (s)		23.8			23.8			47.2	47.2			
Actuated g/C Ratio		0.30			0.30			0.59	0.59			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		934			795			1069	836			
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.18			0.10	0.03			
v/c Ratio		0.68			0.60			0.17	0.06			
Uniform Delay, d1		24.8			24.1			7.5	7.0			
Progression Factor		1.00			0.58			1.00	1.00			
Incremental Delay, d2		2.1			1.2			0.3	0.1			
Delay (s)		26.9			15.2			7.8	7.1			
Level of Service		C			B			A	A			
Approach Delay (s)		26.9			15.2			7.6			0.0	
Approach LOS		C			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		19.2						HCM 2000 Level of Service		B		
HCM 2000 Volume to Capacity ratio		0.34										
Actuated Cycle Length (s)		80.0						Sum of lost time (s)		9.0		
Intersection Capacity Utilization		67.9%						ICU Level of Service		C		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔					↔		↔	
Sign Control	Stop			Stop				Stop			Stop	
Traffic Volume (vph)	0	55	50	230	0	0	0	0	335	10	185	0
Future Volume (vph)	0	55	50	230	0	0	0	0	335	10	185	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	57	52	240	0	0	0	0	349	10	193	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	109	240	349	203								
Volume Left (vph)	0	240	0	10								
Volume Right (vph)	52	0	349	0								
Hadj (s)	-0.27	0.27	-0.53	0.02								
Departure Headway (s)	5.5	5.8	4.7	5.5								
Degree Utilization, x	0.17	0.38	0.46	0.31								
Capacity (veh/h)	566	574	708	607								
Control Delay (s)	9.6	12.3	11.7	10.9								
Approach Delay (s)	9.6	12.3	11.7	10.9								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			11.4									
Level of Service			B									
Intersection Capacity Utilization			54.5%									
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FBPM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	5	0	350	20	0	430
Future Volume (Veh/h)	5	0	350	20	0	430
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	368	21	0	453
Pedestrians	65		5			45
Lane Width (m)	3.5		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	5		0			4
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	675	304			454	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	304			454	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	370	637			1058	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	245	144	151	302	
Volume Left	5	0	0	0	0	
Volume Right	0	0	21	0	0	
cSH	370	1700	1700	1058	1700	
Volume to Capacity	0.01	0.14	0.08	0.00	0.18	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.9	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.8%			
Analysis Period (min)			15			
				ICU Level of Service		A










HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

FBPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	5	40	5	0	5	0	350	25	15	425	0
Future Volume (Veh/h)	20	5	40	5	0	5	0	350	25	15	425	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	21	5	41	5	0	5	0	361	26	15	438	0
Pedestrians		55			55			5				
Lane Width (m)		3.5			3.5			3.5				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		4			4			0				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								164				
pX, platoon unblocked												
vC, conflicting volume	708	965	279	726	952	248	493			442		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	708	965	279	726	952	248	493			442		
IC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	98	94	98	100	99	100			99		
cM capacity (veh/h)	285	231	681	257	235	724	1033			1078		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	62	10	241	146	161	292						
Volume Left	21	5	0	0	15	0						
Volume Right	41	5	0	26	0	0						
cSH	463	379	1700	1700	1078	1700						
Volume to Capacity	0.13	0.03	0.14	0.09	0.01	0.17						
Queue Length 95th (m)	3.7	0.6	0.0	0.0	0.3	0.0						
Control Delay (s)	14.0	14.8	0.0	0.0	0.9	0.0						
Lane LOS	B	B			A							
Approach Delay (s)	Err	14.8	0.0		0.3							
Approach LOS	F	B										
Intersection Summary												
Average Delay				Err								
Intersection Capacity Utilization				Err%		ICU Level of Service				H		
Analysis Period (min)				15								







HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

FBPM
07-19-2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	130	45	335	110	35	430
Future Volume (Veh/h)	130	45	335	110	35	430
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	134	46	345	113	36	443
Pedestrians	55		5		10	
Lane Width (m)	3.0		3.5		3.5	
Walking Speed (m/s)	1.2		1.2		1.2	
Percent Blockage	4		0		1	
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)	147					
pX, platoon unblocked						
vC, conflicting volume	755	294			513	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	755	294			513	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	58	93			96	
cM capacity (veh/h)	318	676			1022	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	180	230	228	184	295	
Volume Left	134	0	0	36	0	
Volume Right	46	0	113	0	0	
cSH	368	1700	1700	1022	1700	
Volume to Capacity	0.49	0.14	0.13	0.04	0.17	
Queue Length 95th (m)	20.7	0.0	0.0	0.9	0.0	
Control Delay (s)	23.8	0.0	0.0	2.0	0.0	
Lane LOS	C			A		
Approach Delay (s)	23.8	0.0	0.8			
Approach LOS	C					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			47.8%		ICU Level of Service	
Analysis Period (min)			15		A	







HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FBPM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	440	570	0
Future Volume (Veh/h)	0	0	0	440	570	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	0	458	594	0
Pedestrians	75				5	
Lane Width (m)	3.0				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	903	372	669			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	903	372	669			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	265	598	882			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	153	305	396	198	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	882	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.18	0.23	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			19.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

FBPM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	5	5	40	435	515	50
Future Volume (Veh/h)	5	5	40	435	515	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	5	42	453	536	52
Pedestrians	70				15	
Lane Width (m)	3.0				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked	0.98					
vC, conflicting volume	942	379	658			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	896	379	658			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	95			
cM capacity (veh/h)	252	587	894			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	10	193	302	357	231	
Volume Left	5	42	0	0	0	
Volume Right	5	0	0	0	52	
cSH	352	894	1700	1700	1700	
Volume to Capacity	0.03	0.05	0.18	0.21	0.14	
Queue Length 95th (m)	0.7	1.2	0.0	0.0	0.0	
Control Delay (s)	15.5	2.4	0.0	0.0	0.0	
Lane LOS	C	A				
Approach Delay (s)	15.5	0.9		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			46.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis 11: Carlaw Ave & Gerrard St E

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	85	495	50	50	310	135	40	265	55	120	305	90
Future Volume (vph)	85	495	50	50	310	135	40	265	55	120	305	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.92			0.98			0.97	
Flpb, ped/bikes		0.98			1.00			1.00			0.98	
Frt		0.99			0.96			0.98			0.97	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3262			2988			3233			3174	
Flt Permitted		0.80			0.83			0.87			0.76	
Satd. Flow (perm)		2626			2503			2826			2450	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	510	52	52	320	139	41	273	57	124	314	93
RTOR Reduction (vph)	0	8	0	0	48	0	0	19	0	0	22	0
Lane Group Flow (vph)	0	642	0	0	463	0	0	352	0	0	509	0
Confl. Peds. (#/hr)	240		105	105		240	130		125	125		130
Confl. Bikes (#/hr)			10			5			5			5
Heavy Vehicles (%)	1%	3%	4%	0%	5%	0%	5%	5%	0%	1%	4%	3%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	9
Turn Type	Perm	NA		Perm	NA	pm+pt	NA		Perm	NA		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.4			32.4			36.3			23.3	
Effective Green, g (s)		33.4			33.4			37.3			24.3	
Actuated g/C Ratio		0.42			0.42			0.47			0.30	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1096			1045			1354			744	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		c0.24			0.18			0.10			c0.21	
v/c Ratio		0.59			0.44			0.26			0.68	
Uniform Delay, d1		18.0			16.6			13.0			24.5	
Progression Factor		1.94			2.05			1.00			1.00	
Incremental Delay, d2		2.2			1.3			0.5			5.1	
Delay (s)		37.0			35.4			13.4			29.5	
Level of Service		D			D			B			C	
Approach Delay (s)		37.0			35.4			13.4			29.5	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay		30.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			15.1				
Intersection Capacity Utilization		86.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	75	565	30	50	390	50	35	275	100	60	270	75
Future Volume (vph)	75	565	30	50	390	50	35	275	100	60	270	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)		4.6			4.6			4.9			4.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.94			0.96	
Flpb, ped/bikes		0.95			0.97			0.99			0.98	
Frt		1.00			1.00			0.98			0.97	
Flt Protected		0.95			0.95			1.00			0.99	
Satd. Flow (prot)		1592			1639			3039			3087	
Flt Permitted		0.39			0.26			0.89			0.83	
Satd. Flow (perm)		661			457			2706			2569	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	595	32	53	411	53	37	289	105	63	284	79
RTOR Reduction (vph)	0	2	0	0	6	0	0	41	0	0	26	0
Lane Group Flow (vph)	79	625	0	53	458	0	0	390	0	0	400	0
Confl. Peds. (#/hr)	115		90	90		115	110		140	140		110
Confl. Bikes (#/hr)			50			20			5			5
Heavy Vehicles (%)	0%	1%	3%	0%	1%	0%	0%	7%	1%	5%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	0	0	0	9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.4			38.4			26.1			26.1	
Effective Green, g (s)		39.4			39.4			27.1			27.1	
Actuated g/C Ratio		0.52			0.52			0.36			0.36	
Clearance Time (s)		5.6			5.6			5.9			5.9	
Lane Grp Cap (vph)		342			236			964			916	
v/s Ratio Prot		c0.34			0.25							
v/s Ratio Perm		0.12			0.12			0.14			c0.16	
v/c Ratio		0.23			0.22			0.41			0.44	
Uniform Delay, d1		10.0			10.0			18.4			18.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			2.2			1.3			1.5	
Delay (s)		11.6			12.2			19.7			20.2	
Level of Service		B			B			B			C	
Approach Delay (s)		16.3			13.5			19.7			20.2	
Approach LOS		B			B			B			C	
Intersection Summary												
HCM 2000 Control Delay		17.1			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.57										
Actuated Cycle Length (s)		76.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		90.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Unsignalized Intersection Capacity Analysis
13: Laneway W & Langley Ave

FBPM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	0	0	14	0	0
Pedestrians	5				20	
Lane Width (m)	3.5				3.0	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			54		73	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			54		73	54
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)			1543		919	1005
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	34	14	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1543	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		11.5%		ICU Level of Service	A	
Analysis Period (min)		15				

















HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FBPM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
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)	33	0	0	13	0	0
Pedestrians	5			5	25	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		76	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		76	63
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1532		912	986
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	33	13	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1532	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization	20.5%			ICU Level of Service	A	
Analysis Period (min)	15					










HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FBPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	310	75	10	20	30	35	10	55	40	45	45	190
Future Volume (vph)	310	75	10	20	30	35	10	55	40	45	45	190
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	333	81	11	22	32	38	11	59	43	48	48	204
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	425	92	113	300								
Volume Left (vph)	333	22	11	48								
Volume Right (vph)	11	38	43	204								
Hadj (s)	0.21	-0.20	-0.17	-0.30								
Departure Headway (s)	5.4	5.6	5.7	5.3								
Degree Utilization, x	0.64	0.14	0.18	0.44								
Capacity (veh/h)	638	566	548	634								
Control Delay (s)	17.5	9.5	10.0	12.3								
Approach Delay (s)	17.5	9.5	10.0	12.3								
Approach LOS	C	A	A	B								
Intersection Summary												
Delay				14.1								
Level of Service				B								
Intersection Capacity Utilization				61.2%	ICU Level of Service			B				
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FBPM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	5	5	70	60	10
Future Volume (Veh/h)	20	5	5	70	60	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	21	5	5	74	64	11
Pedestrians	60			5	10	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	224	134	135			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224	134	135			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	713	872	1391			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	26	79	75			
Volume Left	21	5	0			
Volume Right	5	0	11			
cSH	739	1391	1700			
Volume to Capacity	0.04	0.00	0.04			
Queue Length 95th (m)	0.9	0.1	0.0			
Control Delay (s)	10.1	0.5	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.1	0.5	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay				1.7		
Intersection Capacity Utilization	23.7%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FBPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W		W	W
Traffic Volume (veh/h)	0	5	65	5	5	65
Future Volume (Veh/h)	0	5	65	5	5	65
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	0	6	78	6	6	78
Pedestrians	65		15			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	5		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	251	146			149	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	251	146			149	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	691	859			1369	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	6	84	84			
Volume Left	0	0	6			
Volume Right	6	6	0			
cSH	859	1700	1369			
Volume to Capacity	0.01	0.05	0.00			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	9.2	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	9.2	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization		22.3%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
18: Pape Ave & Existing Site Access

FBPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Volume (veh/h)	65	0	0	0	0	65
Future Volume (Veh/h)	65	0	0	0	0	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	78	0	0	0	0	78
Pedestrians	65			60	10	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			5	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	114	164	143			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114	164	143			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	100			
cM capacity (veh/h)	829	798	1376			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	78	0	78			
Volume Left	78	0	0			
Volume Right	0	0	78			
cSH	829	1700	1700			
Volume to Capacity	0.09	0.00	0.05			
Queue Length 95th (m)	2.5	0.0	0.0			
Control Delay (s)	9.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.9			
Intersection Capacity Utilization		31.5%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	95	535	25	25	360	10	20	30	20	55	40	110
Future Volume (vph)	95	535	25	25	360	10	20	30	20	55	40	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Flpb, ped/bikes		0.99			0.99			0.95			0.95	
Flpb, ped/bikes		0.96			1.00			0.99			0.96	
Frt		0.99			1.00			0.96			0.93	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3258			3303			1648			1559	
Flt Permitted		0.82			0.90			0.91			0.91	
Satd. Flow (perm)		2695			2970			1517			1441	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	563	26	26	379	11	21	32	21	58	42	116
RTOR Reduction (vph)	0	3	0	0	2	0	0	13	0	0	52	0
Lane Group Flow (vph)	0	686	0	0	414	0	0	61	0	0	164	0
Confl. Peds. (#/hr)	300		115	115		300	85		190	190		85
Confl. Bikes (#/hr)			15			5						5
Heavy Vehicles (%)	0%	2%	4%	0%	4%	9%	5%	0%	0%	0%	3%	1%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1398			1540			597			567	
v/s Ratio Prot												
v/s Ratio Perm		c0.25			0.14			0.04			c0.11	
v/c Ratio		0.49			0.27			0.10			0.29	
Uniform Delay, d1		12.4			10.8			15.3			16.6	
Progression Factor		0.79			1.00			1.00			1.00	
Incremental Delay, d2		1.0			0.4			0.3			1.3	
Delay (s)		10.8			11.2			15.7			17.9	
Level of Service		B			B			B			B	
Approach Delay (s)		10.8			11.2			15.7			17.9	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.40										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			7.0				
Intersection Capacity Utilization		76.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FBPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Future Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	0	67	39	11	191	11	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	106		213									
Volume Left (vph)	0		11									
Volume Right (vph)	39		11									
Hadj (s)	-0.22		-0.01									
Departure Headway (s)	4.2		4.1									
Degree Utilization, x	0.12		0.24									
Capacity (veh/h)	815		846									
Control Delay (s)	7.7		8.5									
Approach Delay (s)	7.7		8.5									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization	33.2%		ICU Level of Service				A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FBPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕↕	↕↕	
Traffic Volume (veh/h)	0	0	15	335	430	40
Future Volume (Veh/h)	0	0	15	335	430	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	15	345	443	41
Pedestrians	60					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	726	302	544			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	726	302	544			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	359	700	1035			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	130	230	295	189		
Volume Left	15	0	0	0		
Volume Right	0	0	0	41		
cSH	1035	1700	1700	1700		
Volume to Capacity	0.01	0.14	0.17	0.11		
Queue Length 95th (m)	0.4	0.0	0.0	0.0		
Control Delay (s)	1.1	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	0.4		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			23.6%		ICU Level of Service	A
Analysis Period (min)			15			















HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕				
Sign Control	Stop			Stop			Stop				Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	43	80	0	0	0	0	0	247	31	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	123	278										
Volume Left (vph)	43	0										
Volume Right (vph)	0	31										
Hadj (s)	0.07	-0.05										
Departure Headway (s)	4.6	4.2										
Degree Utilization, x	0.16	0.32										
Capacity (veh/h)	734	843										
Control Delay (s)	8.4	9.1										
Approach Delay (s)	8.4	9.1										
Approach LOS	A	A										
Intersection Summary												
Delay		8.9										
Level of Service		A										
Intersection Capacity Utilization		32.8%										
Analysis Period (min)		15										



HCM Unsignalized Intersection Capacity Analysis 2: Logan Ave & Langley Ave

FBSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Future Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	0	36	62	15	186	0	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	98	201										
Volume Left (vph)	0	15										
Volume Right (vph)	62	0										
Hadj (s)	-0.36	0.04										
Departure Headway (s)	4.0	4.1										
Degree Utilization, x	0.11	0.23										
Capacity (veh/h)	859	844										
Control Delay (s)	7.5	8.4										
Approach Delay (s)	7.5	8.4										
Approach LOS	A	A										
Intersection Summary												
Delay			8.1									
Level of Service			A									
Intersection Capacity Utilization			34.7%		ICU Level of Service				A			
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Future Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	26	46	0	0	0	0	0	180	5	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	72	185										
Volume Left (vph)	26	0										
Volume Right (vph)	0	5										
Hadj (s)	0.09	0.00										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.21										
Capacity (veh/h)	785	863										
Control Delay (s)	7.8	8.1										
Approach Delay (s)	7.8	8.1										
Approach LOS	A	A										
Intersection Summary												
Delay			8.1									
Level of Service			A									
Intersection Capacity Utilization			31.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

FBSAT
07-19-2022

















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	385	40	40	455	35	65	120	60	0	0	0
Future Volume (vph)	25	385	40	40	455	35	65	120	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.93			
Flpb, ped/bikes		1.00			0.99			0.96	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3256			3296			1754	1371			
Flt Permitted		0.90			0.88			0.98	1.00			
Satd. Flow (perm)		2938			2914			1754	1371			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	414	43	43	489	38	70	129	65	0	0	0
RTOR Reduction (vph)	0	15	0	0	11	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	469	0	0	559	0	0	199	42	0	0	0
Confl. Peds. (#/hr)	100		160	160		100	120		65	65		120
Confl. Bikes (#/hr)			10			20			10			5
Heavy Vehicles (%)	0%	4%	0%	5%	3%	0%	2%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		20.1			20.1			42.9	42.9			
Effective Green, g (s)		21.1			21.1			43.9	43.9			
Actuated g/C Ratio		0.29			0.29			0.59	0.59			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		837			830			1040	813			
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.19			0.11	0.03			
v/c Ratio		0.56			0.67			0.19	0.05			
Uniform Delay, d1		22.5			23.4			6.9	6.3			
Progression Factor		1.00			1.01			1.00	1.00			
Incremental Delay, d2		0.9			2.0			0.4	0.1			
Delay (s)		23.4			25.6			7.3	6.4			
Level of Service		C			C			A	A			
Approach Delay (s)		23.4			25.6			7.1			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay	21.1			HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio	0.35											
Actuated Cycle Length (s)	74.0			Sum of lost time (s)					9.0			
Intersection Capacity Utilization	73.3%			ICU Level of Service					D			
Analysis Period (min)	15											
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 4

HCM Unsignalized Intersection Capacity Analysis 5: Carlaw Ave & Rivedale Ave

FBSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	50	40	250	0	0	0	0	265	10	205	0
Future Volume (vph)	0	50	40	250	0	0	0	0	265	10	205	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	42	263	0	0	0	0	279	11	216	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	95	263	279	227								
Volume Left (vph)	0	263	0	11								
Volume Right (vph)	42	0	279	0								
Hadj (s)	-0.27	0.20	-0.60	0.01								
Departure Headway (s)	5.4	5.5	4.7	5.3								
Degree Utilization, x	0.14	0.41	0.36	0.34								
Capacity (veh/h)	578	602	704	625								
Control Delay (s)	9.3	12.3	10.3	11.0								
Approach Delay (s)	9.3	12.3	10.3	11.0								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay				11.0								
Level of Service				B								
Intersection Capacity Utilization	52.5%			ICU Level of Service	A							
Analysis Period (min)	15											

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 5

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FBSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	5	0	335	20	0	445
Future Volume (Veh/h)	5	0	335	20	0	445
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	5	0	360	22	0	478
Pedestrians	70					40
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	6					3
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			240			
pX, platoon unblocked						
vC, conflicting volume	680	301			452	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	680	301			452	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	367	640			1056	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	240	142	159	319	
Volume Left	5	0	0	0	0	
Volume Right	0	0	22	0	0	
cSH	367	1700	1700	1056	1700	
Volume to Capacity	0.01	0.14	0.08	0.00	0.19	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.9	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.4%		ICU Level of Service	A
Analysis Period (min)			15			


HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave/Gas Station

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←				↔			↕			↕	
Traffic Volume (veh/h)	10	5	45	0	0	5	0	330	25	10	430	0
Future Volume (Veh/h)	10	5	45	0	0	5	0	330	25	10	430	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	5	49	0	0	5	0	363	27	11	473	0
Pedestrians		40			70						5	
Lane Width (m)		3.5			3.5						3.5	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		3			6						0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								164				
pX, platoon unblocked												
vC, conflicting volume	726	995	276	756	982	270	513			460		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	726	995	276	756	982	270	513			460		
IC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
IC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	98	93	100	100	99	100			99		
cM capacity (veh/h)	280	223	698	240	227	690	1028			1049		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	60	5	242	148	169	315						
Volume Left	11	0	0	0	11	0						
Volume Right	49	5	0	27	0	0						
cSH	548	690	1700	1700	1049	1700						
Volume to Capacity	0.11	0.01	0.14	0.09	0.01	0.19						
Queue Length 95th (m)	2.9	0.2	0.0	0.0	0.3	0.0						
Control Delay (s)	12.4	10.3	0.0	0.0	0.6	0.0						
Lane LOS	B	B			A							
Approach Delay (s)	Err	10.3	0.0		0.2							
Approach LOS	F	B										
Intersection Summary												
Average Delay				Err								
Intersection Capacity Utilization				Err%		ICU Level of Service				H		
Analysis Period (min)				15								


HCM Unsignalized Intersection Capacity Analysis
8: Carlaw Ave & Existing Site Access

FBSAT
07-19-2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	120	40	280	110	35	455
Future Volume (Veh/h)	120	40	280	110	35	455
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	124	41	289	113	36	469
Pedestrians	80		5			5
Lane Width (m)	3.0		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	6		0			0
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			147			
pX, platoon unblocked						
vC, conflicting volume	737	286			482	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	737	286			482	
IC, single (s)	6.8	7.0			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	62	94			97	
cM capacity (veh/h)	325	666			1030	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	165	193	209	192	313	
Volume Left	124	0	0	36	0	
Volume Right	41	0	113	0	0	
cSH	372	1700	1700	1030	1700	
Volume to Capacity	0.44	0.11	0.12	0.03	0.18	
Queue Length 95th (m)	17.6	0.0	0.0	0.9	0.0	
Control Delay (s)	22.1	0.0	0.0	1.9	0.0	
Lane LOS	C			A		
Approach Delay (s)	22.1	0.0		0.7		
Approach LOS	C					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			46.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FBSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	390	580	0
Future Volume (Veh/h)	0	0	0	390	580	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	0	415	617	0
Pedestrians	65			5	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127		
pX, platoon unblocked						
vC, conflicting volume	894	378	682			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	894	378	682			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	270	594	879			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	138	277	411	206	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	879	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.16	0.24	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			27.6%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 10: Carlaw Ave & Simpson Ave

FBSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	25	405	500	60
Future Volume (Veh/h)	0	0	25	405	500	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	27	440	543	65
Pedestrians	50			20	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	3			2	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88		
pX, platoon unblocked						
vC, conflicting volume	904	374	658			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	904	374	658			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	97			
cM capacity (veh/h)	261	598	907			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	174	293	362	246	
Volume Left	0	27	0	0	0	
Volume Right	0	0	0	0	65	
cSH	1700	907	1700	1700	1700	
Volume to Capacity	0.00	0.03	0.17	0.21	0.14	
Queue Length 95th (m)	0.0	0.7	0.0	0.0	0.0	
Control Delay (s)	0.0	1.7	0.0	0.0	0.0	
Lane LOS	A	A				
Approach Delay (s)	0.0	0.6		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			44.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 10

HCM Signalized Intersection Capacity Analysis 11: Carlaw Ave & Gerrard St E

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑			↑↑	
Traffic Volume (vph)	55	360	55	80	380	135	40	210	65	115	335	75
Future Volume (vph)	55	360	55	80	380	135	40	210	65	115	335	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.98			0.94			0.97			0.98	
Flpb, ped/bikes		0.99			0.99			0.99			0.98	
Frt		0.98			0.97			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3266			3073			3206			3249	
Flt Permitted		0.83			0.82			0.84			0.78	
Satd. Flow (perm)		2715			2530			2720			2577	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	375	57	83	396	141	42	219	68	120	349	78
RTOR Reduction (vph)	0	14	0	0	37	0	0	31	0	0	18	0
Lane Group Flow (vph)	0	475	0	0	583	0	0	298	0	0	529	0
Conf. Peds. (#/hr)	220		160	160		220	105		140	140		105
Conf. Bikes (#/hr)			10			15			5			5
Heavy Vehicles (%)	2%	2%	0%	4%	3%	0%	3%	4%	0%	2%	3%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.4			33.4			29.3			29.3	
Effective Green, g (s)		34.4			34.4			30.3			30.3	
Actuated g/C Ratio		0.46			0.46			0.41			0.41	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1262			1176			1113			1055	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.23			0.11			c0.21	
v/c Ratio		0.38			0.50			0.27			0.50	
Uniform Delay, d1		12.8			13.8			14.5			16.2	
Progression Factor		0.33			0.69			1.00			1.00	
Incremental Delay, d2		0.8			1.4			0.6			1.7	
Delay (s)		5.1			10.9			15.1			17.9	
Level of Service		A			B			B			B	
Approach Delay (s)		5.1			10.9			15.1			17.9	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.1			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.50										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		87.0%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 11

HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			↰	↱	↰	↱	
Traffic Volume (vph)	55	415	55	70	435	40	50	225	75	60	310	95
Future Volume (vph)	55	415	55	70	435	40	50	225	75	60	310	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	4.6	4.6		4.6	4.6			4.9			4.9	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.98			0.94			0.95	
Flpb, ped/bikes	0.93	1.00		0.96	1.00			0.98			0.98	
Frt	1.00	0.98		1.00	0.99			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1542	1802		1594	1805			3109			3116	
Flt Permitted	0.37	1.00		0.38	1.00			0.83			0.85	
Satd. Flow (perm)	605	1802		633	1805			2587			2662	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	432	57	73	453	42	52	234	78	62	323	99
RTOR Reduction (vph)	0	6	0	0	4	0	0	30	0	0	29	0
Lane Group Flow (vph)	57	483	0	73	491	0	0	334	0	0	456	0
Confl. Peds. (#/hr)	145		95	95		145	130		140	140		130
Confl. Bikes (#/hr)			25			35			5			5
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	4%	0%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	6	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.4	41.4		41.4	41.4			27.1			27.1	
Effective Green, g (s)	42.4	42.4		42.4	42.4			28.1			28.1	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.35			0.35	
Clearance Time (s)	5.6	5.6		5.6	5.6			5.9			5.9	
Lane Grp Cap (vph)	320	955		335	956			908			935	
v/s Ratio Prot		0.27			c0.27							
v/s Ratio Perm	0.09			0.12			0.13				c0.17	
v/c Ratio	0.18	0.51		0.22	0.51		0.37				0.49	
Uniform Delay, d1	9.8	12.1		10.0	12.1		19.3				20.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00				1.00	
Incremental Delay, d2	1.2	1.9		1.5	2.0		1.1				1.8	
Delay (s)	11.0	14.0		11.5	14.1		20.5				22.1	
Level of Service	B	B		B	B		C				C	
Approach Delay (s)		13.7			13.8		20.5				22.1	
Approach LOS		B			B		C				C	
Intersection Summary												
HCM 2000 Control Delay		17.1			HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio		0.50										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)		9.5					
Intersection Capacity Utilization		84.2%			ICU Level of Service		E					
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 12

HCM Unsignalized Intersection Capacity Analysis 13: Laneway W & Langley Ave

FBSAT
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	15	0	0	10	0	5
Future Volume (Veh/h)	15	0	0	10	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	0	0	11	0	6
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			27		38	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		38	27
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1576		967	1041
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	17	11	6			
Volume Left	0	0	0			
Volume Right	0	0	6			
cSH	1700	1576	1041			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay		1.5				
Intersection Capacity Utilization		16.2%		ICU Level of Service		A
Analysis Period (min)		15				

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 13

HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FBSAT
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Volume (veh/h)	15	5	0	5	0	0
Future Volume (Veh/h)	15	5	0	5	0	0
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)	16	5	0	5	0	0
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			31		34	28
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			31		34	28
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1571		973	1039
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	21	5	0			
Volume Left	0	0	0			
Volume Right	5	0	0			
cSH	1700	1571	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			9.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	260	50	5	10	55	25	5	35	20	55	30	215
Future Volume (vph)	260	50	5	10	55	25	5	35	20	55	30	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	271	52	5	10	57	26	5	36	21	57	31	224
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	328	93	62	312								
Volume Left (vph)	271	10	5	57								
Volume Right (vph)	5	26	21	224								
Hadji (s)	0.22	-0.15	-0.16	-0.38								
Departure Headway (s)	5.2	5.2	5.4	4.8								
Degree Utilization, x	0.48	0.13	0.09	0.41								
Capacity (veh/h)	656	622	588	707								
Control Delay (s)	12.9	9.0	8.9	11.1								
Approach Delay (s)	12.9	9.0	8.9	11.1								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay				11.4								
Level of Service				B								
Intersection Capacity Utilization			57.4%	ICU Level of Service						B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FBSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Volume (veh/h)	10	5	0	55	60	5
Future Volume (Veh/h)	10	5	0	55	60	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	6	0	69	75	6
Pedestrians	75					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	222	153	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	222	153	156			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	724	844	1349			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	69	81			
Volume Left	12	0	0			
Volume Right	6	0	6			
cSH	760	1349	1700			
Volume to Capacity	0.02	0.00	0.05			
Queue Length 95th (m)	0.6	0.0	0.0			
Control Delay (s)	9.9	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.9	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.1				
Intersection Capacity Utilization		22.6%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FBSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑			↑
Traffic Volume (veh/h)	5	5	55	5	0	55
Future Volume (Veh/h)	5	5	55	5	0	55
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	6	6	66	6	0	66
Pedestrians	70					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	205	139			142	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	205	139			142	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	743	863			1371	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	72	66			
Volume Left	6	0	0			
Volume Right	6	6	0			
cSH	799	1700	1371			
Volume to Capacity	0.02	0.04	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	9.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		22.4%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
18: Pape Ave & Existing Site Access

FBSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Volume (veh/h)	55	0	0	0	0	60
Future Volume (Veh/h)	55	0	0	0	0	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	64	0	0	0	0	70
Pedestrians	95				95	
Lane Width (m)	3.5				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	8				8	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	225	130	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225	130	165			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	90	100	100			
cM capacity (veh/h)	654	854	1316			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	64	0	70			
Volume Left	64	0	0			
Volume Right	0	0	70			
cSH	654	1700	1700			
Volume to Capacity	0.10	0.00	0.04			
Queue Length 95th (m)	2.6	0.0	0.0			
Control Delay (s)	11.1	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	11.1	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		5.3				
Intersection Capacity Utilization		23.2%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		W			W			W			W	
Traffic Volume (vph)	95	415	30	30	450	15	30	45	40	50	65	125
Future Volume (vph)	95	415	30	30	450	15	30	45	40	50	65	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		0.99			0.98			0.94			0.94	
Flpb, ped/bikes		0.96			0.99			0.98			0.97	
Frt		0.99			1.00			0.95			0.93	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3195			3350			1619			1556	
Flt Permitted		0.78			0.90			0.89			0.92	
Satd. Flow (perm)		2517			3031			1467			1452	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	437	32	32	474	16	32	47	42	53	68	132
RTOR Reduction (vph)	0	6	0	0	3	0	0	24	0	0	16	0
Lane Group Flow (vph)	0	563	0	0	519	0	0	97	0	0	237	0
Confl. Peds. (#/hr)	400		150	150		400	130		210	210		130
Heavy Vehicles (%)	0%	3%	0%	0%	2%	0%	0%	2%	0%	0%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.5			34.5			30.5			30.5	
Effective Green, g (s)		35.5			35.5			31.5			31.5	
Actuated g/C Ratio		0.48			0.48			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1207			1454			624			618	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.17			0.07			c0.16	
v/c Ratio		0.47			0.36			0.16			0.38	
Uniform Delay, d1		12.9			12.1			13.1			14.6	
Progression Factor		0.81			1.00			1.00			1.00	
Incremental Delay, d2		1.2			0.7			0.5			1.8	
Delay (s)		11.6			12.8			13.6			16.4	
Level of Service		B			B			B			B	
Approach Delay (s)		11.6			12.8			13.6			16.4	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		13.0			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.43										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)			7.0				
Intersection Capacity Utilization		76.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FBSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↶				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Future Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	67	17	11	194	11	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	84	216										
Volume Left (vph)	0	11										
Volume Right (vph)	17	11										
Hadj (s)	-0.12	-0.01										
Departure Headway (s)	4.3	4.1										
Degree Utilization, x	0.10	0.25										
Capacity (veh/h)	795	859										
Control Delay (s)	7.7	8.4										
Approach Delay (s)	7.7	8.4										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		30.8%										
Analysis Period (min)		15										















HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FBSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↶	↶	
Traffic Volume (veh/h)	0	0	60	275	445	45
Future Volume (Veh/h)	0	0	60	275	445	45
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)	0	0	66	302	489	49
Pedestrians	55					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				262		
pX, platoon unblocked						
vC, conflicting volume	852	324	593			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	324	593			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	93			
cM capacity (veh/h)	283	678	993			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	167	201	326	212		
Volume Left	66	0	0	0		
Volume Right	0	0	0	49		
cSH	993	1700	1700	1700		
Volume to Capacity	0.07	0.12	0.19	0.12		
Queue Length 95th (m)	1.7	0.0	0.0	0.0		
Control Delay (s)	3.9	0.0	0.0	0.0		
Lane LOS	A					
Approach Delay (s)	1.8		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			30.1%			
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FTAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Future Volume (vph)	30	35	0	0	0	0	0	185	25	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	34	40	0	0	0	0	0	213	29	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	74	242										
Volume Left (vph)	34	0										
Volume Right (vph)	0	29										
Hadj (s)	0.14	-0.03										
Departure Headway (s)	4.6	4.1										
Degree Utilization, x	0.09	0.27										
Capacity (veh/h)	739	867										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay			8.4									
Level of Service			A									
Intersection Capacity Utilization			30.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
2: Logan Ave & Langley Ave

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↷				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Future Volume (vph)	0	0	0	0	65	45	15	160	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	72	50	17	178	0	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	122		195									
Volume Left (vph)	0		17									
Volume Right (vph)	50		0									
Hadj (s)	-0.20		0.06									
Departure Headway (s)	4.1		4.2									
Degree Utilization, x	0.14		0.23									
Capacity (veh/h)	830		823									
Control Delay (s)	7.8		8.5									
Approach Delay (s)	7.8		8.5									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization			33.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔				
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Future Volume (vph)	25	40	0	0	0	0	0	155	10	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	47	0	0	0	0	0	182	12	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	76	194										
Volume Left (vph)	29	0										
Volume Right (vph)	0	12										
Hadj (s)	0.11	0.02										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.22										
Capacity (veh/h)	777	856										
Control Delay (s)	7.9	8.3										
Approach Delay (s)	7.9	8.3										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		30.6%										
Analysis Period (min)		15										

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Volume (vph)	15	285	45	40	555	25	50	100	30	0	0	0
Future Volume (vph)	15	285	45	40	555	25	50	100	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.97			
Flpb, ped/bikes		1.00			1.00			0.97	1.00			
Frt		0.98			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3090			3284			1729	1416			
Flt Permitted		0.92			0.91			0.98	1.00			
Satd. Flow (perm)		2841			2982			1729	1416			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	15	291	46	41	566	26	51	102	31	0	0	0
RTOR Reduction (vph)	0	24	0	0	6	0	0	0	13	0	0	0
Lane Group Flow (vph)	0	328	0	0	627	0	0	153	18	0	0	0
Confl. Peds. (#/hr)	85		80	80		85	85		20	20		85
Confl. Bikes (#/hr)			5			10			5			
Heavy Vehicles (%)	0%	8%	19%	5%	5%	4%	2%	5%	3%	0%	0%	0%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		23.4			23.4			45.6	45.6			
Effective Green, g (s)		24.4			24.4			46.6	46.6			
Actuated g/C Ratio		0.30			0.30			0.58	0.58			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		866			909			1007	824			
v/s Ratio Prot												
v/s Ratio Perm		0.12			0.21			0.09	0.01			
v/c Ratio		0.38			0.69			0.15	0.02			
Uniform Delay, d1		21.8			24.5			7.6	7.1			
Progression Factor		1.00			1.25			1.00	1.00			
Incremental Delay, d2		0.3			1.9			0.3	0.0			
Delay (s)		22.1			32.6			8.0	7.1			
Level of Service		C			C			A	A			
Approach Delay (s)		22.1			32.6			7.8			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		25.5										
HCM 2000 Volume to Capacity ratio		0.34										
Actuated Cycle Length (s)		80.0							9.0			
Intersection Capacity Utilization		73.6%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔					↔		↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	30	35	275	0	0	0	0	180	15	215	0
Future Volume (vph)	0	30	35	275	0	0	0	0	180	15	215	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	34	39	309	0	0	0	0	202	17	242	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	73	309	202	259								
Volume Left (vph)	0	309	0	17								
Volume Right (vph)	39	0	202	0								
Hadj (s)	-0.27	0.35	-0.40	0.06								
Departure Headway (s)	5.4	5.6	5.0	5.4								
Degree Utilization, x	0.11	0.48	0.28	0.39								
Capacity (veh/h)	574	604	646	624								
Control Delay (s)	9.1	13.7	10.0	11.8								
Approach Delay (s)	9.1	13.7	10.0	11.8								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay				11.8								
Level of Service				B								
Intersection Capacity Utilization			49.1%									
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FTAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	10	5	175	20	5	470
Future Volume (Veh/h)	10	5	175	20	5	470
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	11	6	199	23	6	534
Pedestrians	90					100
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	7					8
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			92			
pX, platoon unblocked						
vC, conflicting volume	580	301			312	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	580	301			312	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			99	
cM capacity (veh/h)	415	597			1168	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	17	133	89	184	356	
Volume Left	11	0	0	6	0	
Volume Right	6	0	23	0	0	
cSH	465	1700	1700	1168	1700	
Volume to Capacity	0.04	0.08	0.05	0.01	0.21	
Queue Length 95th (m)	0.9	0.0	0.0	0.1	0.0	
Control Delay (s)	13.0	0.0	0.0	0.3	0.0	
Lane LOS	B			A		
Approach Delay (s)	13.0	0.0		0.1		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			36.2%			
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave

FTAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	5	30	0	235	460	0
Future Volume (Veh/h)	5	30	0	235	460	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	34	0	267	523	0
Pedestrians	75					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				17		
pX, platoon unblocked						
vC, conflicting volume	732	336	598			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	732	336	598			
IC, single (s)	6.8	7.0	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	94	100			
cM capacity (veh/h)	339	617	929			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	40	134	134	262	262	
Volume Left	6	0	0	0	0	
Volume Right	34	0	0	0	0	
cSH	549	1700	1700	1700	1700	
Volume to Capacity	0.07	0.08	0.08	0.15	0.15	
Queue Length 95th (m)	1.9	0.0	0.0	0.0	0.0	
Control Delay (s)	12.1	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.1	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.6				
Intersection Capacity Utilization		23.3%		ICU Level of Service	A	
Analysis Period (min)		15				







HCM Signalized Intersection Capacity Analysis
8: Carlaw Ave & New Pape Street

FTAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (vph)	120	25	230	85	15	465
Future Volume (vph)	120	25	230	85	15	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.5		3.5			3.5
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		0.96			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.98		0.96			1.00
Flt Protected	0.96		1.00			1.00
Satd. Flow (prot)	1555		3012			3355
Flt Permitted	0.96		1.00			0.94
Satd. Flow (perm)	1555		3012			3165
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	138	29	264	98	17	534
RTOR Reduction (vph)	13	0	29	0	0	0
Lane Group Flow (vph)	154	0	333	0	0	551
Confl. Peds. (#/hr)		10		80	80	
Heavy Vehicles (%)	6%	9%	10%	5%	4%	6%
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	11.7		45.8			45.8
Effective Green, g (s)	12.7		46.8			46.8
Actuated g/C Ratio	0.19		0.70			0.70
Clearance Time (s)	4.5		4.5			4.5
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	296		2119			2227
v/s Ratio Prot	c0.10		0.11			
v/s Ratio Perm					c0.17	
v/c Ratio	0.52		0.16			0.25
Uniform Delay, d1	24.2		3.3			3.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.7		0.2			0.3
Delay (s)	25.8		3.4			3.8
Level of Service	C		A			A
Approach Delay (s)	25.8		3.4			3.8
Approach LOS	C		A			A
Intersection Summary						
HCM 2000 Control Delay		7.1		HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		66.5		Sum of lost time (s)	7.0	
Intersection Capacity Utilization		40.6%		ICU Level of Service	A	
Analysis Period (min)		15				
c Critical Lane Group						







HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FTAM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	310	595	0
Future Volume (Veh/h)	0	0	0	310	595	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	360	692	0
Pedestrians	85			5		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	6			0		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127	20	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	957	436	777			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	289	650			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	274	632	842			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	120	240	461	231	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	842	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.14	0.27	0.14	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		28.0%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

FTAM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	5	65	315	525	65
Future Volume (Veh/h)	0	5	65	315	525	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	6	73	354	590	73
Pedestrians	95			10		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	7			1		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88	59	
pX, platoon unblocked	0.96	0.95	0.95			
vC, conflicting volume	1044	436	758			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	949	316	652			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	91			
cM capacity (veh/h)	214	607	842			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	6	191	236	393	270	
Volume Left	0	73	0	0	0	
Volume Right	6	0	0	0	73	
cSH	607	842	1700	1700	1700	
Volume to Capacity	0.01	0.09	0.14	0.23	0.16	
Queue Length 95th (m)	0.2	2.3	0.0	0.0	0.0	
Control Delay (s)	11.0	4.3	0.0	0.0	0.0	
Lane LOS	B	A				
Approach Delay (s)	11.0	1.9		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		44.0%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
11: Carlaw Ave & Gerrard St E

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	55	225	25	55	485	135	40	195	50	110	330	90
Future Volume (vph)	55	225	25	55	485	135	40	195	50	110	330	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.96			0.98			0.98	
Flpb, ped/bikes		0.99			1.00			0.99			0.98	
Frt		0.99			0.97			0.97			0.97	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3124			3100			3106			3079	
Flt Permitted		0.76			0.89			0.82			0.78	
Satd. Flow (perm)		2392			2774			2565			2430	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	250	28	61	539	150	44	217	56	122	367	100
RTOR Reduction (vph)	0	8	0	0	27	0	0	22	0	0	22	0
Lane Group Flow (vph)	0	331	0	0	723	0	0	295	0	0	567	0
Confl. Peds. (#/hr)	180		85	85		180	85		110	110		85
Confl. Bikes (#/hr)					10							10
Heavy Vehicles (%)	2%	10%	4%	7%	4%	5%	0%	10%	6%	2%	9%	11%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		42.4			42.4			26.3			26.3	
Effective Green, g (s)		43.4			43.4			27.3			27.3	
Actuated g/C Ratio		0.54			0.54			0.34			0.34	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1297			1504			875			829	
v/s Ratio Prot												
v/s Ratio Perm		0.14			c0.26			0.11			c0.23	
v/c Ratio		0.26			0.48			0.34			0.68	
Uniform Delay, d1		9.7			11.3			19.6			22.6	
Progression Factor		0.21			0.60			1.00			1.00	
Incremental Delay, d2		0.5			1.0			1.0			4.6	
Delay (s)		2.5			7.9			20.7			27.2	
Level of Service		A			A			C			C	
Approach Delay (s)		2.5			7.9			20.7			27.2	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay		14.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		88.8%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Signalized Intersection Capacity Analysis
12: Carlaw Ave & Dundas St E

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	35	300	35	95	560	50	35	185	65	45	295	75
Future Volume (vph)	35	300	35	95	560	50	35	185	65	45	295	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Width		4.6	4.6		4.6	4.6		4.9			4.9	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95			0.95	
Frpb, ped/bikes		1.00	0.99		1.00	0.99		0.96			0.98	
Flpb, ped/bikes		0.98	1.00		0.95	1.00		0.99			0.99	
Frt		1.00	0.98		1.00	0.99		0.97			0.97	
Flt Protected		0.95	1.00		0.95	1.00		0.99			0.99	
Satd. Flow (prot)		1605	1716		1569	1806		3005			3058	
Flt Permitted		0.26	1.00		0.49	1.00		0.87			0.88	
Satd. Flow (perm)		437	1716		814	1806		2616			2717	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	36	312	36	99	583	52	36	193	68	47	307	78
RTOR Reduction (vph)	0	5	0	0	4	0	0	37	0	0	25	0
Lane Group Flow (vph)	36	344	0	99	631	0	0	260	0	0	407	0
Confl. Peds. (#/hr)	65		80	80		65	60		85	85		60
Confl. Bikes (#/hr)			10			65						5
Heavy Vehicles (%)	3%	6%	12%	2%	2%	0%	8%	12%	2%	9%	10%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	10	0	0	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.4			38.4			26.1			26.1	
Effective Green, g (s)		39.4			39.4			27.1			27.1	
Actuated g/C Ratio		0.52			0.52			0.36			0.36	
Clearance Time (s)		5.6			5.6			5.9			5.9	
Lane Grp Cap (vph)		226	889		421	936		932			968	
v/s Ratio Prot			0.20			c0.35						
v/s Ratio Perm		0.08			0.12			0.10			c0.15	
v/c Ratio		0.16	0.39		0.24	0.67		0.28			0.42	
Uniform Delay, d1		9.6	11.0		10.0	13.5		17.5			18.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		1.5	1.3		1.3	3.9		0.7			1.3	
Delay (s)		11.1	12.3		11.3	17.4		18.2			19.8	
Level of Service		B	B		B	B		B			B	
Approach Delay (s)		12.2			16.6			18.2			19.8	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		16.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.57										
Actuated Cycle Length (s)		76.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		91.2%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												











HCM Unsignalized Intersection Capacity Analysis
13: Laneway W & Langley Ave

FTAM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	20	0	0	15	0	0
Future Volume (Veh/h)	20	0	0	15	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	28	0	0	21	0	0
Pedestrians	20			5	30	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		99	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		99	63
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)			1527		872	982
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	28	21	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1527	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			21.2%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FTAM
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (veh/h)	25	0	0	15	5	0
Future Volume (Veh/h)	25	0	0	15	5	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	36	0	0	21	7	0
Pedestrians	10			10	20	
Lane Width (m)	3.5			3.5	3.0	
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)						
pX, platoon unblocked						
vC, conflicting volume			56		87	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			56		87	66
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1540		899	981
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	36	21	7			
Volume Left	0	0	7			
Volume Right	0	0	0			
cSH	1700	1540	899			
Volume to Capacity	0.02	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.2			
Control Delay (s)	0.0	0.0	9.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	9.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			21.0%	ICU Level of Service	A	
Analysis Period (min)			15			









HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FTAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	155	45	10	20	65	35	10	30	10	55	25	205
Future Volume (vph)	155	45	10	20	65	35	10	30	10	55	25	205
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	167	48	11	22	70	38	11	32	11	59	27	220
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	226	130	54	306								
Volume Left (vph)	167	22	11	59								
Volume Right (vph)	11	38	11	220								
Hadj (s)	0.30	0.02	0.01	-0.27								
Departure Headway (s)	5.3	5.2	5.3	4.7								
Degree Utilization, x	0.33	0.19	0.08	0.40								
Capacity (veh/h)	636	637	609	724								
Control Delay (s)	10.9	9.3	8.7	10.7								
Approach Delay (s)	10.9	9.3	8.7	10.7								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay				10.4								
Level of Service				B								
Intersection Capacity Utilization				51.5%	ICU Level of Service			A				
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FTAM
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	0	15	35	15
Future Volume (Veh/h)	25	0	0	15	35	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	35	0	0	21	49	21
Pedestrians	85			5	5	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	7			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				64		
pX, platoon unblocked						
vC, conflicting volume	170	150	155			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	170	150	155			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	764	837	1339			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	35	21	70			
Volume Left	35	0	0			
Volume Right	0	0	21			
cSH	764	1339	1700			
Volume to Capacity	0.05	0.00	0.04			
Queue Length 95th (m)	1.1	0.0	0.0			
Control Delay (s)	9.9	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.9	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	2.8					
Intersection Capacity Utilization	24.3%			ICU Level of Service		A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FTAM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		S	T
Traffic Volume (veh/h)	0	5	10	0	5	30
Future Volume (Veh/h)	0	5	10	0	5	30
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64
Hourly flow rate (vph)	0	8	16	0	8	47
Pedestrians	25		10			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	2		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			22			
pX, platoon unblocked						
vC, conflicting volume	114	41			41	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114	41			41	
IC, single (s)	6.4	6.5			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.5			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	858	949			1549	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	16	55			
Volume Left	0	0	8			
Volume Right	8	0	0			
cSH	949	1700	1549			
Volume to Capacity	0.01	0.01	0.01			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	8.8	0.0	1.1			
Lane LOS	A		A			
Approach Delay (s)	8.8	0.0	1.1			
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			19.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
18: Pape Ave & New Pape Street

FTAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (vph)	10	0	0	0	0	25
Future Volume (vph)	10	0	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5				3.5	
Lane Util. Factor	1.00				1.00	
Frpb, ped/bikes	1.00				0.82	
Flpb, ped/bikes	1.00				1.00	
Frt	1.00				0.86	
Flt Protected	0.95				1.00	
Satd. Flow (prot)	1684				1183	
Flt Permitted	0.95				1.00	
Satd. Flow (perm)	1684				1183	
Peak-hour factor, PHF	0.67	0.67	0.67	0.67	0.67	0.67
Adj. Flow (vph)	15	0	0	0	0	37
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	15	0	0	0	32	0
Confl. Peds. (#/hr)	15	15	85			85
Heavy Vehicles (%)	6%	0%	0%	0%	0%	13%
Turn Type	Prot				NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	1.3				57.8	
Effective Green, g (s)	2.3				58.8	
Actuated g/C Ratio	0.03				0.86	
Clearance Time (s)	4.5				4.5	
Vehicle Extension (s)	3.0				3.0	
Lane Grp Cap (vph)	56				1021	
v/s Ratio Prot	c0.01				c0.03	
v/s Ratio Perm						
v/c Ratio	0.27				0.03	
Uniform Delay, d1	32.1				0.7	
Progression Factor	1.00				1.00	
Incremental Delay, d2	2.6				0.1	
Delay (s)	34.6				0.7	
Level of Service	C				A	
Approach Delay (s)	34.6			0.0	0.7	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			10.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.04			
Actuated Cycle Length (s)			68.1		Sum of lost time (s)	7.0
Intersection Capacity Utilization			30.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						















HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FTAM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	60	345	20	20	570	5	25	30	25	25	25	70
Future Volume (vph)	60	345	20	20	570	5	25	30	25	25	25	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Flpb, ped/bikes		0.99			1.00			0.98			0.97	
Flpb, ped/bikes		0.98			1.00			0.99			0.99	
Frt		0.99			1.00			0.96			0.92	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		3168			3351			1671			1540	
Flt Permitted		0.80			0.93			0.91			0.94	
Satd. Flow (perm)		2542			3131			1540			1466	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	67	388	22	22	640	6	28	34	28	28	28	79
RTOR Reduction (vph)	0	4	0	0	1	0	0	17	0	0	44	0
Lane Group Flow (vph)	0	473	0	0	667	0	0	73	0	0	91	0
Confl. Peds. (#/hr)	200		80	80		200	50		75	75		50
Confl. Bikes (#/hr)			5			10						
Heavy Vehicles (%)	3%	8%	6%	6%	4%	20%	0%	0%	8%	13%	4%	5%
Bus Blockages (#/hr)	7	7	7	7	7	7	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1318			1624			606			577	
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.21			0.05			c0.06	
v/c Ratio		0.36			0.41			0.12			0.16	
Uniform Delay, d1		11.4			11.8			15.4			15.7	
Progression Factor		0.79			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.8			0.4			0.6	
Delay (s)		9.8			12.5			15.8			16.3	
Level of Service		A			B			B			B	
Approach Delay (s)		9.8			12.5			15.8			16.3	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.2			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.30										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			7.0				
Intersection Capacity Utilization		76.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FTAM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Future Volume (vph)	0	0	0	0	105	35	15	125	10	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	0	115	38	16	137	11	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	153		164									
Volume Left (vph)	0		16									
Volume Right (vph)	38		11									
Hadj (s)	-0.14		0.05									
Departure Headway (s)	4.1		4.3									
Degree Utilization, x	0.18		0.20									
Capacity (veh/h)	838		808									
Control Delay (s)	8.0		8.3									
Approach Delay (s)	8.0		8.3									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization	31.6%		ICU Level of Service				A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FTAM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↔↔	↔↔	
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians	60					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				115		
pX, platoon unblocked						
vC, conflicting volume	60	60	60			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	60	60			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	940	993	1556			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	0	0	0	0		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.00	0.00	0.00		
Queue Length 95th (m)	0.0	0.0	0.0	0.0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.3%		ICU Level of Service	A
Analysis Period (min)			15			















HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔				
Sign Control	Stop			Stop			Stop				Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	185	30	0	0	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	40	75	0	0	0	0	0	213	34	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	115	247										
Volume Left (vph)	40	0										
Volume Right (vph)	0	34										
Hadj (s)	0.07	-0.07										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.14	0.28										
Capacity (veh/h)	750	851										
Control Delay (s)	8.3	8.7										
Approach Delay (s)	8.3	8.7										
Approach LOS	A	A										
Intersection Summary												
Delay		8.6										
Level of Service		A										
Intersection Capacity Utilization		32.6%			ICU Level of Service				A			
Analysis Period (min)		15										















HCM Unsignalized Intersection Capacity Analysis 2: Logan Ave & Langley Ave

FTPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Future Volume (vph)	0	0	0	0	25	25	20	185	0	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	0	29	29	23	215	0	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	58	238										
Volume Left (vph)	0	23										
Volume Right (vph)	29	0										
Hadj (s)	-0.30	0.03										
Departure Headway (s)	4.1	4.1										
Degree Utilization, x	0.07	0.27										
Capacity (veh/h)	824	868										
Control Delay (s)	7.4	8.6										
Approach Delay (s)	7.4	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			34.1%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FTPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Future Volume (vph)	20	45	0	0	0	0	0	190	15	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	24	54	0	0	0	0	0	229	18	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	78	247										
Volume Left (vph)	24	0										
Volume Right (vph)	0	18										
Hadj (s)	0.09	-0.03										
Departure Headway (s)	4.5	4.1										
Degree Utilization, x	0.10	0.28										
Capacity (veh/h)	746	866										
Control Delay (s)	8.0	8.6										
Approach Delay (s)	8.0	8.6										
Approach LOS	A	A										
Intersection Summary												
Delay			8.5									
Level of Service			A									
Intersection Capacity Utilization			31.5%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
4: Logan Ave & Gerrard St E

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔			
Traffic Volume (vph)	15	550	45	35	385	40	40	130	65	0	0	0
Future Volume (vph)	15	550	45	35	385	40	40	130	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.98			1.00	0.94			
Flpb, ped/bikes		1.00			1.00			0.98	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.99	1.00			
Satd. Flow (prot)		3350			3262			1813	1418			
Flt Permitted		0.94			0.82			0.99	1.00			
Satd. Flow (perm)		3141			2671			1813	1418			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	16	591	48	38	414	43	43	140	70	0	0	0
RTOR Reduction (vph)	0	11	0	0	14	0	0	0	24	0	0	0
Lane Group Flow (vph)	0	644	0	0	481	0	0	183	46	0	0	0
Confl. Peds. (#/hr)	105		115	115		105	105		45	45		105
Confl. Bikes (#/hr)			15			10			15			5
Heavy Vehicles (%)	0%	2%	0%	0%	4%	3%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		22.9			22.9			46.1	46.1			
Effective Green, g (s)		23.9			23.9			47.1	47.1			
Actuated g/C Ratio		0.30			0.30			0.59	0.59			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		938			797			1067	834			
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.18			0.10	0.03			
v/c Ratio		0.69			0.60			0.17	0.06			
Uniform Delay, d1		24.7			24.0			7.5	7.0			
Progression Factor		1.00			0.59			1.00	1.00			
Incremental Delay, d2		2.1			1.2			0.3	0.1			
Delay (s)		26.8			15.3			7.9	7.1			
Level of Service		C			B			A	A			
Approach Delay (s)		26.8			15.3			7.7			0.0	
Approach LOS		C			B			A			A	
Intersection Summary												
HCM 2000 Control Delay		19.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.34										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		67.9%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 4

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔			
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	55	50	230	0	0	0	0	335	10	175	0
Future Volume (vph)	0	55	50	230	0	0	0	0	335	10	175	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	57	52	240	0	0	0	0	349	10	182	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	109	240	349	192								
Volume Left (vph)	0	240	0	10								
Volume Right (vph)	52	0	349	0								
Hadj (s)	-0.27	0.27	-0.53	0.02								
Departure Headway (s)	5.5	5.7	4.7	5.4								
Degree Utilization, x	0.17	0.38	0.46	0.29								
Capacity (veh/h)	572	578	712	607								
Control Delay (s)	9.5	12.2	11.6	10.7								
Approach Delay (s)	9.5	12.2	11.6	10.7								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay				11.3								
Level of Service				B								
Intersection Capacity Utilization		54.4%		ICU Level of Service				A				
Analysis Period (min)		15										

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 5

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FTPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (veh/h)	5	0	330	20	0	420
Future Volume (Veh/h)	5	0	330	20	0	420
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	347	21	0	442
Pedestrians	65		5			45
Lane Width (m)	3.5		3.5			3.5
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	5		0			4
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			92			
pX, platoon unblocked						
vC, conflicting volume	648	294			433	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	648	294			433	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	384	647			1077	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	231	137	147	295	
Volume Left	5	0	0	0	0	
Volume Right	0	0	21	0	0	
cSH	384	1700	1700	1077	1700	
Volume to Capacity	0.01	0.14	0.08	0.00	0.17	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.5	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.5	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave

FTPM
07-19-2022

	↖	↗	↖	↗	↖	↗
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	20	40	0	345	415	0
Future Volume (Veh/h)	20	40	0	345	415	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	21	41	0	356	428	0
Pedestrians	55			5		
Lane Width (m)	3.5			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	4			0		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				17		
pX, platoon unblocked						
vC, conflicting volume	661	274	483			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	661	274	483			
IC, single (s)	6.8	7.0	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	95	94	100			
cM capacity (veh/h)	382	686	1042			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	62	178	178	214	214	
Volume Left	21	0	0	0	0	
Volume Right	41	0	0	0	0	
cSH	540	1700	1700	1700	1700	
Volume to Capacity	0.11	0.10	0.10	0.13	0.13	
Queue Length 95th (m)	3.1	0.0	0.0	0.0	0.0	
Control Delay (s)	12.5	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.5	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			25.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
8: Carlaw Ave & New Pape Street

FTPM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (vph)	155	55	320	150	45	410
Future Volume (vph)	155	55	320	150	45	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.5		3.5		3.5	
Lane Util. Factor	1.00		0.95		0.95	
Frpb, ped/bikes	0.99		0.96		1.00	
Flpb, ped/bikes	1.00		1.00		1.00	
Frt	0.96		0.95		1.00	
Flt Protected	0.96		1.00		1.00	
Satd. Flow (prot)	1616		3197		3442	
Flt Permitted	0.96		1.00		0.88	
Satd. Flow (perm)	1616		3197		3053	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	160	57	330	155	46	423
RTOR Reduction (vph)	22	0	44	0	0	0
Lane Group Flow (vph)	195	0	441	0	0	469
Confl. Peds. (#/hr)	5	10		55	55	
Confl. Bikes (#/hr)				5		
Heavy Vehicles (%)	2%	0%	3%	1%	0%	3%
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	12.6		41.0		41.0	
Effective Green, g (s)	13.6		42.0		42.0	
Actuated g/C Ratio	0.22		0.67		0.67	
Clearance Time (s)	4.5		4.5		4.5	
Vehicle Extension (s)	3.0		3.0		3.0	
Lane Grp Cap (vph)	351		2144		2048	
v/s Ratio Prot	c0.12		0.14			
v/s Ratio Perm					c0.15	
v/c Ratio	0.56		0.21		0.23	
Uniform Delay, d1	21.8		3.9		4.0	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	1.9		0.2		0.3	
Delay (s)	23.7		4.1		4.3	
Level of Service	C		A		A	
Approach Delay (s)	23.7		4.1		4.3	
Approach LOS	C		A		A	
Intersection Summary						
HCM 2000 Control Delay		7.8		HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		62.6		Sum of lost time (s)		7.0
Intersection Capacity Utilization		50.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FTPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	465	575	0
Future Volume (Veh/h)	0	0	0	465	575	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	0	484	599	0
Pedestrians	75				5	
Lane Width (m)	3.0				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127	20	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	921	374	674			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	822	249	563			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	285	685	922			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	161	323	399	200	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	922	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.19	0.23	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		19.2%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 10: Carlaw Ave & Simpson Ave

FTPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	5	5	40	460	520	50
Future Volume (Veh/h)	5	5	40	460	520	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	5	42	479	542	52
Pedestrians	70			15		
Lane Width (m)	3.0			3.5		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	5			1		
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88	59	
pX, platoon unblocked	0.98	0.96	0.96			
vC, conflicting volume	962	382	664			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	808	286	579			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	95			
cM capacity (veh/h)	286	650	923			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	10	202	319	361	233	
Volume Left	5	42	0	0	0	
Volume Right	5	0	0	0	52	
cSH	397	923	1700	1700	1700	
Volume to Capacity	0.03	0.05	0.19	0.21	0.14	
Queue Length 95th (m)	0.6	1.1	0.0	0.0	0.0	
Control Delay (s)	14.3	2.3	0.0	0.0	0.0	
Lane LOS	B	A				
Approach Delay (s)	14.3	0.9		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			47.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 10

HCM Signalized Intersection Capacity Analysis 11: Carlaw Ave & Gerrard St E

FTPM
07-19-2022





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑			↑↑	
Traffic Volume (vph)	90	495	50	50	310	155	40	265	55	125	305	90
Future Volume (vph)	90	495	50	50	310	155	40	265	55	125	305	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.99			0.92			0.98			0.97	
Flpb, ped/bikes		0.98			1.00			1.00			0.98	
Frt		0.99			0.95			0.98			0.97	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3261			2954			3233			3173	
Flt Permitted		0.78			0.84			0.87			0.76	
Satd. Flow (perm)		2555			2481			2820			2438	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	93	510	52	52	320	160	41	273	57	129	314	93
RTOR Reduction (vph)	0	8	0	0	60	0	0	19	0	0	22	0
Lane Group Flow (vph)	0	647	0	0	472	0	0	352	0	0	514	0
Conf. Peds. (#/hr)	240		105	105		240	130		125	125		130
Conf. Bikes (#/hr)			10			5			5			5
Heavy Vehicles (%)	1%	3%	4%	0%	5%	0%	5%	5%	0%	1%	4%	3%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.4			32.4			36.3			23.3	
Effective Green, g (s)		33.4			33.4			37.3			24.3	
Actuated g/C Ratio		0.42			0.42			0.47			0.30	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1066			1035			1351			740	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		c0.25			0.19			0.10			c0.21	
v/c Ratio		0.61			0.46			0.26			0.69	
Uniform Delay, d1		18.2			16.8			13.0			24.6	
Progression Factor		1.95			2.11			1.00			1.00	
Incremental Delay, d2		2.5			1.4			0.5			5.3	
Delay (s)		37.9			36.9			13.4			29.9	
Level of Service		D			D			B			C	
Approach Delay (s)		37.9			36.9			13.4			29.9	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay		31.2			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.61										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			15.1				
Intersection Capacity Utilization		86.4%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Scenario 1 4:14 pm 06-20-2022 Baseline

Synchro 11 Report
Page 11

HCM Signalized Intersection Capacity Analysis 12: Carlaw Ave & Dundas St E

FTPM
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	565	30	50	390	50	35	290	100	60	290	75
Future Volume (vph)	75	565	30	50	390	50	35	290	100	60	290	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	4.6	4.6		4.6	4.6			4.9			4.9	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			0.94			0.96	
Flpb, ped/bikes	0.95	1.00		0.97	1.00			0.99			0.98	
Frt	1.00	0.99		1.00	0.98			0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1592	1832		1639	1800			3050			3102	
Flt Permitted	0.39	1.00		0.26	1.00			0.89			0.83	
Satd. Flow (perm)	661	1832		457	1800			2714			2583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	595	32	53	411	53	37	305	105	63	305	79
RTOR Reduction (vph)	0	2	0	0	6	0	0	38	0	0	24	0
Lane Group Flow (vph)	79	625	0	53	458	0	0	409	0	0	423	0
Confl. Peds. (#/hr)	115		90	90		115	110		140	140		110
Confl. Bikes (#/hr)			50			20			5			5
Heavy Vehicles (%)	0%	1%	3%	0%	1%	0%	0%	7%	1%	5%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	9	0	0	9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.4	38.4		38.4	38.4			26.1			26.1	
Effective Green, g (s)	39.4	39.4		39.4	39.4			27.1			27.1	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.36			0.36	
Clearance Time (s)	5.6	5.6		5.6	5.6			5.9			5.9	
Lane Grp Cap (vph)	342	949		236	933			967			921	
v/s Ratio Prot	c0.34			0.25								
v/s Ratio Perm	0.12			0.12				0.15			c0.16	
v/c Ratio	0.23	0.66		0.22	0.49			0.42			0.46	
Uniform Delay, d1	10.0	13.4		10.0	11.8			18.5			18.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.6	3.6		2.2	1.8			1.4			1.7	
Delay (s)	11.6	16.9		12.2	13.7			19.9			20.5	
Level of Service	B	B		B	B			B			C	
Approach Delay (s)	16.3			13.5			19.9			20.5		
Approach LOS	B			B			B			C		
Intersection Summary												
HCM 2000 Control Delay	17.3			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	76.0			Sum of lost time (s)			9.5					
Intersection Capacity Utilization	90.2%			ICU Level of Service			E					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis 13: Laneway W & Langley Ave

FTPM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	0	0	14	0	0
Pedestrians	5				20	
Lane Width (m)	3.5				3.0	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			54		73	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			54		73	54
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1543		919	1005
Direction, Lane #						
Volume Total	34	14	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1543	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	11.5%			ICU Level of Service		
Analysis Period (min)	15			A		

HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FTPM
07-19-2022

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Traffic Volume (veh/h)	25	0	0	10	0	0
Future Volume (Veh/h)	25	0	0	10	0	0
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)	33	0	0	13	0	0
Pedestrians	5			5	25	
Lane Width (m)	3.5			3.5	3.0	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			58		76	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		76	63
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1532		912	986
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	33	13	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1532	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		20.5%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩			↩			↩			↩	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	310	75	10	20	30	35	10	40	40	45	45	190
Future Volume (vph)	310	75	10	20	30	35	10	40	40	45	45	190
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	333	81	11	22	32	38	11	43	43	48	48	204
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	425	92	97	300								
Volume Left (vph)	333	22	11	48								
Volume Right (vph)	11	38	43	204								
Hadj (s)	0.21	-0.20	-0.21	-0.30								
Departure Headway (s)	5.4	5.5	5.7	5.2								
Degree Utilization, x	0.63	0.14	0.15	0.43								
Capacity (veh/h)	645	577	552	641								
Control Delay (s)	17.1	9.4	9.7	12.2								
Approach Delay (s)	17.1	9.4	9.7	12.2								
Approach LOS	C	A	A	B								
Intersection Summary												
Delay				13.9								
Level of Service				B								
Intersection Capacity Utilization			61.2%		ICU Level of Service					B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FTPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			U	U	
Traffic Volume (veh/h)	20	5	5	55	60	10
Future Volume (Veh/h)	20	5	5	55	60	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	21	5	5	59	64	11
Pedestrians	60			5	10	
Lane Width (m)	3.5			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				64		
pX, platoon unblocked						
vC, conflicting volume	208	134	135			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208	134	135			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	727	872	1391			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	26	64	75			
Volume Left	21	5	0			
Volume Right	5	0	11			
cSH	751	1391	1700			
Volume to Capacity	0.03	0.00	0.04			
Queue Length 95th (m)	0.9	0.1	0.0			
Control Delay (s)	10.0	0.6	0.0			
Lane LOS	A	A				
Approach Delay (s)	10.0	0.6	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.8				
Intersection Capacity Utilization		23.7%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FTPM
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		U			U
Traffic Volume (veh/h)	0	5	50	5	5	65
Future Volume (Veh/h)	0	5	50	5	5	65
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	0	6	60	6	6	78
Pedestrians	65		15			
Lane Width (m)	3.5		3.5			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	5		1			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			22			
pX, platoon unblocked						
vC, conflicting volume	233	128			131	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233	128			131	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	708	879			1389	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	6	66	84			
Volume Left	0	0	6			
Volume Right	6	6	0			
cSH	879	1700	1389			
Volume to Capacity	0.01	0.04	0.00			
Queue Length 95th (m)	0.2	0.0	0.1			
Control Delay (s)	9.1	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	9.1	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay		0.7				
Intersection Capacity Utilization		22.2%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
18: Pape Ave & New Pape Street

FTPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Volume (vph)	50	0	0	0	0	65
Future Volume (vph)	50	0	0	0	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5				3.5	
Lane Util. Factor	1.00				1.00	
Frpb, ped/bikes	1.00				0.86	
Flpb, ped/bikes	1.00				1.00	
Frt	1.00				0.86	
Flt Protected	0.95				1.00	
Satd. Flow (prot)	1750				1337	
Flt Permitted	0.95				1.00	
Satd. Flow (perm)	1750				1337	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	60	0	0	0	0	78
RTOR Reduction (vph)	0	0	0	0	15	0
Lane Group Flow (vph)	60	0	0	0	63	0
Confl. Peds. (#/hr)	10	60	65			65
Heavy Vehicles (%)	2%	0%	0%	0%	0%	5%
Turn Type	Prot				NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.0				51.5	
Effective Green, g (s)	6.0				52.5	
Actuated g/C Ratio	0.09				0.80	
Clearance Time (s)	4.5				4.5	
Vehicle Extension (s)	3.0				3.0	
Lane Grp Cap (vph)	160				1071	
v/s Ratio Prot	c0.03				c0.05	
v/s Ratio Perm						
v/c Ratio	0.38				0.06	
Uniform Delay, d1	28.0				1.4	
Progression Factor	1.00				1.00	
Incremental Delay, d2	1.5				0.1	
Delay (s)	29.5				1.5	
Level of Service	C				A	
Approach Delay (s)	29.5			0.0	1.5	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay		13.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.09				
Actuated Cycle Length (s)		65.5		Sum of lost time (s)		7.0
Intersection Capacity Utilization		35.2%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		W			W			W			W	
Traffic Volume (vph)	95	540	25	25	390	10	20	30	20	55	40	110
Future Volume (vph)	95	540	25	25	390	10	20	30	20	55	40	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frpb, ped/bikes		0.99			0.99			0.95			0.95	
Flpb, ped/bikes		0.97			1.00			0.99			0.96	
Frt		0.99			1.00			0.96			0.93	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3266			3308			1648			1559	
Flt Permitted		0.81			0.90			0.91			0.91	
Satd. Flow (perm)		2681			2984			1517			1441	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	568	26	26	411	11	21	32	21	58	42	116
RTOR Reduction (vph)	0	3	0	0	2	0	0	13	0	0	47	0
Lane Group Flow (vph)	0	691	0	0	446	0	0	61	0	0	169	0
Confl. Peds. (#/hr)	300		115	115		300	85		190	190		85
Confl. Bikes (#/hr)			15			5						5
Heavy Vehicles (%)	0%	2%	4%	0%	4%	9%	5%	0%	0%	0%	3%	1%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.5			40.5			30.5			30.5	
Effective Green, g (s)		41.5			41.5			31.5			31.5	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1390			1547			597			567	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.15			0.04			c0.12	
v/c Ratio		0.50			0.29			0.10			0.30	
Uniform Delay, d1		12.5			10.9			15.3			16.7	
Progression Factor		0.79			1.00			1.00			1.00	
Incremental Delay, d2		1.0			0.5			0.3			1.3	
Delay (s)		10.9			11.4			15.7			18.0	
Level of Service		B			B			B			B	
Approach Delay (s)		10.9			11.4			15.7			18.0	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		12.4			HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio		0.41										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)					7.0		
Intersection Capacity Utilization		76.7%			ICU Level of Service					D		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FTPM
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↶				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Future Volume (vph)	0	0	0	0	60	35	10	170	10	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	0	67	39	11	191	11	0	0	0
Direction, Lane #	WB 1	NB 1										
Volume Total (vph)	106	213										
Volume Left (vph)	0	11										
Volume Right (vph)	39	11										
Hadj (s)	-0.22	-0.01										
Departure Headway (s)	4.2	4.1										
Degree Utilization, x	0.12	0.24										
Capacity (veh/h)	815	846										
Control Delay (s)	7.7	8.5										
Approach Delay (s)	7.7	8.5										
Approach LOS	A	A										
Intersection Summary												
Delay		8.2										
Level of Service		A										
Intersection Capacity Utilization		33.2%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FTPM
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↶	↶	
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians	60					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				115		
pX, platoon unblocked						
vC, conflicting volume	60	60	60			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	60	60			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	945	999	1556			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	0	0	0	0		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.00	0.00	0.00		
Queue Length 95th (m)	0.0	0.0	0.0	0.0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.3%			
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
1: Logan Ave & Rivedale Ave

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶						↷				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Future Volume (vph)	35	65	0	0	0	0	0	200	25	0	0	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	43	80	0	0	0	0	0	247	31	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	123	278										
Volume Left (vph)	43	0										
Volume Right (vph)	0	31										
Hadj (s)	0.07	-0.05										
Departure Headway (s)	4.6	4.2										
Degree Utilization, x	0.16	0.32										
Capacity (veh/h)	734	843										
Control Delay (s)	8.4	9.1										
Approach Delay (s)	8.4	9.1										
Approach LOS	A	A										
Intersection Summary												
Delay		8.9										
Level of Service		A										
Intersection Capacity Utilization		32.8%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis
2: Logan Ave & Langley Ave

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶			↷				
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Future Volume (vph)	0	0	0	0	35	60	15	180	0	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	0	36	62	15	186	0	0	0	0
Direction, Lane #		WB 1			NB 1							
Volume Total (vph)		98			201							
Volume Left (vph)		0			15							
Volume Right (vph)		62			0							
Hadj (s)		-0.36			0.04							
Departure Headway (s)		4.0			4.1							
Degree Utilization, x		0.11			0.23							
Capacity (veh/h)		859			844							
Control Delay (s)		7.5			8.4							
Approach Delay (s)		7.5			8.4							
Approach LOS		A			A							
Intersection Summary												
Delay					8.1							
Level of Service					A							
Intersection Capacity Utilization		34.7%										
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis 3: Logan Ave & Victor Ave

FTSAT
07-19-2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔						↔				
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Future Volume (vph)	25	45	0	0	0	0	0	175	5	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	26	46	0	0	0	0	0	180	5	0	0	0
Direction, Lane #	EB 1	NB 1										
Volume Total (vph)	72	185										
Volume Left (vph)	26	0										
Volume Right (vph)	0	5										
Hadj (s)	0.09	0.00										
Departure Headway (s)	4.4	4.1										
Degree Utilization, x	0.09	0.21										
Capacity (veh/h)	785	863										
Control Delay (s)	7.8	8.1										
Approach Delay (s)	7.8	8.1										
Approach LOS	A	A										
Intersection Summary												
Delay		8.1										
Level of Service		A										
Intersection Capacity Utilization		31.9%							A			
Analysis Period (min)		15										

HCM Signalized Intersection Capacity Analysis 4: Logan Ave & Gerrard St E

FTSAT
07-19-2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↔			↔			↔				
Traffic Volume (vph)	25	390	40	40	460	35	65	120	60	0	0	0
Future Volume (vph)	25	390	40	40	460	35	65	120	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	3.5
Total Lost time (s)		4.5			4.5			4.5	4.5			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frpb, ped/bikes		0.98			0.99			1.00	0.93			
Flpb, ped/bikes		1.00			0.99			0.96	1.00			
Frt		0.99			0.99			1.00	0.85			
Flt Protected		1.00			1.00			0.98	1.00			
Satd. Flow (prot)		3257			3298			1754	1371			
Flt Permitted		0.90			0.88			0.98	1.00			
Satd. Flow (perm)		2939			2916			1754	1371			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	419	43	43	495	38	70	129	65	0	0	0
RTOR Reduction (vph)	0	14	0	0	11	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	475	0	0	565	0	0	199	42	0	0	0
Confl. Peds. (#/hr)	100		160	160		100	120		65	65		120
Confl. Bikes (#/hr)			10			20			10			5
Heavy Vehicles (%)	0%	4%	0%	5%	3%	0%	2%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4			8			2		2			
Actuated Green, G (s)		20.2			20.2			42.8	42.8			
Effective Green, g (s)		21.2			21.2			43.8	43.8			
Actuated g/C Ratio		0.29			0.29			0.59	0.59			
Clearance Time (s)		5.5			5.5			5.5	5.5			
Vehicle Extension (s)		3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)		841			835			1038	811			
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.19			0.11	0.03			
v/c Ratio		0.56			0.68			0.19	0.05			
Uniform Delay, d1		22.5			23.4			7.0	6.4			
Progression Factor		1.00			1.02			1.00	1.00			
Incremental Delay, d2		0.9			2.0			0.4	0.1			
Delay (s)		23.3			25.9			7.4	6.5			
Level of Service		C			C			A	A			
Approach Delay (s)		23.3			25.9			7.1			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM 2000 Control Delay		21.2							C			
HCM 2000 Volume to Capacity ratio		0.35										
Actuated Cycle Length (s)		74.0						9.0				
Intersection Capacity Utilization		73.4%							D			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
5: Carlaw Ave & Rivedale Ave

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔					↔		↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	50	40	250	0	0	0	0	265	10	195	0
Future Volume (vph)	0	50	40	250	0	0	0	0	265	10	195	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	42	263	0	0	0	0	279	11	205	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	95	263	279	216								
Volume Left (vph)	0	263	0	11								
Volume Right (vph)	42	0	279	0								
Hadj (s)	-0.27	0.20	-0.60	0.01								
Departure Headway (s)	5.4	5.5	4.7	5.3								
Degree Utilization, x	0.14	0.40	0.36	0.32								
Capacity (veh/h)	584	606	708	625								
Control Delay (s)	9.2	12.2	10.3	10.8								
Approach Delay (s)	9.2	12.2	10.3	10.8								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay				10.9								
Level of Service				B								
Intersection Capacity Utilization			52.4%									
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: Carlaw Ave & Langley Ave

FTSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	5	0	275	20	0	435
Future Volume (Veh/h)	5	0	275	20	0	435
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	5	0	296	22	0	468
Pedestrians	70					40
Lane Width (m)	3.5					3.5
Walking Speed (m/s)	1.2					1.2
Percent Blockage	6					3
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			92			
pX, platoon unblocked						
vC, conflicting volume	611	269			388	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	611	269			388	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	406	671			1115	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	5	197	121	156	312	
Volume Left	5	0	0	0	0	
Volume Right	0	0	22	0	0	
cSH	406	1700	1700	1115	1700	
Volume to Capacity	0.01	0.12	0.07	0.00	0.18	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	
Control Delay (s)	14.0	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.0	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			30.2%			
Analysis Period (min)			15			
				ICU Level of Service		A

HCM Unsignalized Intersection Capacity Analysis
7: Carlaw Ave & Victor Ave

FTSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	10	45	0	330	420	0
Future Volume (Veh/h)	10	45	0	330	420	0
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)	11	49	0	363	462	0
Pedestrians	40				5	
Lane Width (m)	3.5				3.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	3				0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				17		
pX, platoon unblocked						
vC, conflicting volume	688	271	502			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	688	271	502			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	93	100			
cM capacity (veh/h)	370	703	1038			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	60	182	182	231	231	
Volume Left	11	0	0	0	0	
Volume Right	49	0	0	0	0	
cSH	604	1700	1700	1700	1700	
Volume to Capacity	0.10	0.11	0.11	0.14	0.14	
Queue Length 95th (m)	2.6	0.0	0.0	0.0	0.0	
Control Delay (s)	11.6	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	11.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		22.9%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
8: Carlaw Ave & New Pape Street

FTSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑			↑↑
Traffic Volume (vph)	155	55	265	150	45	435
Future Volume (vph)	155	55	265	150	45	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	3.5		3.5			3.5
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		0.93			1.00
Flpb, ped/bikes	1.00		1.00			0.99
Frt	0.96		0.95			1.00
Flt Protected	0.96		1.00			1.00
Satd. Flow (prot)	1629		3082			3461
Flt Permitted	0.96		1.00			0.89
Satd. Flow (perm)	1629		3082			3086
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	160	57	273	155	46	448
RTOR Reduction (vph)	24	0	46	0	0	0
Lane Group Flow (vph)	193	0	382	0	0	494
Confl. Peds. (#/hr)	5	5		80	80	
Confl. Bikes (#/hr)				5		
Heavy Vehicles (%)	0%	3%	3%	1%	0%	2%
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	14.1		50.9			50.9
Effective Green, g (s)	15.1		51.9			51.9
Actuated g/C Ratio	0.20		0.70			0.70
Clearance Time (s)	4.5		4.5			4.5
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	332		2161			2164
v/s Ratio Prot	c0.12		0.12			
v/s Ratio Perm					c0.16	
v/c Ratio	0.58		0.18			0.23
Uniform Delay, d1	26.6		3.8			3.9
Progression Factor	1.00		0.80			1.00
Incremental Delay, d2	2.6		0.2			0.2
Delay (s)	29.2		3.2			4.2
Level of Service	C		A			A
Approach Delay (s)	29.2		3.2			4.2
Approach LOS	C		A			A
Intersection Summary						
HCM 2000 Control Delay		8.6		HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio		0.31				
Actuated Cycle Length (s)		74.0		Sum of lost time (s)	7.0	
Intersection Capacity Utilization		50.9%		ICU Level of Service	A	
Analysis Period (min)		15				
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis
9: Carlaw Ave & Laneway

FTSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	0	415	595	0
Future Volume (Veh/h)	0	0	0	415	595	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	0	441	633	0
Pedestrians	65			5	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	5			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				127	20	
pX, platoon unblocked	0.96	0.96	0.96			
vC, conflicting volume	924	386	698			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	826	264	590			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	285	672	908			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	147	294	422	211	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	908	1700	1700	1700	
Volume to Capacity	0.00	0.00	0.17	0.25	0.12	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			28.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
10: Carlaw Ave & Simpson Ave

FTSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (veh/h)	0	0	25	430	515	60
Future Volume (Veh/h)	0	0	25	430	515	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	27	467	560	65
Pedestrians	50			20	5	
Lane Width (m)	3.0			3.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	3			2	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				88	59	
pX, platoon unblocked	0.96	0.96	0.96			
vC, conflicting volume	935	382	675			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	856	282	586			
IC, single (s)	6.8	6.9	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	97			
cM capacity (veh/h)	270	659	929			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	0	183	311	373	252	
Volume Left	0	27	0	0	0	
Volume Right	0	0	0	0	65	
cSH	1700	929	1700	1700	1700	
Volume to Capacity	0.00	0.03	0.18	0.22	0.15	
Queue Length 95th (m)	0.0	0.7	0.0	0.0	0.0	
Control Delay (s)	0.0	1.6	0.0	0.0	0.0	
Lane LOS	A	A				
Approach Delay (s)	0.0	0.6		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			45.4%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
11: Carlaw Ave & Gerrard St E

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	60	360	55	80	380	150	40	215	65	120	340	80
Future Volume (vph)	60	360	55	80	380	150	40	215	65	120	340	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6			4.6			4.7			4.7	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frpb, ped/bikes		0.98			0.94			0.97			0.98	
Flpb, ped/bikes		0.99			0.99			0.99			0.98	
Frt		0.98			0.96			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		3264			3053			3210			3244	
Flt Permitted		0.81			0.82			0.84			0.78	
Satd. Flow (perm)		2661			2516			2720			2557	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	375	57	83	396	156	42	224	68	125	354	83
RTOR Reduction (vph)	0	13	0	0	43	0	0	31	0	0	19	0
Lane Group Flow (vph)	0	482	0	0	592	0	0	303	0	0	543	0
Confl. Peds. (#/hr)	220		160	160		220	105		140	140		105
Confl. Bikes (#/hr)			10			15			5			5
Heavy Vehicles (%)	2%	2%	0%	4%	3%	0%	3%	4%	0%	2%	3%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.4			33.4			29.3			29.3	
Effective Green, g (s)		34.4			34.4			30.3			30.3	
Actuated g/C Ratio		0.46			0.46			0.41			0.41	
Clearance Time (s)		5.6			5.6			5.7			5.7	
Lane Grp Cap (vph)		1237			1169			1113			1046	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.24			0.11			c0.21	
v/c Ratio		0.39			0.51			0.27			0.52	
Uniform Delay, d1		12.9			13.9			14.5			16.4	
Progression Factor		0.33			0.68			1.00			0.84	
Incremental Delay, d2		0.9			1.5			0.6			1.8	
Delay (s)		5.2			10.9			15.1			15.6	
Level of Service		A			B			B			B	
Approach Delay (s)		5.2			10.9			15.1			15.6	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		11.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)			9.3				
Intersection Capacity Utilization		87.6%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Signalized Intersection Capacity Analysis
12: Carlaw Ave & Dundas St E

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	55	415	55	70	435	40	50	240	75	60	330	95
Future Volume (vph)	55	415	55	70	435	40	50	240	75	60	330	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)		4.6			4.6			4.9			4.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.95			0.95	
Flpb, ped/bikes		0.93			0.96			0.99			0.98	
Frt		1.00			1.00			0.99			0.97	
Flt Protected		0.95			0.95			0.99			0.99	
Satd. Flow (prot)		1542			1594			3124			3132	
Flt Permitted		0.37			0.38			0.83			0.85	
Satd. Flow (perm)		605			633			2599			2676	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	432	57	73	453	42	52	250	78	62	344	99
RTOR Reduction (vph)	0	6	0	0	4	0	0	29	0	0	27	0
Lane Group Flow (vph)	57	483	0	73	491	0	0	351	0	0	479	0
Confl. Peds. (#/hr)	145		95	95		145	130		140	140		130
Confl. Bikes (#/hr)			25			35			5			5
Heavy Vehicles (%)	2%	1%	0%	1%	1%	2%	0%	4%	0%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	6
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.4			41.4			27.1			27.1	
Effective Green, g (s)		42.4			42.4			28.1			28.1	
Actuated g/C Ratio		0.53			0.53			0.35			0.35	
Clearance Time (s)		5.6			5.6			5.9			5.9	
Lane Grp Cap (vph)		320			335			912			939	
v/s Ratio Prot		0.27			c0.27							
v/s Ratio Perm		0.09			0.12			0.14			c0.18	
v/c Ratio		0.18			0.22			0.39			0.51	
Uniform Delay, d1		9.8			12.1			19.5			20.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.2			1.5			1.2			2.0	
Delay (s)		11.0			14.0			20.7			22.5	
Level of Service		B			B			C			C	
Approach Delay (s)		13.7			13.8			20.7			22.5	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay		17.3			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		80.0			Sum of lost time (s)			9.5				
Intersection Capacity Utilization		84.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												










HCM Unsignalized Intersection Capacity Analysis
13: Laneway W & Langley Ave

FTSAT
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	15	0	0	10	0	5
Future Volume (Veh/h)	15	0	0	10	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	0	0	11	0	6
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			27		38	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		38	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1576		967	1041
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	17	11	6			
Volume Left	0	0	0			
Volume Right	0	0	6			
cSH	1700	1576	1041			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (m)	0.0	0.0	0.1			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			16.2%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
14: Laneway E & Langley Ave

FTSAT
07-19-2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	15	5	0	5	0	0
Future Volume (Veh/h)	15	5	0	5	0	0
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)	16	5	0	5	0	0
Pedestrians					10	
Lane Width (m)					3.0	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			31		34	28
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			31		34	28
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1571		973	1039
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	21	5	0			
Volume Left	0	0	0			
Volume Right	5	0	0			
cSH	1700	1571	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			9.5%	ICU Level of Service	A	
Analysis Period (min)			15			










HCM Unsignalized Intersection Capacity Analysis
15: Pape Ave & Rivedale Ave

FTSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	260	50	5	10	55	25	5	25	20	55	30	215
Future Volume (vph)	260	50	5	10	55	25	5	25	20	55	30	215
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	271	52	5	10	57	26	5	26	21	57	31	224
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	328	93	52	312								
Volume Left (vph)	271	10	5	57								
Volume Right (vph)	5	26	21	224								
Hadj (s)	0.22	-0.15	-0.20	-0.38								
Departure Headway (s)	5.2	5.2	5.3	4.7								
Degree Utilization, x	0.47	0.13	0.08	0.41								
Capacity (veh/h)	660	629	592	711								
Control Delay (s)	12.7	9.0	8.7	11.0								
Approach Delay (s)	12.7	9.0	8.7	11.0								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay	11.3											
Level of Service	B											
Intersection Capacity Utilization	57.4%			ICU Level of Service			B					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
16: Pape Ave & Langley Ave

FTSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	5	0	45	60	5
Future Volume (Veh/h)	10	5	0	45	60	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	6	0	56	75	6
Pedestrians	75					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				64		
pX, platoon unblocked						
vC, conflicting volume	209	153	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209	153	156			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	736	844	1349			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	56	81			
Volume Left	12	0	0			
Volume Right	6	0	6			
cSH	769	1349	1700			
Volume to Capacity	0.02	0.00	0.05			
Queue Length 95th (m)	0.6	0.0	0.0			
Control Delay (s)	9.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	22.6%			ICU Level of Service		A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
17: Pape Ave & Poucher St

FTSAT
07-19-2022

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (veh/h)	5	5	45	5	0	55
Future Volume (Veh/h)	5	5	45	5	0	55
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	6	6	54	6	0	66
Pedestrians	70					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (m)			22			
pX, platoon unblocked						
vC, conflicting volume	193	127			130	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	193	127			130	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	755	876			1385	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	60	66			
Volume Left	6	0	0			
Volume Right	6	6	0			
cSH	811	1700	1385			
Volume to Capacity	0.01	0.04	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	9.5	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.5	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		22.4%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Signalized Intersection Capacity Analysis
18: Pape Ave & Future Site Access

FTSAT
07-19-2022

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (vph)	45	0	0	0	0	60
Future Volume (vph)	45	0	0	0	0	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5				3.5	
Lane Util. Factor	1.00				1.00	
Frpb, ped/bikes	1.00				0.82	
Flpb, ped/bikes	1.00				1.00	
Frt	1.00				0.86	
Flt Protected	0.95				1.00	
Satd. Flow (prot)	1785				1336	
Flt Permitted	0.95				1.00	
Satd. Flow (perm)	1785				1336	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	52	0	0	0	0	70
RTOR Reduction (vph)	0	0	0	0	13	0
Lane Group Flow (vph)	52	0	0	0	57	0
Confl. Peds. (#/hr)	95					95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Prot				NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	3.2				48.9	
Effective Green, g (s)	4.2				49.9	
Actuated g/C Ratio	0.07				0.82	
Clearance Time (s)	4.5				4.5	
Vehicle Extension (s)	3.0				3.0	
Lane Grp Cap (vph)	122				1091	
v/s Ratio Prot	c0.03				c0.04	
v/s Ratio Perm						
v/c Ratio	0.43				0.05	
Uniform Delay, d1	27.3				1.1	
Progression Factor	1.00				1.00	
Incremental Delay, d2	2.4				0.1	
Delay (s)	29.7				1.2	
Level of Service	C				A	
Approach Delay (s)	29.7			0.0	1.2	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay		13.3		HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio		0.08				
Actuated Cycle Length (s)		61.1		Sum of lost time (s)	7.0	
Intersection Capacity Utilization		25.8%		ICU Level of Service	A	
Analysis Period (min)		15				
c Critical Lane Group						















HCM Signalized Intersection Capacity Analysis
19: Pape Ave & Gerrard St E

FTSAT
07-19-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	95	420	30	30	480	15	30	45	40	50	65	125
Future Volume (vph)	95	420	30	30	480	15	30	45	40	50	65	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5			3.5			3.5			3.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Flpb, ped/bikes		0.99			0.98			0.94			0.94	
Flpb, ped/bikes		0.96			0.99			0.98			0.97	
Frt		0.99			1.00			0.95			0.93	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		3204			3356			1619			1556	
Flt Permitted		0.77			0.90			0.89			0.92	
Satd. Flow (perm)		2504			3043			1467			1452	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	442	32	32	505	16	32	47	42	53	68	132
RTOR Reduction (vph)	0	6	0	0	3	0	0	24	0	0	15	0
Lane Group Flow (vph)	0	568	0	0	550	0	0	97	0	0	238	0
Confl. Peds. (#/hr)	400		150	150		400	130		210	210		130
Heavy Vehicles (%)	0%	3%	0%	0%	2%	0%	0%	2%	0%	0%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.5			34.5			30.5			30.5	
Effective Green, g (s)		35.5			35.5			31.5			31.5	
Actuated g/C Ratio		0.48			0.48			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		1201			1459			624			618	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.18			0.07			c0.16	
v/c Ratio		0.47			0.38			0.16			0.39	
Uniform Delay, d1		13.0			12.2			13.1			14.6	
Progression Factor		0.82			1.00			1.00			1.00	
Incremental Delay, d2		1.2			0.7			0.5			1.8	
Delay (s)		11.9			13.0			13.6			16.4	
Level of Service		B			B			B			B	
Approach Delay (s)		11.9			13.0			13.6			16.4	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		13.2			HCM 2000 Level of Service						B	
HCM 2000 Volume to Capacity ratio		0.43										
Actuated Cycle Length (s)		74.0			Sum of lost time (s)						7.0	
Intersection Capacity Utilization		76.7%			ICU Level of Service						D	
Analysis Period (min)		15										
c Critical Lane Group												


HCM Unsignalized Intersection Capacity Analysis
20: Logan Ave & Simpson Ave

FTSAT
07-19-2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Future Volume (vph)	0	0	0	0	60	15	10	175	10	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	67	17	11	194	11	0	0	0
Direction, Lane #	WB 1		NB 1									
Volume Total (vph)	84		216									
Volume Left (vph)	0		11									
Volume Right (vph)	17		11									
Hadj (s)	-0.12		-0.01									
Departure Headway (s)	4.3		4.1									
Degree Utilization, x	0.10		0.25									
Capacity (veh/h)	795		859									
Control Delay (s)	7.7		8.4									
Approach Delay (s)	7.7		8.4									
Approach LOS	A		A									
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization	30.8%				ICU Level of Service				A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
21: Carlaw Ave & Langley Ave

FTSAT
07-19-2022

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕↕	↕↕	
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
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)	0	0	0	0	0	0
Pedestrians	55					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				115		
pX, platoon unblocked						
vC, conflicting volume	55	55	55			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55	55	55			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	952	1007	1563			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	0	0	0	0		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.00	0.00	0.00		
Queue Length 95th (m)	0.0	0.0	0.0	0.0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.1%	ICU Level of Service		A
Analysis Period (min)			15			