

TRAFFIC IMPACT STUDY & PARKING STUDY

Proposed Residential Apartment Addition
1785 Bloor Street
City of Mississauga, Region of Peel

June 2022

Prepared for
1785 Bloor Holdings Inc.

c/o Sajecki Planning



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June 6, 2022

1785 Bloor Holdings Inc.
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c/o Ms. Michi McCloskey, MA IDS
Sajecki Planning

Re: Proposed 14-Storey Residential Apartment Building, 1785 Bloor Street, Mississauga, ON – Traffic Impact and Parking Study

TRANS-PLAN is pleased to submit this Traffic Impact and Parking Study for the proposed residential expansion to the existing 76-unit apartment building at 1785 Bloor Street in the City of Mississauga, proposing a 14-storey apartment building with 238 dwelling units. The existing apartment is to remain, for a total of 314 residential dwelling units on the property.

Our findings indicate that the proposed development can be accommodated on the surrounding road network without any improvements other than constructing the proposed driveways. Further, the proposed auto parking supply of 0.92 spaces per unit is expected to be sufficient based on our review of the existing parking supply and demand at the 76 unit apartment. Units are to be catered to those who do not own a personal vehicle and would utilize the alternative modes of travel in the study area.

A Transportation Demand Management plan has also been included in this report, discussing how the subject site can reduce single-occupant vehicle travel and encourage alternative modes of travel.

The Bloor Street Integrated Project is a planning study being prepared by the City, which includes roadway improvements along Bloor Street fronting the subject site. As the study is ongoing, further coordination is expected to be required between the City and applicant of the subject site to discuss the proposed signal control and access configuration.

Sincerely,

Anil Seegobin, P.Eng.
Partner, Engineer

Trans-Plan Transportation Inc.
Transportation Consultants



Charles Chung, EIT
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Transmittal Letter

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1. INTRODUCTION

Trans-Plan has been retained by 1785 Bloor Holdings Inc. to complete a Traffic Impact Study and Parking Study for a proposed 14-storey residential apartment at 1785 Bloor Street, Mississauga. The study components include the following tasks:

Traffic Impact Study

- A review and assessment of the existing road network
- A review of the site context and development proposal
- An assessment of future background conditions based on anticipated traffic growth, area developments and planned transportation improvements in the study area
- An assessment of the impact of site-generated traffic on the adjacent roadway network under future background and total traffic conditions
- Determination of roadway and intersection improvements and transit and pedestrian / cycling infrastructure improvements, as required, to accommodate the proposed development

Parking Study

- A review of the auto parking supply and requirements based on the City's By-law
- Conduction of parking utilization surveys to determine existing parking requirements, and provide an analysis of future parking demands including that generated from the additional apartment building
- Provide justification for reduced parking provisions at the site, if necessary.

Traffic Demand Management (TDM) Plan

- a review of the study area roadways for transit and active transportation facilities
- a review of TDM guidelines to determine the TDM measures that would be appropriate for the planned development in terms of context, scale and land use

Prior to conducting this study, transportation staff at the City of Mississauga staff was provided a term of reference to confirm the study scope and methodology.

2. SITE CONTEXT

The subject site, shown in Figure 1, is located on the north side of Bloor Street, approximately 150m west of Bridgewood Drive in the City of Mississauga. The lot is currently occupied by an existing 10-storey apartment building containing 76 residential units, with access to the site provided from Bloor Street. The unit breakdown is as follows:

- Bachelor: 20 units
- 1-Bedroom: 18 units
- 2-Bedroom: 38 units

Land uses in the immediate area surrounding the site include mostly high-rise apartment buildings with some commercial/service uses to the west, and a high school located to the north. Adjacent east is

Ontario Hydro owned lands. Beyond the immediate area surrounding the site, land uses consist mostly of low-density detached dwellings.

3. PROPOSED DEVELOPMENT

The site plan, provided by onespace, is shown in Figure 2. The proposed development consists of a new 14-storey apartment building addition to the lot, consisting of 238 units. The unit breakdown is as follows:

- 1-Bedroom: 73 units
- 2-Bedroom: 126 units
- 3-Bedroom: 39 units

The existing apartment building on site is to remain unchanged, with the new structure to be in place of the existing parking lot. A total of 314 residential units are to be provided on-site, including the existing 76 units. The unit breakdown is as follows:

- Bachelor: 20 units
- 1-Bedroom: 91 units
- 2-Bedroom: 164 units
- 3-Bedroom: 39 units

Parking on site is to be provided via 19 at-grade visitor parking spaces, and two levels of underground parking consisting of 270 spaces. In total, 289 parking spaces are provided, with 48 visitor parking spaces and 241 resident parking spaces. Although not included in the total parking count, 15 tandem parking spaces are also provided in the underground levels for resident use to be coordinated. Access to the site is currently to remain via the existing drive aisle from Bloor Street.

4. EXISTING CONDITIONS

4.1 Road Network

The roadways located in the study area are described as follows:

Bloor Street is an arterial road that runs in an east-west direction, under the jurisdiction of the City of Mississauga. It consists of four travel lanes, two in each direction. The posted speed limit within the study area is 50km/h.

Fieldgate Drive is a local road under the jurisdiction of the City of Mississauga, running in a north-south direction. It has two travel lanes, one in each direction. The speed limit is unposted, and is assumed to be 50 km/h.

Bridgewood Drive is a local road under the jurisdiction of the City of Mississauga, running in a north-south direction. It has two travel lanes, one in each direction. The speed limit is unposted, and is assumed to be 50 km/h.

There is also a Signalized Pedestrian Crossing (PXO) located between the 1745-1759 site access driveways (30m west of subject site access), which will be included in the road network analyzed through this report.

The existing study area roadway characteristics are shown in Figure 3.

4.2 Transit Service

The site is served by MiWay Transit, which provides transit routes across the city. The MiWay transit routes serving the area are as follows:

MiWay Route 3, Bloor is a local bus route operating mainly in an east-west orientation along Bloor Street. The route connects riders from the Mississauga City Centre Transit Terminal at Square one to Kipling Terminal. The nearest stop is located at the signalized PXO approximately 40-meters west of the subject site access.

MiWay Route 307, Philip Pocock-Bloor East is a high school bus route, operating exclusively with an eastbound route. The first stop is Philip Pocock Catholic Secondary School, then travels southbound as it services various secondary schools along Tomken Road, before travelling eastbound along Bloor Street, and the route ending at Kipling Terminal. As it is an exclusive eastbound route dedicated to secondary schools, the route is only operational during weekdays, and in service once per day. The nearest stop is located at the signalized PXO approximately 40-meters west of the subject site access.

The approximate service times and peak service frequencies for the above routes are shown below in Table 1. A transit map is also provided in Figure 4.

Table 1 – Transit Service in Study Area

YRT Route	Nearest Transit Stop to Site	Approximate Service Times		Approximate Peak Service Frequency (min)		
		Weekdays (WD)	Saturday (SAT)	WD AM	WD PM	SAT
3, Bloor	40m west of 1785 Bloor Street Site Access	4:06 – 3:32	05:20 – 01:03	15	13	22
307, Philip Pocock – Bloor East	40m west of 1785 Bloor Street Site Access	14:38	Not in Operation	-	-	-

Source: Triplinx website

4.3 Traffic Counts

Trans-Plan conducted turning movement counts (TMCs) at the study area intersection(s) and driveway(s) on Thursday November 25, 2021 (a typical weekday) during Step Three of Ontario's Roadmap to Reopen due to the ongoing Covid pandemic. The detailed TMC data, and signal timing plans, are provided in Appendix A, and the count dates, times and peak hours are summarized below in Table 2.

Table 2 – Turning Movement Counts, Study Area Intersections and Driveways

Location	Count Date	Count Hours	Peak Hours
Bloor Street and Bridgewood Drive (Signalized Intersection)	Thursday November 25, 2021	7:00am – 9:30am 4:00pm – 6:30pm	8:00am – 9:00am 4:45pm – 5:45pm
Bloor Street and Fieldgate Drive (Signalized Intersection)			8:00am – 9:00am 4:00pm – 5:00pm
Bloor Street and 1785 Bloor Street Site Access			8:00am – 9:00am 3:00pm – 4:00pm

The existing traffic volumes for the weekday AM and PM peak hours are shown in Figure 5.

5. FUTURE BACKGROUND CONDITIONS

The future background traffic volumes for the weekday AM and PM peak hours are shown in Figure 6, based on review of background traffic growth, planned developments and roadway improvements.

5.1 Background Growth Rate

City of Mississauga Transportation Planning Staff were contacted to discuss a feasible growth rate for the study area roadways. It was recommended a 1% growth rate be applied to westbound AM peak traffic volumes, and a 0.5% growth rate applied to the eastbound PM peak traffic volumes. The growth rate was applied to the study area intersections for a future horizon year of 2027.

5.2 Background Developments

Based on review of the City of Mississauga's Active Development Applications, there are two notable background developments near the site that may have traffic impacts on the study area intersection(s) and driveway(s). These developments and their details are listed below in Table 3.

Table 3 – Planned Background Developments

No.	City File No.	Location	Description of Application	Trip Generation Source
DEV 1	OZ 17/014 W3	1750 Bloor Street & 3315 Fieldgate Drive	A 17-storey apartment building and a 1-storey amenity building. The two existing apartment buildings will remain.	Table 2 of the Traffic Impact Study Addendum, dated April 2020, prepared by LEA Consulting Ltd.
DEV 2	OZ 20-003 W3	1840 to 1850 Bloor Street	Two 18-storey apartment buildings containing 433 residential units. The two existing apartment buildings will remain.	Figure 7 of the Urban Traffic Considerations Report, dated February 2020, prepared by BA Group

The above noted developments and their respective traffic impact studies were referenced to obtain trip generation and distribution, which were then distributed to the study area intersections. It should be noted that the traffic study for the development at 1750 Bloor Street, opposite south of the subject development, did not include the drop-off area along Bloor Street in the analysis of future total traffic conditions, indicating it would be removed. In this case, traffic volumes obtained from the drop-off area and main driveway access were consolidated, with the intersection layout from its respective TIS carried forward through this analysis.

The trip generation and assignment figures for these above background developments are provided in Appendix B.

5.3 Future Roadway Improvements

The City of Mississauga has initiated the Bloor Street Integrated Project, a planning and preliminary design study for various road improvements to the Bloor Street corridor, which includes the section analyzed in

this report. The road improvements planned through the Integrated Road Program will focus on road rehabilitation, road safety, noise walls, street-lighting, and cycling and transit facilities.

The major changes to the section of Bloor Street within the study area will include widening the roadway to incorporate a signalized intersection at the driveways of 1759 and 1750 Bloor Street, replacing the pedestrian cross-over. The City may also be contemplating one-way cycling tracks on both the north and south sides, with a curb/splash pad buffer between the roadway and new cycling lanes. The boulevard and pedestrian sidewalk are also to be maintained.

It is also noted that due to the Bloor Street project, the existing driveway access may be required to be relocated further east as to not impact the proposed signal location. A second option that was discussed would be consolidating the access of the subject site with the adjacent property for 1759 Bloor Street, allowing the use of the proposed signal on Bloor Street.

Notwithstanding the coordination and agreements necessary with the neighbour, there would also be traffic operational concerns needed to be addressed. The shared access point would require a connection from the subject site to the driveway on 1759 Bloor Street, while also continuing to provide connection internally to the existing apartment on-site, and the proposed apartment addition. This would create additional conflict points with vehicles and pedestrians crossing the connections. Larger vehicles, such as waste, loading, and emergency services, would all be required to utilize the shared driveway and internal connections to service the subject site, further increasing the potential traffic conflicts. The internal connection would need to be located an acceptable spacing from the traffic signal to accommodate southbound vehicle queues, while allowing the subject site traffic to exit onto the 1759 Bloor Street driveway. This would further impact the existing parking spaces and operations of the 1759 Bloor Street property.

Further coordination with the City, and their ongoing Bloor Street project, is to be completed during this development application process to determine an acceptable access configuration for the subject site.

6. SITE TRAFFIC

6.1 Trips Generated by Existing Uses

The existing site uses consist of a 10-storey apartment building containing 76 residential units. A site visit and observation of the site access was conducted on Thursday November 25th, 2021. This included an in-out count of vehicles at the site access to determine the regular number of vehicles entering and exiting the site during the peak hours on a typical weekday. Detailed traffic counts from the existing driveway access are provided in Appendix A, and summarized below in Table 4.

Table 4 – Existing Site Trip Generation

Location	Units	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
1785 Bloor Street (Existing 10-Storey Apartment Building)	76	13	16	18	20
Total		29		38	

Based on the above information, the existing residential apartment building generates approximately 29 and 38 two-way trips during the AM and PM peak hours, respectively.

6.2 Trip Generation for Additional Development

The auto trip rates from the Institute of Transportation Engineers (ITE) Trip Generation manuals, 10th Edition, Land Use Code (LUC) 222 for Multifamily Housing (High-Rise) was referenced to estimate the trip volumes generated by the new apartment building. The estimated trip generation for the new residential addition is shown below in Table 5.

Table 5 – Site Trip Generation

Land Use	Size (units)	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (High-Rise)	238						
ITE Code 222	Distribution	26%	74%	100%	61%	39%	100%
	Equation	$T = 0.28(X) + 12.86$			$T = 0.34(X) + 8.56$		
	Rate	0.08	0.25	0.33	0.23	0.15	0.38
	Trips	21	59	80	54	35	89

Based on ITE's trip generation rates, the new apartment building on-site is expected to generate approximately 80 and 89 new two-way trips during the weekday AM and PM peak hours, respectively.

6.3 Trip Distribution and Assignment

Site trips for the proposed development were distributed to / from the subject site and the boundary roadways based on existing travel patterns obtained from the study area intersection and site driveway counts.

The existing directional distribution of traffic volumes along Bloor Street was analyzed, with the resulting volume split approximately 60 percent eastbound / 40 percent westbound during the weekday AM peak hour and approximately 55 percent westbound / 45 percent eastbound during the weekday PM peak hour. The estimated site traffic assignment for the weekday AM and PM peak hours is shown in Figure 7.

7. FUTURE TOTAL CONDITIONS

The future total traffic volumes for the horizon year 2027 during the weekday AM and PM peak hours are shown in Figure 8, respectively, obtained by adding the site trip assignment to the future 2028 background traffic volumes.

8. CAPACITY AND VEHICLE QUEUING ANALYSIS

8.1 Capacity Analysis

A capacity analysis was performed for the study area roadways using Synchro analysis software. The capacity analysis results of the weekday AM and PM peak hours are shown in Appendix C. Capacity Analysis and Queue Sheets are provided in Appendix C.

According to the City of Mississauga Traffic Impact Study guidelines, a volume-to-capacity (v/c) ratio of 0.85 or less is considered acceptable for signalized intersections, and a v/c of 0.90 or less is acceptable for exclusive turning movements.

The results for the study area intersections and driveway(s) are summarized as follows:

Bloor Street & Bridgewood Drive

Under existing conditions, this intersection operates well at an overall LOS of A during the AM and PM peak hours, with a maximum v/c ratio and delay of 0.40 and 34 seconds during the PM peak hour

Under future 2027 total traffic conditions, it is expected to continue operating well at an overall LOS of B and A during the AM and PM peak hour, respectively. All individual movements operate acceptably with v/c ratios of 0.68 or better.

Bloor Street & 1785 Bloor Street Driveway

Under existing conditions, the driveway operates effectively at an overall LOS of A, with a maximum v/c ratio and delay of 0.37 and 18 seconds during the PM peak hour.

Under future 2027 total traffic conditions, it is expected to continue operating well at an overall LOS of A, with the maximum delay for southbound motorists increasing marginally to 19 seconds.

Bloor Street & 1750 Bloor Street Driveway / 1759 Bloor Street Driveway

Under existing conditions, the driveway operates effectively at an overall LOS of A, with a maximum v/c ratio and delay of 0.28 and 22 seconds during the PM peak hour.

Under future conditions, the intersection has been signalized, utilizing the signal timings at Bridgewood Drive as the basis for the timings. The intersection is expected to continue operating well, with an overall LOS of A. All individual movements are expected to operate with reserve capacity.

Bloor Street & Fieldgate Drive

Under existing conditions, this intersection operates well at an overall LOS of B during the AM and PM peak hours, with a maximum v/c ratio and delay of 0.74 and 47 seconds during the AM peak hour

Under future 2027 total traffic conditions, it is expected to continue operating well at an overall LOS of B during the AM and PM peak hour. All individual movements operate acceptably with v/c ratios of 0.74 or better.

Table 6 - Capacity Analysis Results

Intersection	Existing Traffic Conditions						Background Traffic Conditions						Total Traffic Conditions					
	Weekday AM Peak			Weekday PM Peak			2027 Weekday AM			2027 Weekday PM			2027 Weekday AM			2027 Weekday PM		
	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
Bloor Street & Bridgewood Drive	0.38	9	A	0.39	6	A	0.50	13	B	0.49	9	A	0.51	13	B	0.51	9	A
Eastbound Through / Left / Right	0.38	6	A	0.30	4	A	0.45	8	A	0.37	6	A	0.46	8	A	0.38	6	A
Westbound Through / Left / Right	0.22	5	A	0.40	5	A	0.28	7	A	0.51	7	A	0.28	7	A	0.53	7	A
Northbound Through / Left / Right	0.30	32	C	0.16	33	C	0.68	37	D	0.41	33	C	0.68	37	D	0.41	33	C
Southbound Through / Left / Right	0.37	32	C	0.29	34	C	0.34	29	C	0.31	32	C	0.34	29	C	0.31	32	C
Bloor Street & 1785 Bloor Street Driveway																		
Eastbound Through	0	A		0	A		0	A		0	A		1	A		0.51	9	A
Eastbound Through / Left	0	A		0	A		0	A		0	A		0	A		0.38	6	A
Westbound Through	0	A		0	A		0	A		0	A		0	A		0.53	7	A
Westbound Through / Right	0	A		0	A		0	A		0	A		0	A		0.41	33	C
Southbound Left / Right	13	B		18	C		14	B		19	C		17	C		0.31	32	C
1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street																		
Eastbound Through / Left / Right	0	A		0	A		0.35	6	A	0.37	4	A	0.35	6	A	0.37	4	A
Westbound Through / Left / Right	0	A		0	A		0.37	4	A	0.38	4	A	0.37	4	B	0.39	4	B
Northbound Through / Left / Right	21	C		22	C		0.29	4	A	0.4	4	A	0.3	4	B	0.41	4	B
Southbound Through / Left / Right	0	A		0	A		0.22	34	C	0.02	37	D	0.22	34	C	0.02	37	D
Bloor Street & Fieldgate Drive	0.41	18	B	0.43	15	B	0.44	18	B	0.46	15	B	0.46	18	B	0.47	14	B
Eastbound Left	0.28	7	A	0.22	5	A	0.31	7	A	0.24	5	A	0.33	7	A	0.25	5	A
Eastbound Through / Right	0.28	8	A	0.28	6	A	0.30	8	A	0.33	6	A	0.31	8	A	0.34	6	A
Westbound Left	0.09	11	B	0.15	8	A	0.10	11	B	0.18	9	A	0.10	11	B	0.18	9	A
Westbound Through / Right	0.27	12	B	0.38	9	A	0.34	13	B	0.41	10	B	0.36	13	B	0.42	10	B
Northbound Left	0.33	34	C	0.40	39	D	0.36	34	C	0.39	39	D	0.36	34	C	0.39	39	D
Northbound Through / Right	0.16	32	C	0.15	36	D	0.16	32	C	0.15	36	D	0.16	32	C	0.15	36	D
Southbound Left	0.74	47	D	0.67	47	D	0.74	47	D	0.67	47	D	0.74	47	D	0.67	47	D
Southbound Through / Right	0.23	32	C	0.28	37	D	0.24	32	C	0.28	37	D	0.24	32	C	0.28	37	D

8.2 Vehicle Queuing Analysis

A vehicle queuing analysis was performed for the study area intersections and driveways using SimTraffic analysis software, under the critical future 2027 total traffic conditions. A 30-minute seeding interval and 60-minute recording period was used, and the simulation was run 3 times.

The SimTraffic output sheets are provided in Appendix C, and the 95th percentile queue results are shown in Table 7.

Table 7 – Vehicle Queuing Analysis Results, Future 2027 Total Traffic Conditions

Intersection Movement	95 th Percentile Vehicle Queues	
	Weekday AM Peak Hour	Weekday PM Peak Hour
Bloor Street & Bridgewood Drive		
Eastbound Left / Through	54	45
Eastbound Through / Right	58	56
Westbound Left / Through	37	55
Westbound Through / Right	30	57
Northbound Left / Through / Right	51	33
Southbound Left / Through / Right	30	26
Bloor Street & 1785 Bloor Street Driveway		
Southbound Left / Right	10	13
Bloor Street & 1750 Bloor Street Driveway		
Eastbound Left / Through	45	49
Eastbound Through / Right	47	56
Westbound Left / Through	42	85
Westbound Through / Right	50	87
Bloor Street & Fieldgate		
Eastbound Left	28	31
Eastbound Through	47	53
Eastbound Through / Right	48	59
Westbound Left	16	21
Westbound Through	60	76
Westbound Through / Right	61	78
Northbound Left	22	25
Northbound Through / Right	23	18
Southbound Left	46	37
Southbound Through / Right	56	40

Based on the above queuing analysis, the 95th percentile vehicles queues for the signalized study area intersections are expected to be acceptable during the weekday AM and PM peak hours, under future 2027 total traffic conditions.

Once the signal control at 1750 Bloor Street is implemented, westbound vehicle queues may extend up to approximately 87m, or approximately 12 vehicle lengths. These vehicle queues would extend past the subject site access, however, coordination with the City is to be completed to determine the relocation of

the subject site access. Based on the capacity analysis of these driveways, the control delay is minor and any vehicle queues would only affect drivers exiting the site for a brief period of time.

9. PEDESTRIAN CROSSING REVIEW

Trans-Plan's site visit on Thursday, November 25th, 2021, also included observations of the existing PXO along Bloor Street, approximately 40m west of the site driveway, to determine its impact on the driveway access during the peak hours, based on the total number of pedestrian calls made, and the average number of vehicles queued as a result. Table 8 below summarizes the information collected from the observations, with detailed results provided in Appendix D.

Table 8 – Survey Results of Existing PXO along Bloor Street

Location:	AM Peak Hour	PM Peak Hour
Signalized PXO, 30m west of 1785 Bloor Street Driveway		
Duration of PXO All-Red Time (Seconds)	30	
Number of Calls made per hour	13	14
Average Number of Vehicles Queued per hour	5	9
Observed Maximum Number of Vehicles Queued	12	14
Approximate Vehicle Queue Length = 5.6 (TAC Standard Vehicle Design Length) x Observed Max. Number of Vehicles Queued	5.6 x 12 = 67m	5.6 x 14 = 78m

As noted above, observations confirmed a maximum queue of 12 and 14 vehicles at the PXO during the AM and PM peak hours, respectively. Based on this information, an approximate length of those maximum vehicle queues was determined using the TAC standard vehicle design length of 5.6-meters.

Although in some instances the westbound vehicle queue extended to and/or past the 1750 Bloor Street driveway, the total time vehicles spent queued at the PXO was never greater than 45 seconds, as the PXO signal displays all-red to east and westbound traffic for a total of 30 seconds, after which through traffic can proceed. Observations also confirmed the larger vehicle queues were typically westbound platoons of vehicles approaching the PXO at the tail-end of the pedestrian phase, and as a result were stopped for an even shorter period. In any case, vehicles entering or exiting the 1785 Bloor Street driveway were not observed to be queued extensively while waiting for the westbound vehicle queue to clear from the PXO.

9.1 Summary of Findings

As previously noted, the capacity analysis indicates that the study area intersections can accommodate the additional traffic generated by the site and are expected to continue operating acceptably in horizon year 2027. Given the similar v/c ratios and control delays between the analysis of future background and total traffic conditions, all intersection movements are expected to continue operating similarly to existing conditions, with minor increases in delays anticipated. In this case, the additional site traffic is not

expected to have a significant impact on the roadway, in the form of queueing through the adjacent driveway accesses, or the PXO (which is to be removed for a full signal control intersection in the future).

10. PARKING STUDY

10.1 Existing Parking Requirements

A parking study was conducted to determine the parking demands of the existing residential development and to compare the demand with the parking supply and City of Mississauga Zoning By-law requirements for parking. The existing site parking requirements, based on the City Zoning By-law 0225-2007 (see Appendix E), are summarized in Table 9.

Table 9 – Existing Site Parking Requirements, City of Mississauga By-law 0225-2007

Land Use	Size (units)	Minimum Requirements		Existing Supply
		Rate	Spaces	
Bachelor (studio unit)	20	1.00 spaces per unit	20	88
1-Bedroom	18	1.18 spaces per unit	21	
2-Bedroom	38	1.36 spaces per unit	52	
Visitor	76	0.20 spaces per unit	15	11
Total	76		108	99

Source: City of Mississauga Zoning By-law 0225-2007

The City's Zoning By-law parking requirement for the proposed uses is 108 spaces, whereas 99 spaces are provided on-site, resulting in a shortfall of 9 parking spaces. It should be noted there are 3 existing parking spaces designated for service vehicles, which were not included in the total count of residential spaces as they are not intended for residents or visitors to the building.

10.2 Proposed Parking Supply for New Development

Auto parking is provided at-grade, and an underground parking garage with 2 parking levels, broken down as follows:

- At-Grade (Visitor Parking Only): 19 spaces
- P1 and P2 Levels: 29 visitor parking on P1 level and 241 resident spaces

The total parking supply is 289 parking spaces. 15 tandem parking spaces are also provided for residents on the underground parking levels, but are not included in the parking supply count towards the requirements.

10.3 Auto Parking Requirements for New Development

Per the parking requirements in the City's By-law, the site is required to provide a total of 471 spaces, as calculated below in Table 10. The relevant excerpt of the By-law is provided in Appendix E.

Table 10 – Parking Requirements for New Development, City of Mississauga By-law 0225-2007

Land Use	Size (units)	Minimum Requirements		Proposed Supply
		Rate	Spaces	
Bachelor (studio unit)	20	1.00 spaces per unit	20	241
1-Bedroom	91	1.18 spaces per unit	107	
2-Bedroom	164	1.36 spaces per unit	223	
3-Bedroom	39	1.50 spaces per unit	59	
Visitor	314	0.20 spaces per unit	63	48
Total	314		472	289

Source: City of Mississauga Zoning By-law 0225-2007

Compared to the 472 space requirement, the proposed parking supply of 289 parking spaces results in a shortfall of 183 parking spaces.

10.4 Parking Utilization Survey

To better understand parking needs for the site, a parking utilization survey was conducted by Trans-Plan to determine the demand of the existing residential building.

The existing 76 unit apartment building provides 11 visitor parking spaces (~0.15 visitor spaces / unit), and 88 resident parking spaces (~1.15 resident spaces / unit).

The parking demand survey was conducted on a regular weekday (Thursday). Parking demands were recorded in 30 minute intervals for a 24-hour period. The detailed parking survey results are provided in Appendix D. A summary of parking demand results for the apartment building on the weekday surveyed is shown in Table 11.

Table 11 – Parking Utilization Survey Results, Peak Demands

1785 Bloor Street (76 units) Thursday November 25, 2021	AM	PM
Peak Time	4:00 AM	12:00 AM
Peak Demand (spaces)	64	70
Parking Utilization	0.84	0.92

The peak parking demand of the existing mixed-use building was 70 spaces, occurring at midnight. The peak rate was 0.92 spaces per unit. The parking rates generated from the existing development were utilized to generate estimated parking demand for the future development based on the new total number of dwelling units.

10.5 Expected Peak Parking Demand

To depict the peak parking demand of the future development more accurately, with the addition of the new residential building, parking rates and projected demand generated based on city by-law requirements were compared those generated by the surveyed peak parking rates.

Table 12 below shows a comparison of projected parking demands, generated using parking rates based on city by-law requirements, to those generated by the surveyed parking rate.

Table 12 – Comparison of Projected Parking Demand

1785 Bloor Street Parking Statistics	Existing Apartment (76 units)		Existing + Additional Development (314 units)	
	Required (City By-law)	Existing	Required (City By-law)	Proposed
Supply	108	99	472	289
Rate	$108 / 76 =$ 1.42	$99 / 76 =$ 1.30	$472 / 314 =$ 1.50	$289 / 314 =$ 0.92

As noted above, the City parking requirements generate a parking rate of 1.42 for the existing development, and 1.50 with the addition of the new residential development. The surveyed 0.92 rate generated from the current parking utilization survey estimates a peak demand of 289 total parking spaces.

10.6 Parking Supply Allocation

Based on the surveyed rate of 0.92 parking spaces / unit, 289 parking spaces are proposed for the residential development.

Table 13 – Parking Space Count

314 units	Resident Parking	Visitor Parking	Total	Tandem Spaces
Supply	241	48	289	15
Parking Rate	0.77 spaces / unit	0.15 spaces / unit	0.92 spaces / unit	0.05 spaces / unit

To match the existing visitor parking rate of 0.15 spaces / unit, 48 visitor parking spaces are proposed for the 314 residential units. The remaining 241 parking spaces are to be provided for residents. Although each unit would not have a vehicle parking space, the residential units would be catered to those who do not own a personal vehicle. In addition, 15 tandem spaces are provided for residents for an additional 0.05 resident spaces / unit. Although not included in the parking supply count for requirements, the additional spaces would allow residents who require additional spaces to purchase the tandem spaces.

11. ON-SITE CIRCULATION STUDY

11.1 Site Circulation Review

An on-site circulation study was conducted using AutoTurn vehicle turning template software to demonstrate that design vehicles can safely and efficiently access the site and their designated areas.

Figure 9 demonstrates a municipal 12m waste collection vehicle utilizing the proposed loading area without conflict. The vehicle forwards into the loading area, depicting a front-loader waste collection vehicle, and reverses out of the loading area to exit the site along the 6m drive aisle.

Figure 10 demonstrates a loading vehicle, represented by a TAC medium single-unit (MSU) vehicle, performing similar maneuvers as the waste collection vehicle. The vehicle reverses into the loading area, and forwards out to exit the site.

The underground parking levels provide 7m drive aisles, with all end parking spaces provided sufficient space to enter and exit the parking spaces without conflict with adjacent spaces or columns.

The vehicle turning templates show that the proposed driveways and internal drive aisles can accommodate the design vehicles and that site circulation is acceptable.

12. TRANSPORTATION DEMAND MANAGEMENT PLAN

A Transportation Demand Management (TDM) Plan is provided as part of this report in an effort to reduce traffic congestion and minimize parking demands by providing the public with a greater choice of opportunities to choose travel modes other than single-occupant vehicles. Our proposed TDM plan for the site is outlined as follows:

Pedestrian Connectivity

There is existing sidewalk infrastructure along all study area roadways, including Bloor Street which is approximately 15-20 meters south of the main entrance to the existing building, however there is currently not a walkway connection from the building to the sidewalk.

As previously noted in Section 5.3, the Bloor Street Integrated Roads Project is planning to widen the roadway, however as per the plans provided by the city, the sidewalk network and boulevard are to be maintained.

The site plan (see Figure 2) also illustrates proposed concrete sidewalks within the site, connecting the main entrances of both buildings to the sidewalk network along Bloor Street.

Cycling

The existing sidewalk network along Bloor Street connects to Fieldgate Drive, which provides a signed bike route providing connectivity to multi-use trails along other major roadways such as Dixie Road, and Burnhamthorpe Road East.

Based on the design plans for the Bloor Street Integrated Project, one-way cycling tracks are to be provided on both the north and south sides of Bloor Street, which will provide more exclusive connectivity to other cycling facilities located in the area.

The potential addition of cycling lanes along Bloor Street will provide incentive to both residents and visitors to choose cycling over driving.

188 long-term bicycle parking spaces, provided at 0.6 spaces / unit, are provided for resident use.

18 short-term bicycle parking spaces, provided at 0.05 spaces / unit, are also provided at-grade for visitor use.

Transit

As discussed in Section 4.2, the subject site is serviced by MiWay's Route 3 and Route 307, with bus stops located along Bloor Street approximately 40m west of the subject site. The route provides connections to other major roadways such as Dixie Road (westbound), or towards Kipling Avenue (eastbound), where other major MiWay routes can be accessed, providing connectivity to the extensive transit network available.

The Bloor Street Integrated Project currently does not indicate any transit improvements along the section of the corridor analyzed in this report. Furthermore, the Corporate Report for the Cross-Boundary Transit Service Integration Pilot Project, issued by the City of Mississauga on May 25th, 2021, was obtained and reviewed for relevant comments. This report identified opportunities for MiWay and TTC cross-boundary services, which included Bloor Street just west of the study area analyzed in this report. However, it was noted that Route 3 is expected to maintain its existing service levels through this pilot project.

Although there are currently no identified transit improvements for the section of Bloor Street analyzed in this report, the existing service is expected to generate some ridership due to the proximity of the bus stops to the subject site.

Communication Strategy

To inform residents and visitors of the alternative modes of travel available within the area, information packages should be provided and available at the reception area. The information packages could include the following:

- City of Mississauga Cycling Map
- Miway Transit Map and Route Schedules

This information package will assist those in planning their trips with the growing transit and cycling infrastructure within the study area.

13. SUMMARY AND CONCLUSIONS

13.1 Summary

This Traffic Impact Study, prepared for the proposed additional apartment building to the existing residential development at 1785 Bloor Street, Mississauga, ON, is summarized as follows:

Traffic Impact Study

- The existing residential development at the subject site consists of a 10-storey apartment building with 76 dwelling units.

- Based on TMC counts conducted at the subject site driveway, the existing residential development generates approximately 29 and 38 two-way trips during the AM and PM peak hours, respectively.
- The new addition to the site consists of a 14-storey apartment building including 238 dwelling units. A total of 314 residential units, and 289 parking spaces are proposed.
- Based on ITE's Trip Generation manual, the additional apartment building is expected to generate approximately 80 and 89 new two-way trips during the weekday AM and PM peak hours, respectively.
- The capacity analysis indicates that the site driveway, adjacent site driveways, and intersections along Bloor Street at Fieldgate Drive and Bridgewood Drive are expected to operate acceptably in horizon year 2027. No road improvements or signal timing adjustments are required to accommodate the traffic generated by the development.
- The vehicle queuing analysis indicates that the queue lengths at the site driveway, adjacent site driveways, and intersections along Bloor Street are expected to be acceptable in horizon year 2027.
- Observations of the existing Signalized Pedestrian Crossing (PXO) were conducted to confirm its impact on the site driveway, in the form of vehicle queuing while the pedestrian phase is active. Vehicle queues were noted to not exceed more than 14 vehicles during the PM peak hour. Additionally, the duration of queues was marginal, given the pedestrian phase only lasts 30 seconds.
- Considering the results from the capacity and queueing analysis of existing, future background and total traffic conditions at the site driveways were similar, it can be concluded that operations at the site driveway will likely remain the same. In conclusion, the PXO is not expected to create extensive delays for motorists entering or exiting the site driveway, or adjacent site driveways.
- Due to the ongoing Bloor Street study, a signal control was applied to the driveway at 1750 Bloor Street under future conditions, which is expected to replace the PXO in the future. Our analysis indicates that the roadway is expected to operate acceptably under these conditions.

Parking Study

- The existing development provides 88 parking spaces for residents, and 11 pay-to-park spaces for visitor use, for a total of 99 parking spaces.
- Proposed parking for the future development is to be provided via 289 parking spaces, at a proposed rate of 0.92 spaces / unit, through two levels of underground parking, and 19 at-grade parking spaces.
- Based on the City of Mississauga By-law 0225-2007, the development is required to provide a total of 472 parking spaces for the 314 residential units.
- To further understand parking demand at the site, a parking utilization survey was conducted on Thursday, November 25th, 2021. The following summarizes the results from this study:
 - Existing required parking rate based off city by-law = 1.42
 - Existing peak parking rate = 0.92
 - Future required parking rate based off city by-law = 1.50
- Projected parking demands for the new development were generated by using peak parking rates calculated from city by-law requirements (1.50) and compared to those generated by the surveyed peak parking rate (0.92). The parking demands generated by the city by-law parking requirements

estimate a peak demand of 1.50 spaces / unit, whereas the surveyed parking rate estimates a peak demand of 0.92 spaces / unit.

- 48 visitor parking spaces are proposed for the subject site, equaling a rate of 0.15 visitor spaces per unit, which is identical to the existing visitor parking rate for the existing 76 unit apartment. The remaining 241 parking spaces are provided for residents, at a rate of 0.77 spaces per unit. The residential units would be catered to those who do not require a vehicle, and would utilize the available alternative modes of travel available in the study area.

Transportation Demand Management Plan

- The main entrance of each building is to provide walkways connecting with Bloor Street, allowing for connectivity to the existing sidewalk infrastructure.
- Upon completion of the Bloor Street Integrated Roads Project, one-way cycling tracks are to be provided on both the north and south sides of the corridor.
- The site is currently served by MiWay Transit's Route 3 (Bloor), and Route 307 (Philip Pocock-Bloor East), with transit stops located less than 50m west of the site. Existing transit connections near the site along Bloor Street are to be maintained, providing connectivity to the extensive MiWay transit network available throughout the city.
- Information packages (containing MiWay and cycling route maps, etc.) should be provided to future residents either by mail, or via an information session organized by the Developer / Applicant in conjunction with City of Mississauga Staff.

13.2 Conclusions

To conclude, our traffic findings for horizon year 2027 indicate that the proposed development can be accommodated by surrounding road network and no improvements are required. It is our understanding that further coordination is to be completed with the City to discuss the access location in relation to the proposed signal control adjacent west of the subject site driveway.

Respectfully submitted,



Anil Seegobin, P.Eng.
Partner, Engineer

Trans-Plan Transportation Inc.
Transportation Consultants



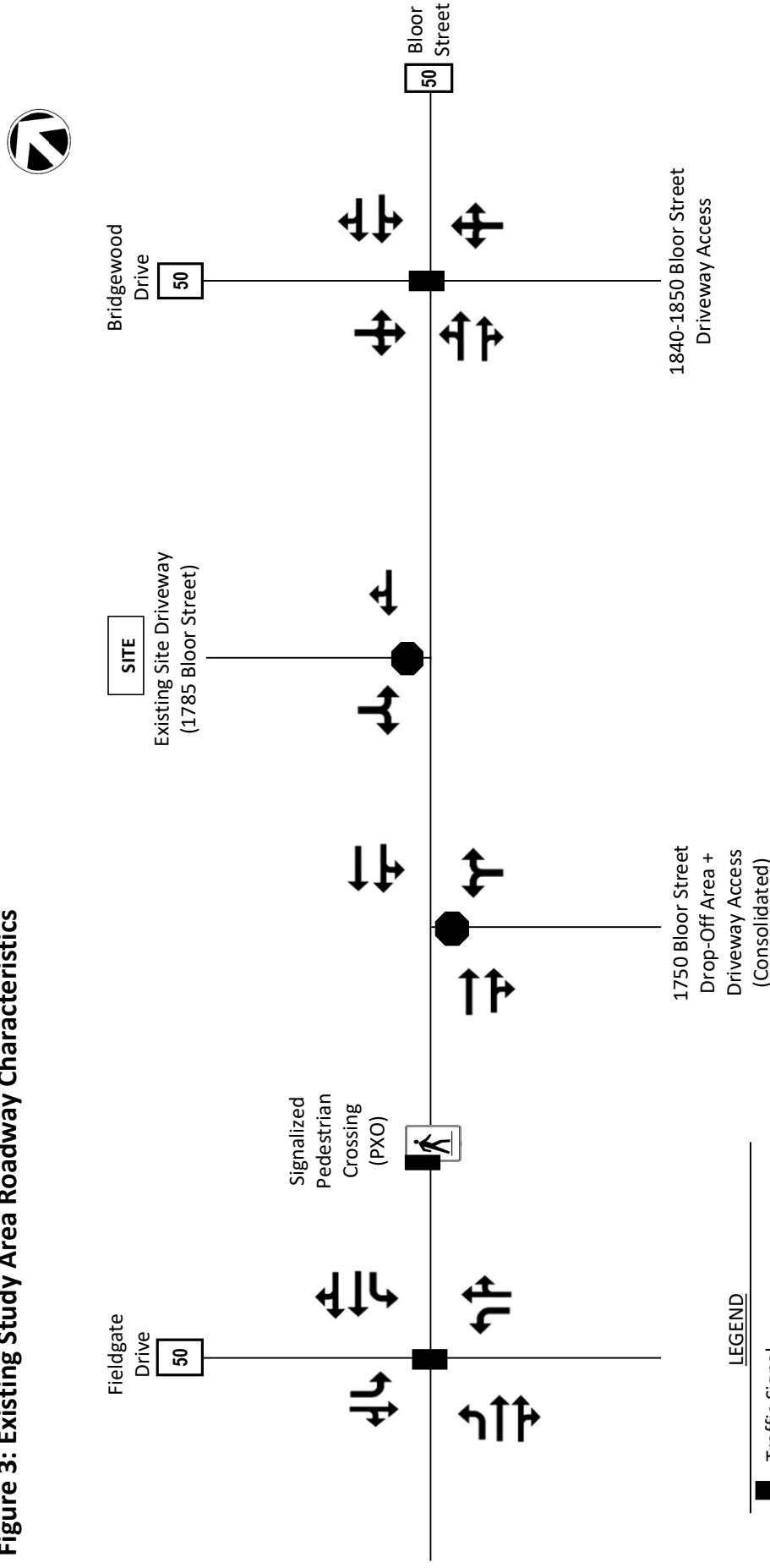
Charles Chung
Transportation E.I.T.

Figure 1 – Site Location



Source: Google Earth

Figure 3: Existing Study Area Roadway Characteristics



LEGEND	
	Traffic Signal
	Stop Sign
	Lane Configuration
	Signalized Pedestrian Crossing (PXO)
	Posted Speed Limit

Schematic; Not To Scale

Figure 4: Transit Map

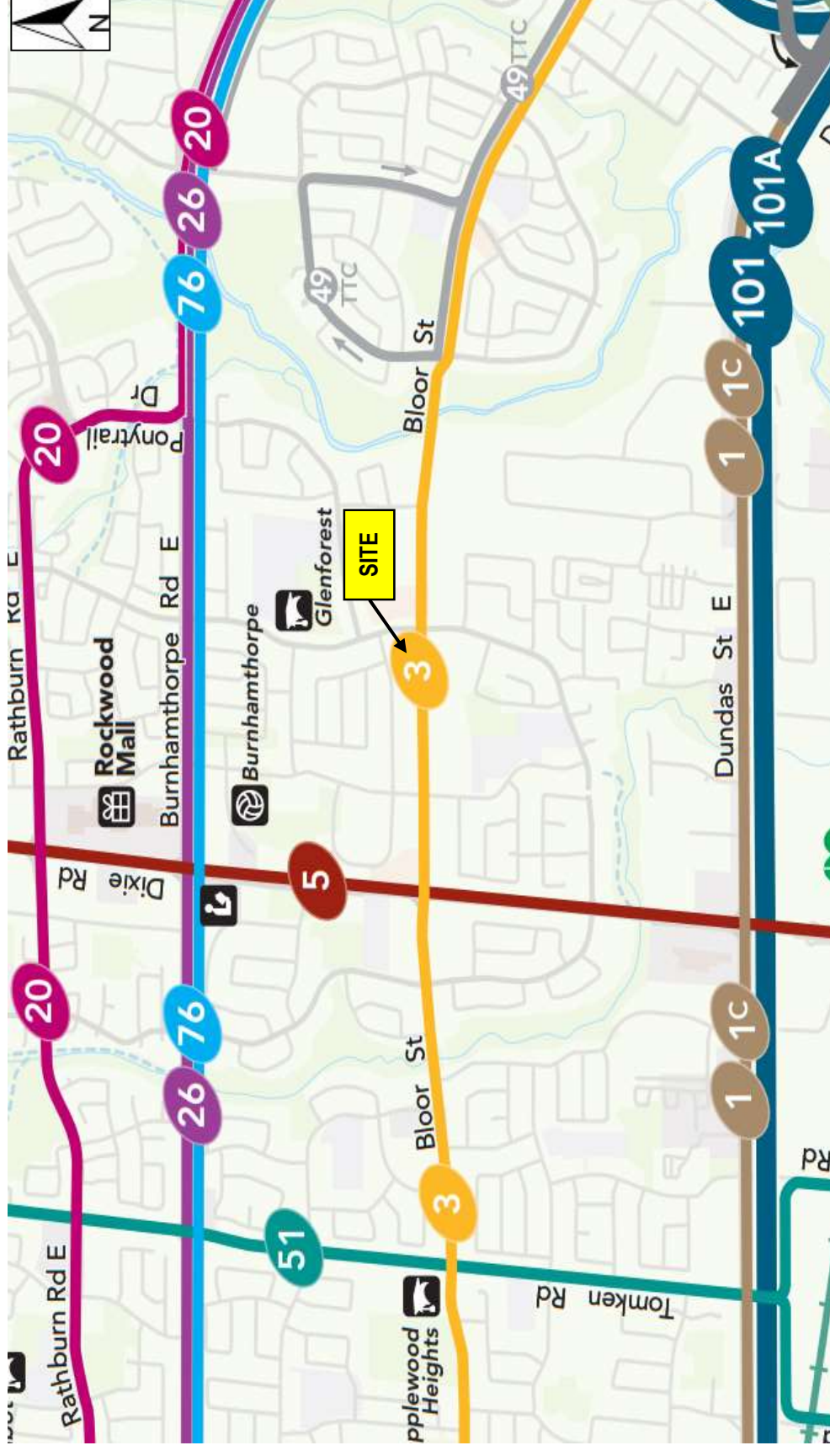


Figure 5: Existing Traffic Volumes, Weekday AM and PM Peak Hours

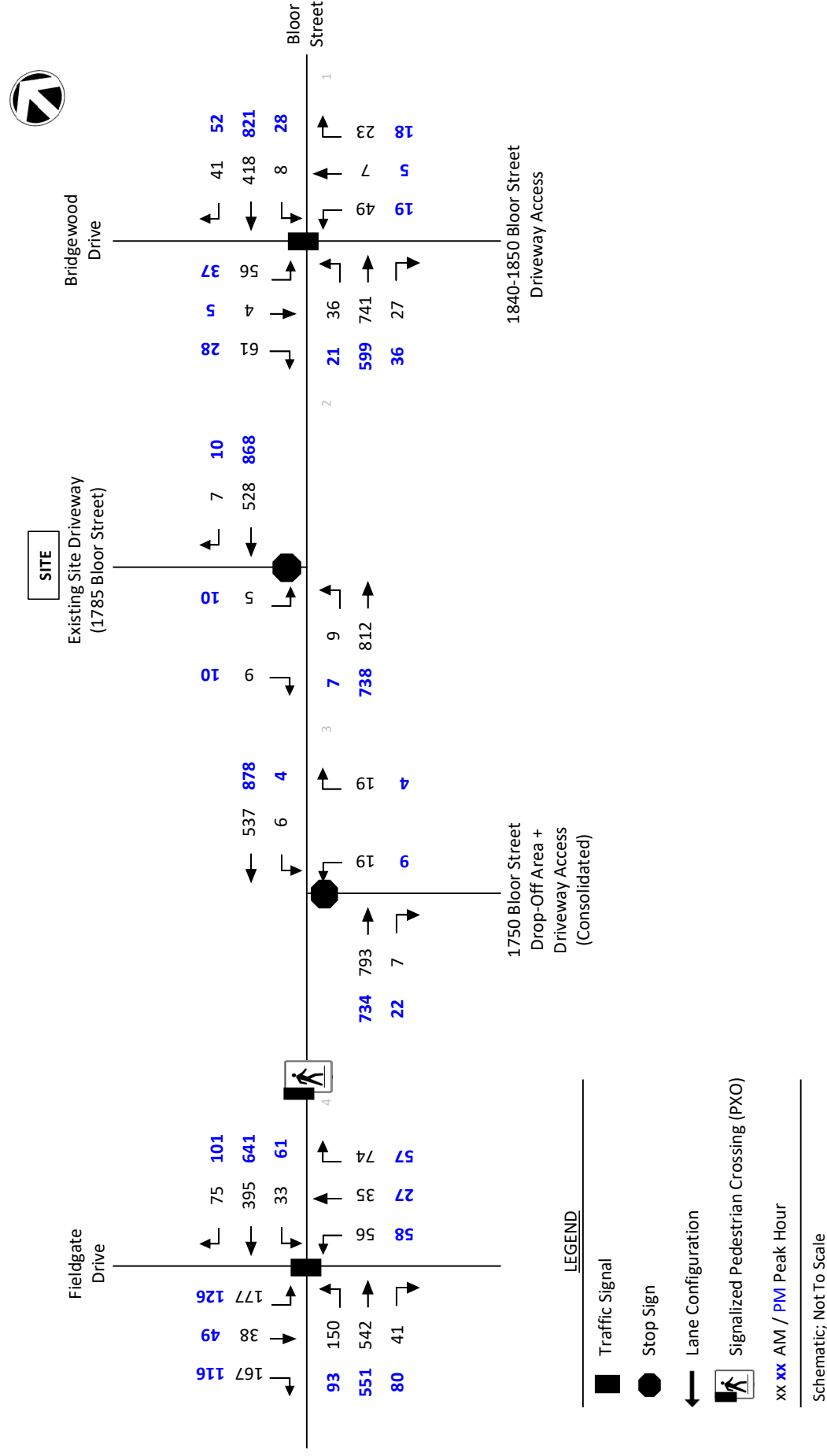


Figure 6: 2027 Background Traffic Volumes, Weekday AM and PM Peak Hours

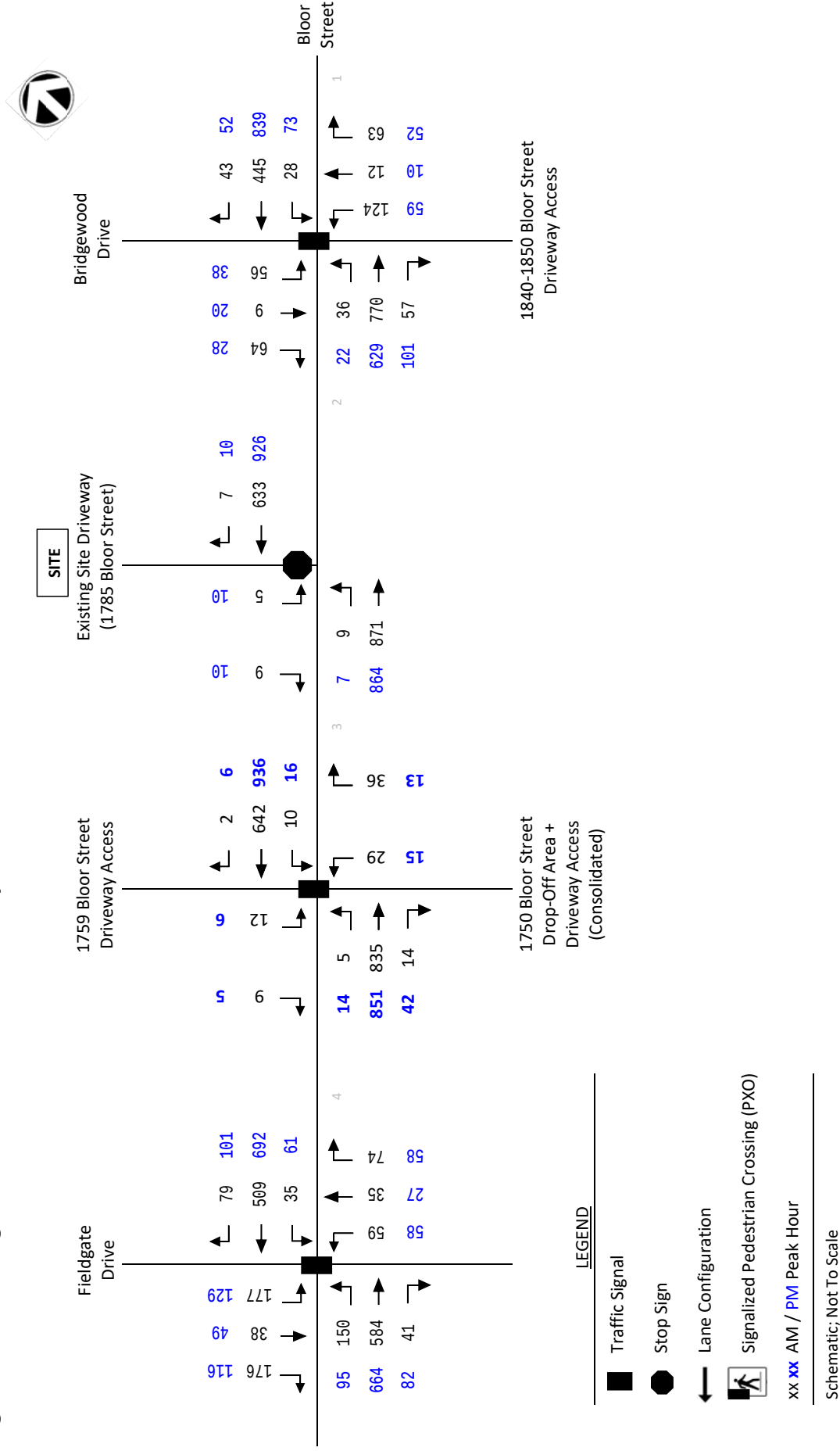


Figure 7: Site Traffic Assignment, Weekday AM and PM Peak Hours

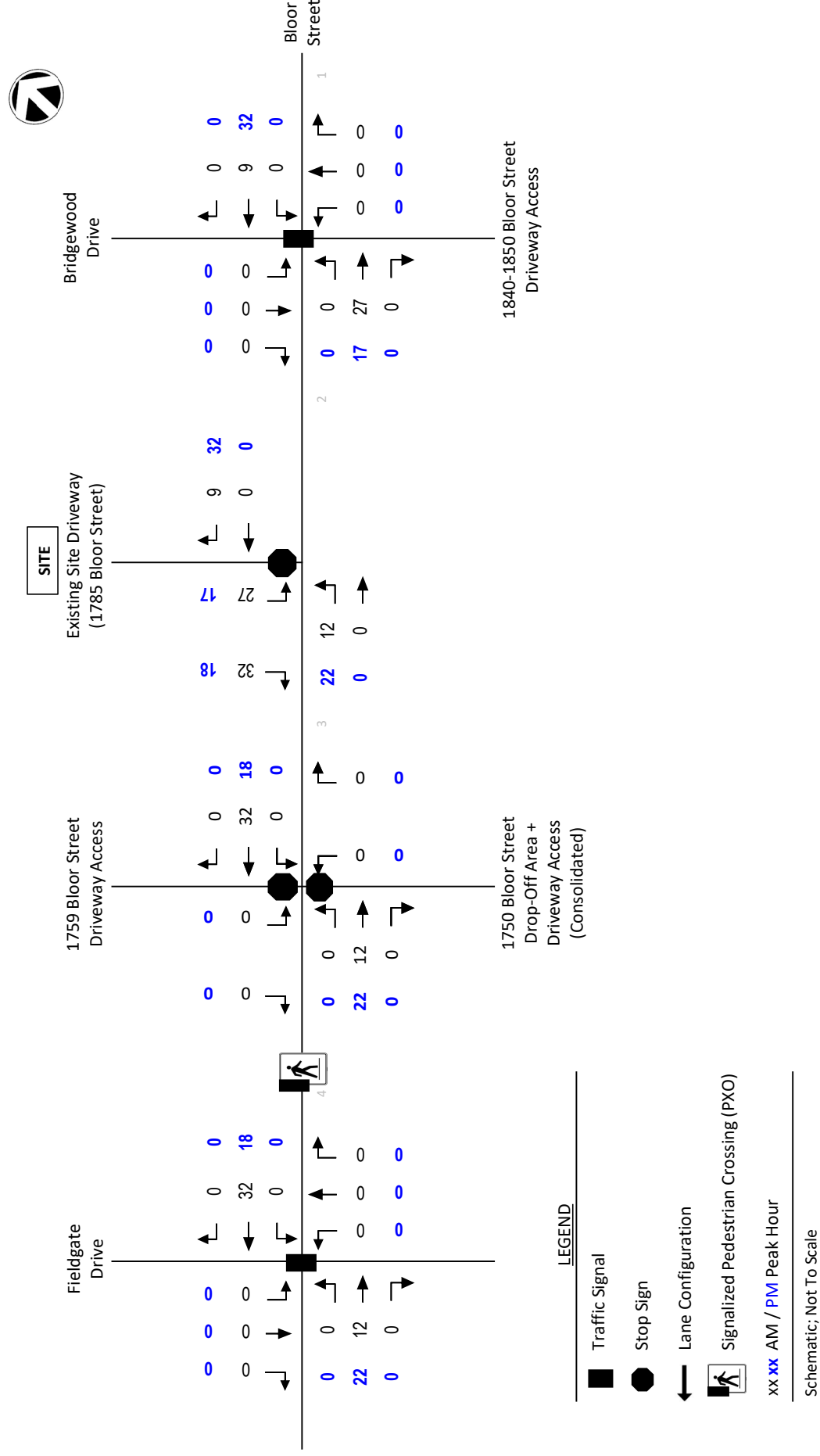
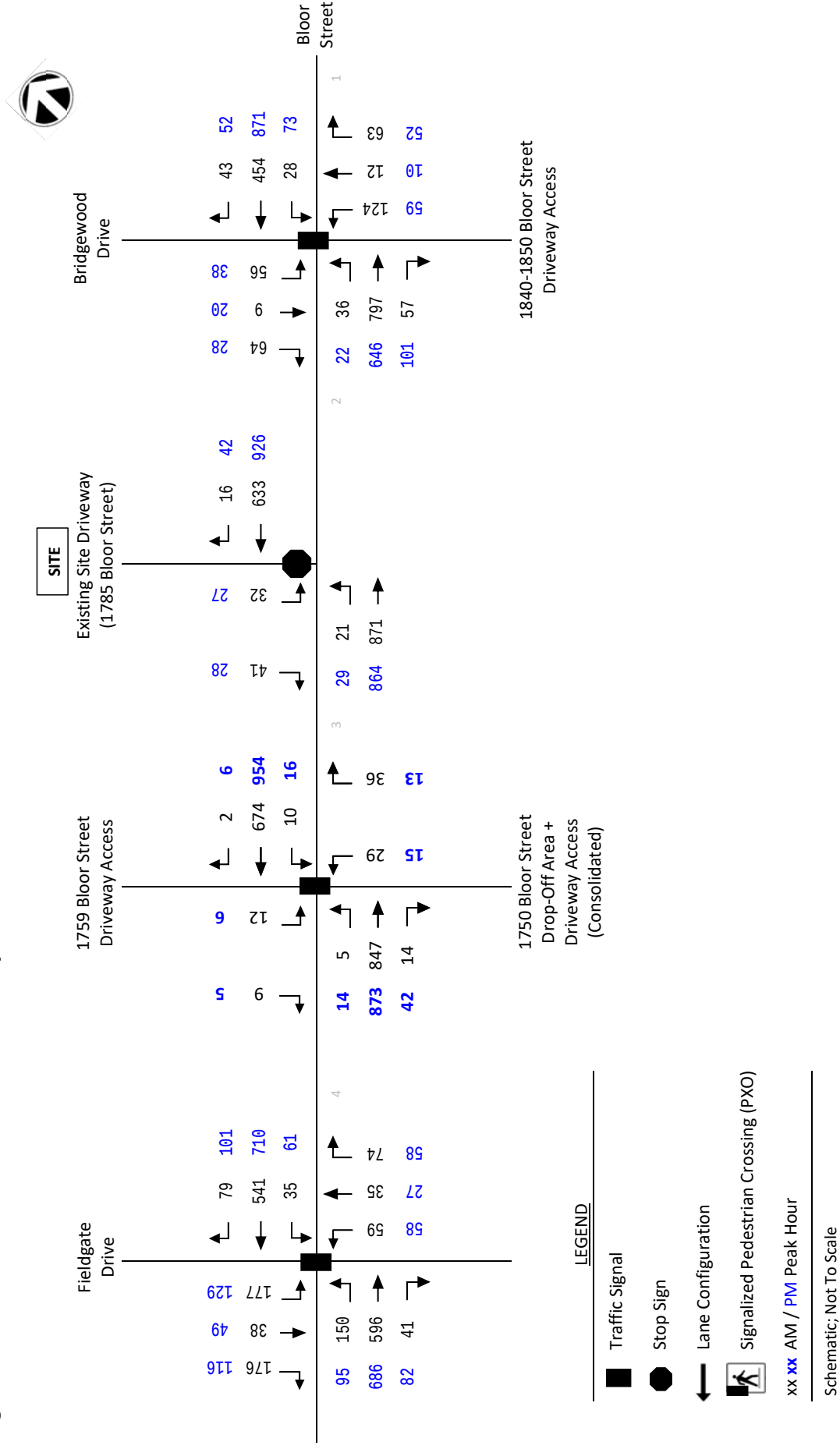
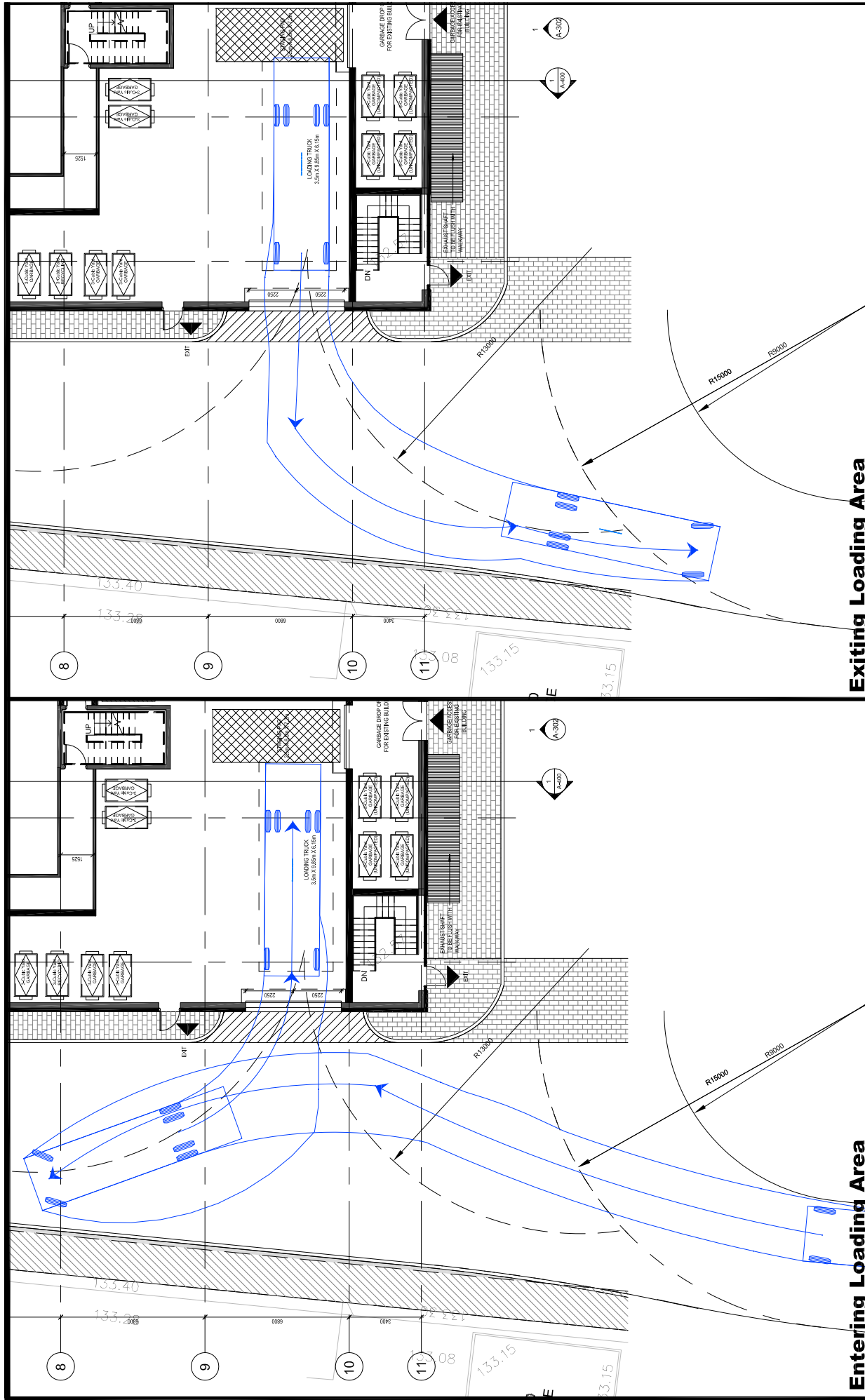


Figure 8: 2027 Total Traffic Volumes, Weekday AM and PM Peak Hours



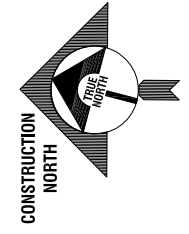
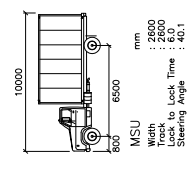


Entering Loading Area

Exiting Loading Area

Figure 10 - Loading Vehicle Site Circulation

PROPOSED RESIDENTIAL ADDITION TO EXISTING DEVELOPMENT
1785 BLOOR STREET
MISSISSAUGA, ON



APPENDICES

Appendix A – Turning Movement Counts and Signal Timing Plans

Appendix B – Background Traffic Information

Appendix C – Capacity and Queue Analysis Sheets

Appendix D – Pedestrian Crossover (PXO) Survey

Appendix E – City of Mississauga By-law 0225-2007

Appendix F – Parking Utilization Survey Results



APPENDIX A

Turning Movement Counts & Signal Timing Plans

Trans-Plan Transportation Inc.

Site ID Code:
Intersection Location: Bloor Street and Fieldgate Drive
Municipality: Mississauga, Ontario
Count Date: Thursday, November 21, 2021
Weather and Temperature:
Surveyor: TP

AM	NORTH APPROACH Fieldgate Dr										EAST APPROACH Bloor St										SOUTH APPROACH Fieldgate Dr										WEST APPROACH Bloor St										Total	Grand Total																																		
	CAR					TRUCKS					CYCLISTS					Peds					CAR					TRUCKS					CYCLISTS					Peds																																								
	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R																																								
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Turning Movement Count Diagram

Intersection: Bloor Street and Fieldgate Drive

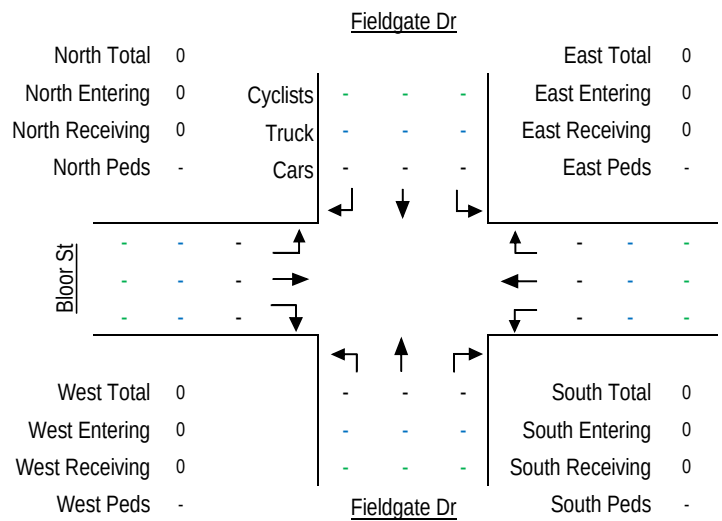
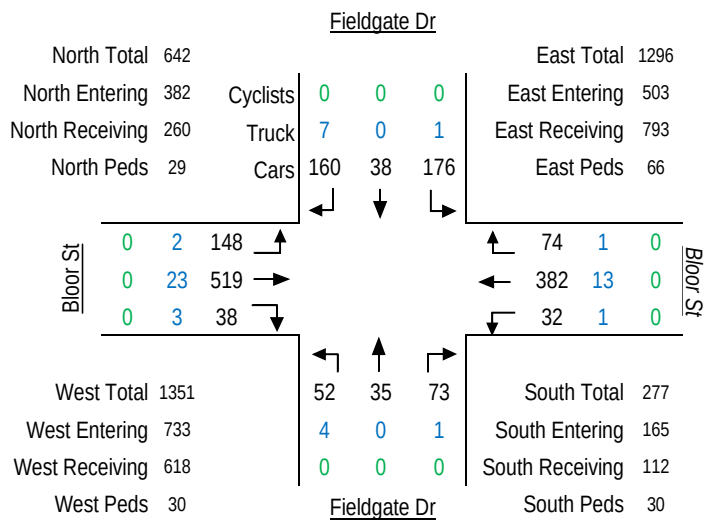
Municipality: Mississauga, Ontario

Intersection ID:

Date: Thursday, November 21, 2021

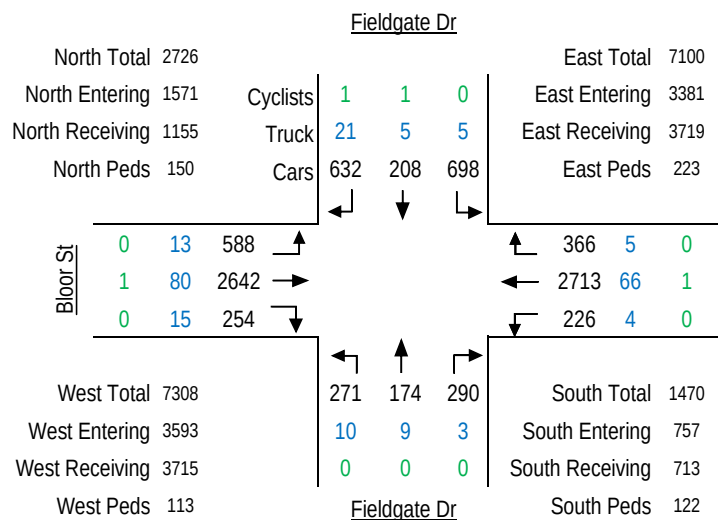
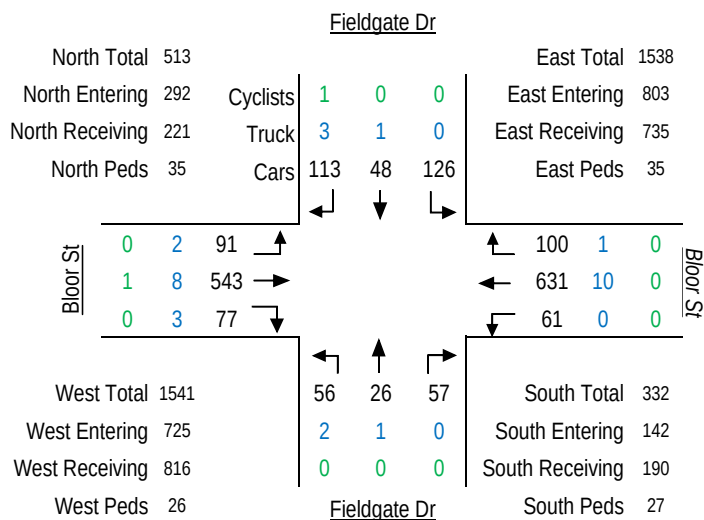
AM Peak Hour: 8:00 to 9:00

MD Peak Hour: - to -



PM Peak Hour: 16:00 to 17:00

Total Count



Trans-Plan Transportation Inc.

Site ID Code:

Intersection Location:

Municipality:

Count Date:

Weather and Temperature:

Surveyor:

Bloor Street and Bridgewood Drive

Mississauga, Ontario

Thursday, November 21, 2021

TP

AM	NORTH APPROACH Bridgewood Dr										EAST APPROACH Bloor St										SOUTH APPROACH Access										Total	WEST APPROACH Bloor St										Total	Grand Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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7:00	8	0	7	0	1	0	0	0	2	18	1	47	2	0	2	0	0	0	0	3	55	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Turning Movement Count Diagram

Intersection: Bloor Street and Bridgewood Drive

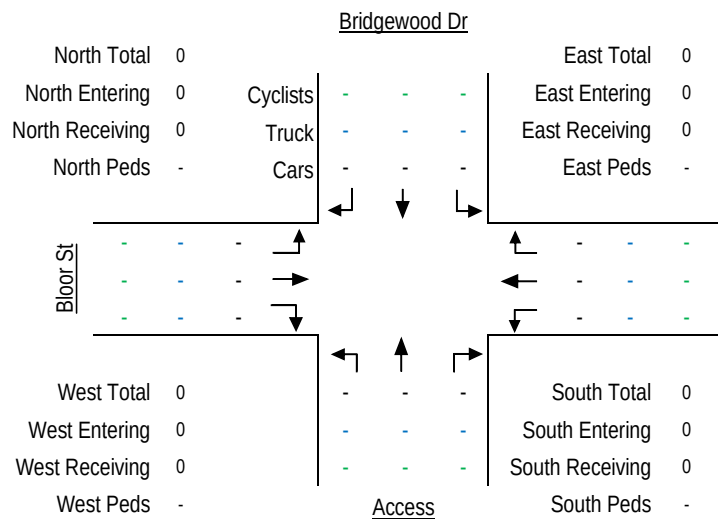
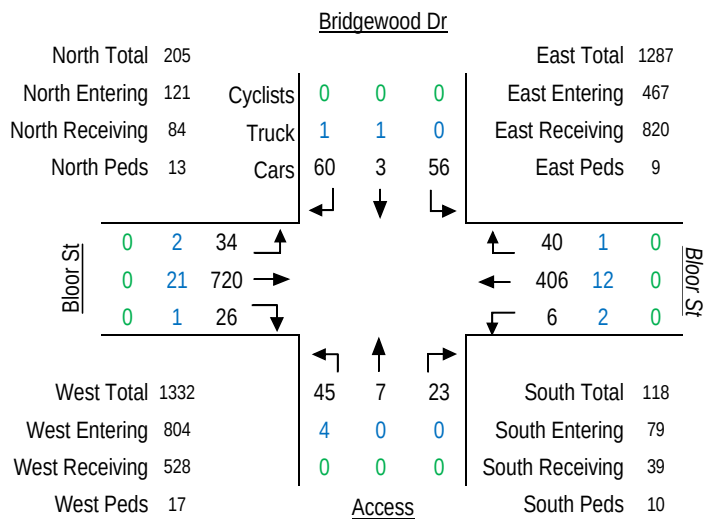
Municipality: Mississauga, Ontario

Intersection ID:

Date: Thursday, November 21, 2021

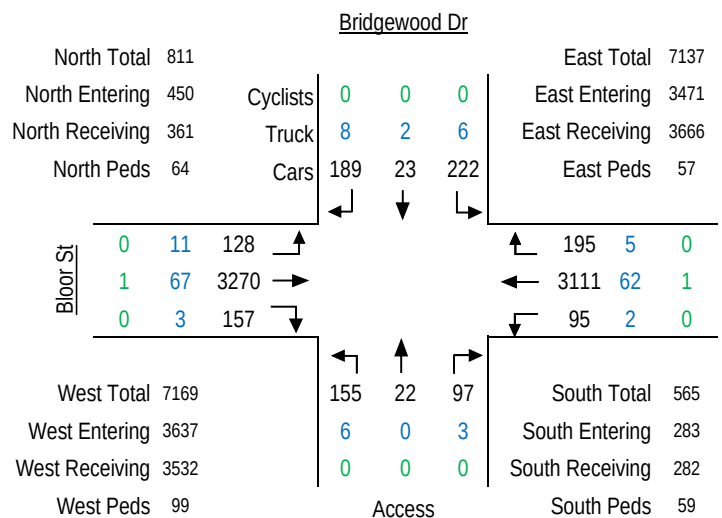
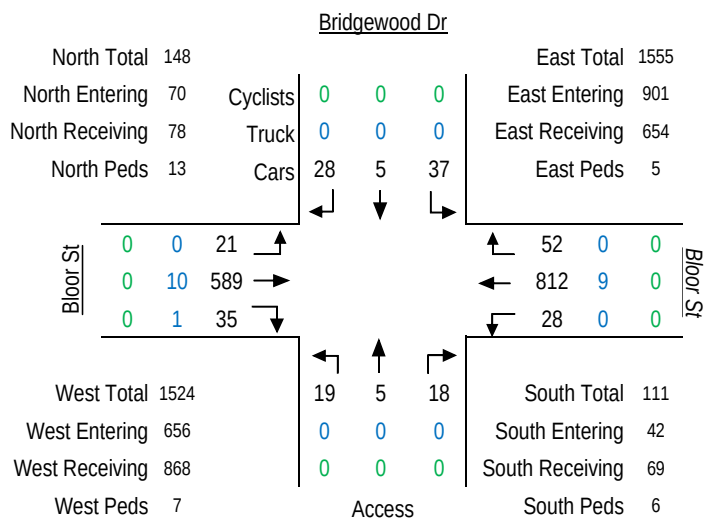
AM Peak Hour: 8:00 to 9:00

MD Peak Hour: - to -



PM Peak Hour: 16:45 to 17:45

Total Count



In/Out Access Count

Site: 1785 Bloor Street, Mississauga

Date: Thursday, November 25, 2021

Start Time	In	Out	Hourly Total	SBL	SBR	EBL	WBR
6:00	1	1	11	1			1
6:15	1	2		1	1	1	
6:30	1	2			2		1
6:45	1	2			2	1	
7:00	1	1	21		1	1	
7:15	1	2		1	1	1	
7:30	3	9		6	3	3	
7:45	1	3		1	2	1	
8:00	1	4	29	2	2	1	
8:15	4	4		1	3	1	3
8:30	4	5		2	3	2	2
8:45	4	3		2	1	3	1
9:00	4	2	16		2	3	1
9:15	1	4		2	2	1	
9:30	0	3					
9:45	1	1					
				SBL	SBR	EBL	WBR
15:00	9	7	38	4	3	3	6
15:15	5	4			4	2	3
15:30	1	5		3	2	1	
15:45	3	4		3	1	2	1
16:00	3	1	30		1	1	2
16:15	6	6		1	5	4	2
16:30	5	5		2	3	3	2
16:45	3	1		1		1	2
17:00	3	2	23		2	1	2
17:15	2	1			1	1	1
17:30	5	1			1	3	2
17:45	7	2		1	1	5	2

Signal Timing Report

Runtime: 2021-10-07 13:32:13

Device:		1909							
District :	Mississauga	ID:	Location: BLOOR STREET E @ Fieldgate Drive						
Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	10	0	10	0	10	0	10
Ped Clear	Sec	0	18	0	23	0	18	0	23
Min Green	Sec	0	8	0	8	5	8	0	8
Passage	Sec	0.0	3.0	0.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	0	21	0	24	10	21	0	24
Maximum 2	Sec	0	21	0	24	10	21	0	24
Yellow Change	Sec	3.0	3.5	3.0	3.0	3.0	3.5	3.0	3.0
Red Clearance	Sec	0.0	2.5	0.0	3.5	0.0	2.5	0.0	3.5
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	redClear	other	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	0	Enabled	0	Enabled	Enabled	Enabled	0	Enabled
			Non-Actuated 1		Non Lock Det	Non Lock Det	Non-Actuated 1		Non Lock Det
			Max Veh Recall		Dual Entry		Max Veh Recall		Dual Entry
			Ped Recall				Ped Recall		
			Dual Entry				Dual Entry		
			Act Rest In Walk				Act Rest In Walk		
[P2] Ring	Ring	0	1	0	1	2	2	0	2
[P2] Concurrency	Phase (.)	(.)	(5,6)	(.)	(8)	(2)	(2)	(.)	(4)
Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	100	80	100	0	0	0	0	0
Offset	Sec	10	17	41	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	60	0	40	12	48	0	40
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	40	0	40	12	28	0	40
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	60	0	40	12	48	0	40
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASON	JFMAMJJASON	JFMAMJJASON	J-----	-F-----	---A-----	---M-----	-----J----
Day of Week	Bit	-MTWTF-	S-----	-----S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	123456789012345678901	123456789012345678901	123456789012345678901	1-----	-----5-----	-2-----	-----	1-----
Day Plan	Number	1	3	2	3	3	3	3	3
TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-----A----	-----S---	-----O--	-----D	-----D	-----D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-----	---6-----	-----1-----	-7---	-8---	4-----	0	0
Day Plan	Number	3	3	3	3	3	3	0	0
TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	7	9	16	18	3	0	0
Plan 1 Minute	Min	0	0	0	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	8	7	0	0
Plan 2 Hour	Hour	0	3	9	18	0	0	0	0
Plan 2 Minute	Min	0	0	0	30	0	0	0	0
Plan 2 Action	Number	8	7	2	8	0	0	0	0
Plan 3 Hour	Hour	0	3	9	18	0	0	0	0
Plan 3 Minute	Min	0	0	0	30	0	0	0	0
Plan 3 Action	Number	8	7	2	8	0	0	0	0
TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-11-24 15:31

Device:		1910							
District :	Mississauga	ID:	1910						
Location:		BLOOR STREET E @ Bridgewood Drive							
Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	10	0	10	0	0	0	0
Ped Clear	Sec	0	11	0	14	0	0	0	0
Min Green	Sec	0	8	0	12	0	0	0	0
Passage	Sec	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	27	0	20	0	0	0	0
Maximum 2	Sec	0	27	0	20	0	0	0	0
Yellow Change	Sec	3.0	3.5	3.0	3.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	2.5	0.0	3.5	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	redClear	other	phaseNotOn	other	other	other	other
[P2] Options	Bit	0	Enabled	0	Enabled	0	0	0	0
			Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk						
[P2] Ring	Ring	0	1	0	1	0	0	0	0
[P2] Concurrency	Phase (.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	100	80	100	0	0	0	0	0
Offset	Sec	12	38	13	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	69	0	31	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	49	0	31	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	69	0	31	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASON	JFMAMJJASON	JFMAMJJASON	J-----	-F-----	---A-----	---M-----	-----J-----
Day of Week	Bit	-MTWTF-	S-----	-----S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	123456789012345678901	123456789012345678901	123456789012345678901	1-----5-----	-----2-----	-----4-----	-----	1-----
Day Plan	Number	1	3	2	3	3	3	3	3
TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-----A---	-----S---	-----O--	-----D	-----D	-----D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-----	-6-----	-----1-----	-7---	-8---	4-----	0	0
Day Plan	Number	3	3	3	3	3	3	0	0
TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	7	9	16	18	3	0	0
Plan 1 Minute	Min	0	0	0	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	8	7	0	0
Plan 2 Hour	Hour	0	3	9	18	0	0	0	0
Plan 2 Minute	Min	0	0	0	30	0	0	0	0
Plan 2 Action	Number	8	7	2	8	0	0	0	0
Plan 3 Hour	Hour	0	3	9	18	0	0	0	0
Plan 3 Minute	Min	0	0	0	30	0	0	0	0
Plan 3 Action	Number	8	7	2	8	0	0	0	0
TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0



APPENDIX B

Background Traffic Information

Background Development Map



Background Developments Information

Proposed Residential Development
1785 Bloor Street, Mississauga, ON



Development 1 - 1750 Bloor Street & 3315 Fieldgate Drive
Proposed Residential Development

Land Use	Units	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential ITE Code 222	224						
Trips		14	43	57	42	23	65

Source: Transportation Impact Study, October 2020 by LEA Consulting

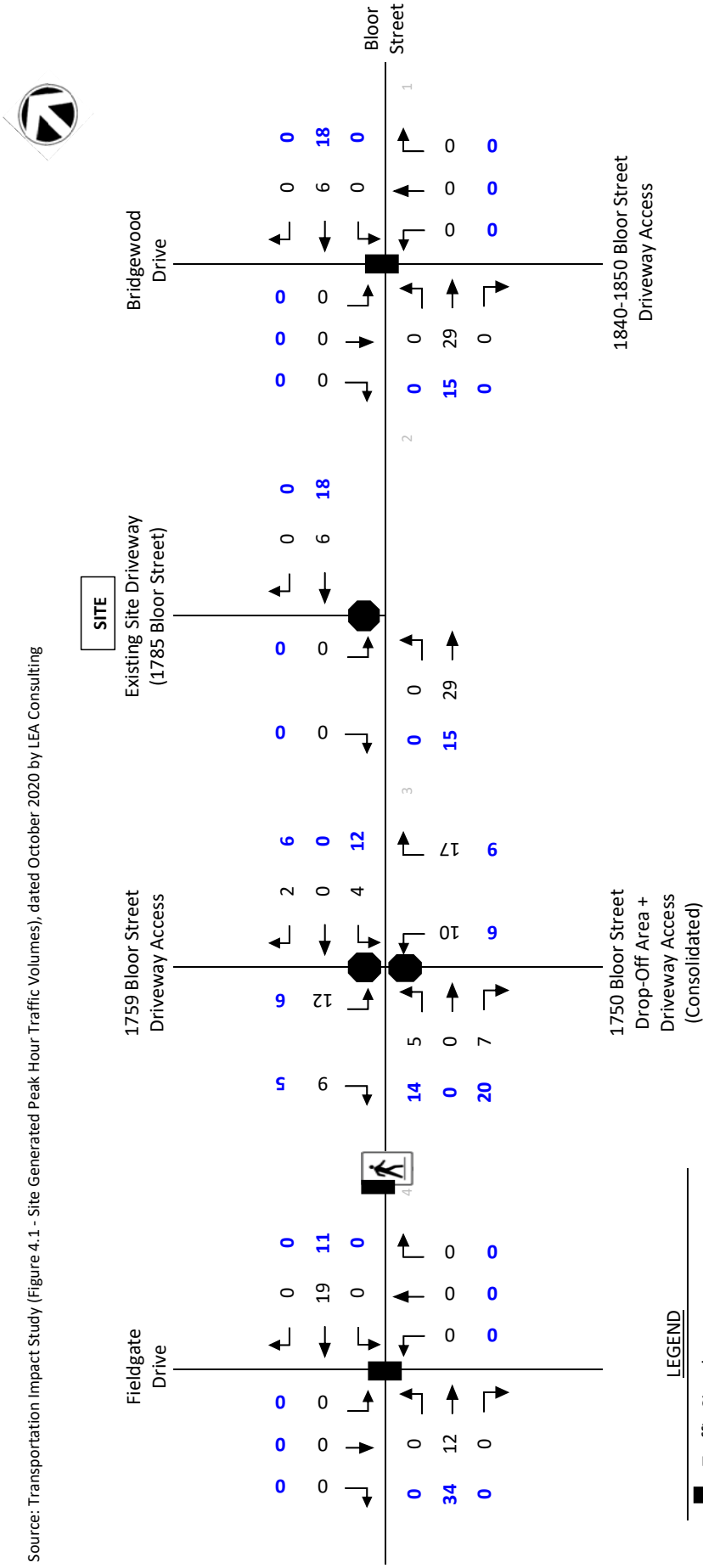
Development 2 - 1840-1850 Bloor Street
Proposed Residential Development

Land Use	Units	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential ITE Code 222	224						
Trips		40	115	155	110	70	180

Source: Urban Transportation Considerations Report, February 2020 by BA Group

DEV 1: Trip Distribution for Proposed Residential Development at 1750 Bloor Street

Source: Transportation Impact Study (Figure 4.1 - Site Generated Peak Hour Traffic Volumes), dated October 2020 by LEA Consulting



LEGEND

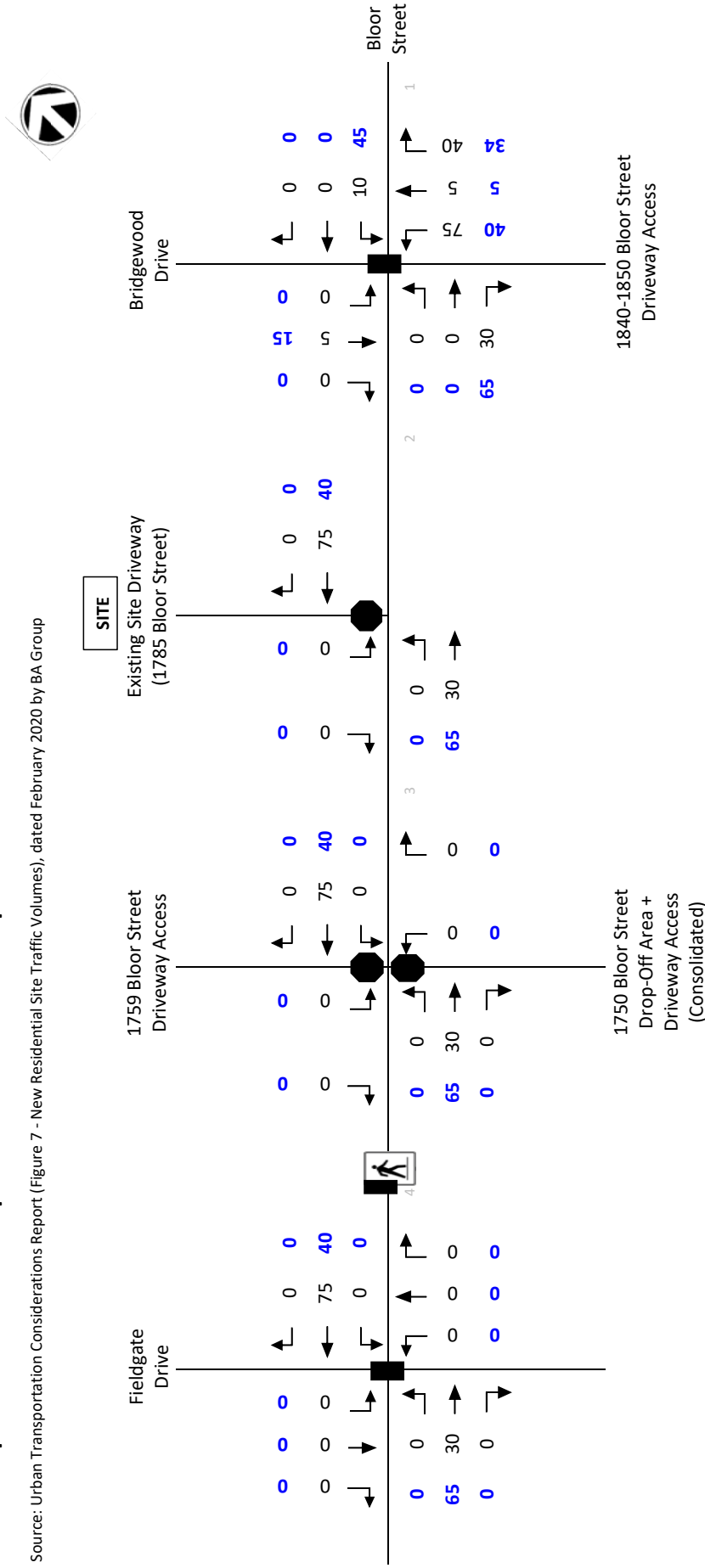
- Traffic Signal
- Stop Sign
- Lane Configuration
- Signalized Pedestrian Crossing (PXO)

xx xx AM / PM Peak Hour

Schematic; Not To Scale

DEV 2: Trip Distribution for Proposed Residential Development at 1840-1850 Bloor Street

Source: Urban Transportation Considerations Report (Figure 7 - New Residential Site Traffic Volumes), dated February 2020 by BA Group





APPENDIX D

Capacity and Queue Analysis Sheets

Timings
1: Bloor Street & Bridgewood Drive

<Existing> Weekday AM Peak Hour
12/14/2021

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	36	741	8	418	49	7	56	4
Traffic Volume (vph)	36	741	8	418	49	7	56	4
Future Volume (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Turn Type	2	2	2	2	4	4	4	4
Protected Phases	2	2	2	2	4	4	4	4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Initial (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Minimum Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (s)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Total Split (%)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
Yellow Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?	Max	Max	Max	Max	None	None	None	None
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	56.9	56.9	56.9	56.9	12.6	12.6	12.6	12.6
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.15	0.15	0.15	0.15
v/c Ratio	0.38	0.38	0.22	0.22	0.36	0.36	0.49	0.49
Control Delay	5.9	5.9	4.8	4.8	27.3	27.3	24.7	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	5.9	4.8	4.8	27.3	27.3	24.7	24.7
LOS	A	A	A	A	C	C	C	C
Approach Delay	5.9	5.9	4.8	4.8	27.3	27.3	24.7	24.7
Approach LOS	A	A	A	A	C	C	C	C
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 82								
Natural Cycle: 60								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay: 8.2								
Intersection Capacity Utilization 69.7%								
Analysis Period (min) 15								



Queues
1: Bloor Street & Bridgewood Drive

<Existing> Weekday AM Peak Hour
12/14/2021

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	855	498	83	129
v/c Ratio	0.38	0.22	0.36	0.49
Control Delay	5.9	4.8	27.3	24.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.9	4.8	27.3	24.7
Queue Length 50th (m)	23.8	11.6	8.2	10.0
Queue Length 95th (m)	36.6	19.0	20.4	25.7
Internal Link Dist (m)	154.6	492.4	61.1	137.6
Turn Bay Length (m)	2225	2277	579	620
Base Capacity (vph)	0	0	0	0
Survation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.22	0.14	0.21
Intersection Summary				

HCM Signalized Intersection Capacity Analysis
1: Bloor Street & Bridgwood Drive

HCM Unsignalized Intersection Capacity Analysis
2: Bloor Street & 1785 Bloor Street Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	36	741	27	8	418	41	49	7	23	56	4	61
Traffic Volume (vph)	36	741	27	8	418	41	49	7	23	56	4	61
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Total Lost time (s)	0.95	0.95	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	0.99
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	0.99
Flpb. ped/bikes	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.96	0.96	0.93	0.93	0.93
Flt Protected	3506	3506	3483	1764	1701	1701	0.83	0.83	0.83	0.83	0.83	0.83
Satd. Flow (prot)	3209	3209	3276	1384	1436	1436	0.94	0.94	0.94	0.94	0.94	0.94
Flt Permitted	0.91	0.91	0.94	0.76	0.76	0.76	0.83	0.83	0.83	0.83	0.83	0.83
Satd. Flow (perm)	3209	3209	3276	1384	1436	1436	0.94	0.94	0.94	0.94	0.94	0.94
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	38	788	29	9	445	44	52	7	24	60	4	65
RTOR Reduction (vph)	0	2	0	0	5	0	0	19	0	0	0	47
Lane Group Flow (vph)	0	853	0	0	493	0	64	0	0	0	0	82
Confl. Peds. (#/hr)	13	10	10	13	17	17	9	9	9	9	9	17
Heavy Vehicles (%)	6%	3%	4%	2%	3%	2%	0%	0%	0%	2%	2%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	2	2	2	2	2	2	4	4	4	4	4	4
Permitted Phases	2	2	2	2	2	2	4	4	4	4	4	4
Actuated Green, G (s)	56.9	56.9	56.9	56.9	56.9	56.9	12.6	12.6	12.6	12.6	12.6	12.6
Effective Green, g (s)	56.9	56.9	56.9	56.9	56.9	56.9	12.6	12.6	12.6	12.6	12.6	12.6
Actuated G/C Ratio	0.69	0.69	0.69	0.69	0.69	0.69	0.15	0.15	0.15	0.15	0.15	0.15
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2226	2226	2273	2273	2273	2273	212	212	212	220	220	220
v/s Ratio Prot	0.27	0.27	0.15	0.15	0.15	0.15	0.05	0.05	0.05	0.06	0.06	0.06
v/s Ratio Perm	0.38	0.38	0.22	0.22	0.22	0.22	0.30	0.30	0.30	0.37	0.37	0.37
Uniform Delay, d1	5.2	5.2	4.5	4.5	4.5	4.5	30.8	30.8	30.8	31.2	31.2	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5	0.2	0.2	0.2	0.2	0.8	0.8	0.8	1.1	1.1	1.1
Delay (s)	5.7	5.7	4.7	4.7	4.7	4.7	31.6	31.6	31.6	32.2	32.2	32.2
Level of Service	A	A	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)	5.7	5.7	4.7	4.7	4.7	4.7	31.6	31.6	31.6	32.2	32.2	32.2
Approach LOS	A	A	A	A	A	A	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	9.0											
HCM 2000 Level of Service	A											
HCM 2000 Volume to Capacity ratio	0.38											
Actuated Cycle Length (s)	82.0											
Sum of lost time (s)	12.5											
Intersection Capacity Utilization	69.7%											
ICU Level of Service	C											
Analysis Period (min)	15											
c Critical Lane Group												

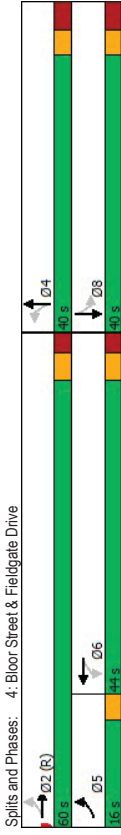
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	812	528	7	5	9						
Traffic Volume (veh/h)	9	812	528	7	5	9						
Future Volume (Veh/h)	9	812	528	7	5	9						
Sign Control	Free	Free	Free	Free	Free	Free						
Grade	0%	0%	0%	0%	0%	0%						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92						
Hourly flow rate (vph)	10	883	574	8	5	10						
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (m)												
pk. platoon unblocked												
vc. conflicting volume												
vc1, stage 1 conf vol												
vc2, stage 2 conf vol												
vcu, unblocked vol												
IC, single (s)												
IC, 2 stage (s)												
IF (s)												
p0 queue free %												
dm capacity (veh/h)												
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2						
Volume Total	304	589	383	199	15	15						
Volume Left	10	0	0	0	0	5						
Volume Right	0	0	0	0	8	10						
cSH	994	1700	1700	1700	445	445						
Volume to Capacity	0.01	0.35	0.23	0.12	0.03	0.03						
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0	0.8						
Control Delay (s)	0.4	0.0	0.0	0.0	0.0	13.4						
Lane LOS	A	A	A	A	B	B						
Approach Delay (s)	0.1	0.0	0.0	0.0	13.4	13.4						
Approach LOS					B	B						
Intersection Summary												
Average Delay	0.2											
Intersection Capacity Utilization	38.8%											
Analysis Period (min)	15											
ICU Level of Service	A											

HCM Unsignalized Intersection Capacity Analysis <Existing> Weekday AM Peak Hour 3: 1750 Bloor Street Driveway Access/1759 Bloor Street Driveway Access & Bloor Street 12/14/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4TB		4TB				4B			4B	
Traffic Volume (veh/h)	0	793	7	6	537	0	19	0	19	0	0	0
Future Volume (veh/h)	0	793	7	6	537	0	19	0	19	0	0	0
Sign Control		Free		Free			Stop		Stop		Stop	
Grade		0%		0%			0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	862	8	7	584	0	21	0	21	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (m)		214										
pX platoon unblocked												
VC, conflicting volume	584			870			1172	1464	435	1050	1468	292
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	584			754			1072	1380	295	943	1384	292
IC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
IC, 2 stage (s)												
p0 queue free %	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 capacity (veh/h)	100			99			87	100	97	100	100	100
CM capacity (veh/h)	987			808			165	135	665	198	134	704
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	431	439	299	292	42	0						
Volume Left	0	0	7	0	21	0						
Volume Right	0	8	0	0	21	0						
cSH	987	1700	808	1700	264	1700						
Volume to Capacity	0.00	0.26	0.01	0.17	0.16	0.00						
Queue Length 95th (m)	0.0	0.0	0.2	0.0	4.2	0.0						
Control Delay (s)	0.0	0.0	0.3	0.0	21.2	0.0						
Lane LOS			A		C	A						
Approach Delay (s)	0.0	0.2	21.2	0.0								
Approach LOS			C		A							
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			32.1%							A		
Analysis Period (min)			15									

Timings <Existing> Weekday AM Peak Hour 4: Bloor Street & Fieldgate Drive 12/14/2021

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4TB		4TB		4B		4B
Traffic Volume (vph)	150	542	33	395	56	35	177	38
Future Volume (vph)	150	542	33	395	56	35	177	38
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2		6	4		8	
Permitted Phases	2		6		4		8	
Detector Phase	5	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	8.0	1.0	1.0	8.0	8.0	1.0	1.0
Minimum Split (s)	10.0	34.0	34.0	40.0	40.0	40.0	40.0	40.0
Total Split (s)	16.0	60.0	44.0	44.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	None	None	None	None	None
Ad Effct Green (s)	68.5	65.5	54.6	54.6	22.0	22.0	22.0	22.0
Actuated g/C Ratio	0.68	0.66	0.55	0.55	0.22	0.22	0.22	0.22
v/c Ratio	0.27	0.28	0.09	0.27	0.33	0.28	0.74	0.45
Control Delay	7.8	8.5	15.3	13.6	35.1	12.6	52.5	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	8.5	15.3	13.6	35.1	12.6	52.5	10.1
LOS	A	A	B	B	D	B	D	B
Approach Delay								
Approach LOS								
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 100								
Offset: 0 (0%), Referenced to phase 2EBTL, Start of Green								
Natural Cycle: 85								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.74								
Intersection Signal Delay: 15.6								
Intersection Capacity Utilization 82.8%								
Analysis Period (min) 15								



Queues
4: Bloor Street & Fieldgate Drive

<Existing> Weekday AM Peak Hour
12/14/2021

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	165	641	36	516	62	119	195	226
v/c Ratio	0.27	0.28	0.09	0.27	0.33	0.28	0.74	0.45
Control Delay	7.8	8.5	15.3	13.6	35.1	12.6	52.5	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	8.5	15.3	13.6	35.1	12.6	52.5	10.1
Queue Length 50th (m)	9.7	24.2	3.1	24.8	10.2	5.9	35.5	6.6
Queue Length 95th (m)	22.5	42.9	10.7	45.7	19.6	17.7	53.2	22.7
Internal Link Dist (m)	536.1		189.9		128.6		151.2	
Turn Bay Length (m)	50.0	50.0		40.0		25.0		
Base Capacity (vph)	669	2262	405	1882	286	600	399	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.28	0.09	0.27	0.22	0.20	0.49	0.34
Intersection Summary								

HCM Signalized Intersection Capacity Analysis
4: Bloor Street & Fieldgate Drive

<Existing> Weekday AM Peak Hour
12/14/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	150	542	41	33	395	75	56	35	74	177	38	167
Future Volume (vph)	150	542	41	33	395	75	56	35	74	177	38	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.99	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.97
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.95	1.00	0.97
Frt	1.00	0.99	1.00	0.98	1.00	0.98	1.00	0.90	1.00	0.88	1.00	0.88
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.88	0.88
Satd. Flow (prot)	1791	3448	1733	3431	1733	3431	1674	1631	1666	1620	1666	1620
Flt Permitted	0.42	1.00	0.41	1.00	0.41	1.00	0.49	1.00	0.68	1.00	0.68	1.00
Satd. Flow (perm)	793	3448	745	3431	745	3431	856	1631	1193	1620	1193	1620
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	596	45	36	434	82	62	38	81	195	42	184
RTOR Reduction (vph)	0	4	0	0	11	0	0	63	0	0	144	0
Lane Group Flow (vph)	165	637	0	36	505	0	62	56	0	195	82	0
Confl. Peds. (#/hr)	29	30	30	30	30	29	30	30	66	66	30	30
Heavy Vehicles (%)	1%	4%	7%	3%	3%	1%	7%	0%	1%	4%	0%	1%
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2			6			4			8	
Permitted Phases	2		6			4						8
Actuated Green, G (s)	65.5	65.5	54.5	54.5	54.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Effective Green, g (s)	65.5	65.5	54.5	54.5	54.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Actuated g/C Ratio	0.66	0.66	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	599	2258	406	1869	1869	188	368		262	356		
v/s Ratio Prot	0.02	c0.18		0.15		0.03						
v/s Ratio Perm	0.16		0.05	0.05	0.07	0.33	0.16	0.74	0.23			
v/c Ratio	0.28	0.28	0.09	0.27	0.27	0.33	0.16	0.74	0.23			
Uniform Delay, d1	6.7	7.3	10.9	12.1	12.1	32.8	31.5	36.4	32.1			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.1	0.1	0.1	1.0	0.2	10.9	0.3			
Delay (s)	6.8	7.6	11.0	12.2	12.2	33.8	31.7	47.3	32.4			
Level of Service	A	A	B	B	B	C	C	D	C			
Approach Delay (s)	7.4			12.1		32.4			39.3			
Approach LOS	A			B		C			D			
Intersection Summary												
HCM 2000 Control Delay	17.9											
HCM 2000 Volume to Capacity ratio	0.41											
Actuated Cycle Length (s)	100.0											
Intersection Capacity Utilization	82.8%											
Analysis Period (min)	15											
c Critical Lane Group												

Timings
1: Bloor Street & Bridgewood Drive

<Existing> Weekday PM Peak Hour
12/14/2021

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4T	4T	4T	4T	4T	4T	4T
Traffic Volume (vph)	21	599	28	821	19	5	37	5
Future Volume (vph)	21	599	28	821	19	5	37	5
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2	4	4		4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effcd Green (s)		61.9		61.9	12.1	12.1		12.1
Actuated g/C Ratio		0.76		0.76	0.15	0.15		0.15
v/c Ratio		0.29		0.39	0.19	0.31		0.31
Control Delay		4.5		5.1	21.9	24.3		24.3
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		4.5		5.1	21.9	24.3		24.3
LOS		A		A	C	C		C
Approach Delay		4.5		5.1	21.9	24.3		24.3
Approach LOS		A		A	C	C		C
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 81.2								
Natural Cycle: 60								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.39								
Intersection Signal Delay: 6.0								
Intersection Capacity Utilization 67.4%								
Analysis Period (min) 15								



Queues
1: Bloor Street & Bridgewood Drive

<Existing> Weekday PM Peak Hour
12/14/2021

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	706	969	44	75
v/c Ratio	0.29	0.39	0.19	0.31
Control Delay	4.5	5.1	21.9	24.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.5	5.1	21.9	24.3
Queue Length 50th (m)	18.3	27.8	3.4	6.1
Queue Length 95th (m)	25.4	37.6	11.8	17.3
Internal Link Dist (m)	154.6	492.4	61.1	137.6
Turn Bay Length (m)				
Base Capacity (vph)	2450	2499	622	620
Survation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.39	0.07	0.12
Intersection Summary				

HCM Signalized Intersection Capacity Analysis
1: Bloor Street & Bridgwood Drive

HCM Unsignalized Intersection Capacity Analysis
2: Bloor Street & 1785 Bloor Street Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T	4T		4T	4T		4T			4T	4T
Traffic Volume (vph)	21	599	36	28	821	52	19	5	18	37	5	28
Future Volume (vph)	21	599	36	28	821	52	19	5	18	37	5	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3537	3537	3537	3570	3570	3570	1751	1751	1751	1751	1752	1752
Flt Permitted	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82	0.81	0.81	0.81
Satd. Flow (perm)	3211	3211	3211	3280	3280	3280	1476	1476	1476	1456	1456	1456
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)	23	644	39	30	883	56	20	5	19	40	5	30
RTOR Reduction (vph)	0	2	0	0	3	0	0	17	0	0	0	27
Lane Group Flow (vph)	0	704	0	0	986	0	0	27	0	0	0	48
Confl. Peds. (#/hr)	13	6	6	6	13	7	7	5	5	5	5	7
Heavy Vehicles (%)	0%	2%	3%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	2	2	2	2	2	2	4	4	4	4	4	4
Permitted Phases	2	2	2	2	2	2	4	4	4	4	4	4
Actuated Green, G (s)	60.6	60.6	60.6	60.6	60.6	60.6	9.5	9.5	9.5	9.5	9.5	9.5
Effective Green, g (s)	60.6	60.6	60.6	60.6	60.6	60.6	9.5	9.5	9.5	9.5	9.5	9.5
Actuated G/C Ratio	0.73	0.73	0.73	0.73	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2355	2355	2355	2406	2406	2406	169	169	169	167	167	167
v/s Ratio Prot	0.22	0.22	0.22	0.29	0.29	0.29	0.02	0.02	0.02	0.03	0.03	0.03
v/s Ratio Perm	0.30	0.30	0.30	0.40	0.40	0.40	0.16	0.16	0.16	0.29	0.29	0.29
Uniform Delay, d1	3.8	3.8	3.8	4.2	4.2	4.2	33.0	33.0	33.0	33.5	33.5	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.4	1.0	1.0	1.0
Delay (s)	4.1	4.1	4.1	4.7	4.7	4.7	33.4	33.4	33.4	34.4	34.4	34.4
Level of Service	A	A	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)	4.1	4.1	4.1	4.7	4.7	4.7	33.4	33.4	33.4	34.4	34.4	34.4
Approach LOS	A	A	A	A	A	A	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	6.4											
HCM 2000 Level of Service	A											
HCM 2000 Volume to Capacity ratio	0.39											
Actuated Cycle Length (s)	82.6											
Sum of lost time (s)	12.5											
Intersection Capacity Utilization	67.4%											
ICU Level of Service	C											
Analysis Period (min)	15											
c Critical Lane Group												

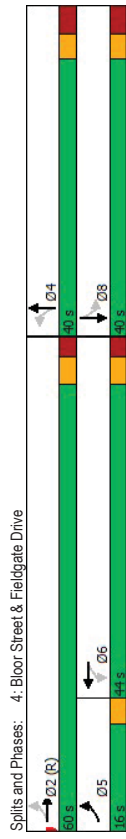
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔↔		↔	
Traffic Volume (veh/h)	7	738	868	10	10	10
Future Volume (Veh/h)	7	738	868	10	10	10
Sign Control	Free	Free	Free	Stop	Stop	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	802	943	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (m)	235	179				
pX, platoon unblocked	0.92				0.93	0.92
vC, conflicting volume	954				1366	477
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	772				1116	252
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	98
dM capacity (veh/h)	770				186	686
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	275	535	629	325	22	
Volume Left	8	0	0	0	11	
Volume Right	0	0	0	11	11	
cSH	770	1700	1700	1700	293	
Volume to Capacity	0.01	0.31	0.37	0.19	0.08	
Queue Length 95th (m)	0.2	0.0	0.0	0.0	1.8	
Control Delay (s)	0.4	0.0	0.0	0.0	18.3	
Lane LOS	A	A	A	C	C	
Approach Delay (s)	0.1	0.0	0.0	0.0	18.3	
Approach LOS	C	C	C	C	C	
Intersection Summary						
Average Delay	0.3			A		
Intersection Capacity Utilization	35.3%			ICU Level of Service		
Analysis Period (min)	15			A		

HCM Unsignalized Intersection Capacity Analysis <Existing> Weekday PM Peak Hour 3: 1750 Bloor Street Driveway Access/1759 Bloor Street Driveway Access & Bloor Street 12/14/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T		4T				4T			4T	
Traffic Volume (veh/h)	0	734	22	4	878	0	9	0	4	0	0	0
Future Volume (veh/h)	0	734	22	4	878	0	9	0	4	0	0	0
Sign Control		Free		Free			Stop		Stop		Stop	
Grade		0%		0%			0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	798	24	4	954	0	10	0	4	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (m)		214										
pX platoon unblocked	0.92	0.96					0.94	0.94	0.96	0.94	0.94	0.92
VC conflicting volume	954	822					1295	1772	411	1365	1784	477
VC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCu, unblocked vol	786	737					1013	1519	310	1087	1531	270
IC, single (s)	4.1	4.1					7.5	6.5	6.9	7.5	6.5	6.9
IC, 2 stage (s)												
p0 queue free %	2.2	2.2					3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free (s)	100	100					94	100	99	100	100	100
CM capacity (veh/h)	766	832					182	111	660	159	109	673
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	399	423	481	477	14	0						
Volume Left	0	0	4	0	10	0						
Volume Right	0	24	0	0	4	0						
cSH	766	1700	832	1700	229	1700						
Volume to Capacity	0.00	0.25	0.00	0.28	0.06	0.00						
Queue Length 95th (m)	0.0	0.0	0.1	0.0	1.5	0.0						
Control Delay (s)	0.0	0.0	0.1	0.0	21.7	0.0						
Lane LOS		A	A	C	A	A						
Approach Delay (s)	0.0	0.1	21.7	0.0								
Approach LOS		C	C	A								
Intersection Summary												
Average Delay			0.2							A		
Intersection Capacity Utilization			37.1%									
Analysis Period (min)			15									

Timings <Existing> Weekday PM Peak Hour 4: Bloor Street & Fieldgate Drive 12/14/2021

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4T	4T	4T	4T	4T	4T	4T
Traffic Volume (vph)	93	551	61	641	58	27	126	49
Future Volume (vph)	93	551	61	641	58	27	126	49
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2		6	4		8	
Permitted Phases	2		6		4		8	
Detector Phase	5	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	8.0	1.0	1.0	8.0	8.0	1.0	1.0
Minimum Split (s)	10.0	34.0	34.0	40.0	40.0	40.0	40.0	40.0
Total Split (s)	16.0	60.0	44.0	44.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None
Act Effect Green (s)	74.0	71.0	63.3	63.3	16.5	16.5	16.5	16.5
Actuated g/C Ratio	0.74	0.71	0.63	0.63	0.16	0.16	0.16	0.16
v/c Ratio	0.21	0.28	0.15	0.37	0.40	0.29	0.67	0.48
Control Delay	5.6	6.0	11.3	10.6	42.7	15.8	53.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	11.3	10.6	42.7	15.8	53.4	16.2
LOS	A	A	B	B	D	B	D	B
Approach Delay								
Approach LOS								
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 100								
Offset: 0 (0%), Referenced to phase 2EBTL, Start of Green								
Natural Cycle: 85								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.67								
Intersection Signal Delay: 13.3								
Intersection Capacity Utilization 75.6%								
Analysis Period (min) 15								



Queues
4: Bloor Street & Fieldgate Drive

<Existing> Weekday PM Peak Hour
12/14/2021

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group								
Lane Group Flow (vph)	103	701	68	824	64	93	140	183
v/c Ratio	0.21	0.28	0.15	0.37	0.40	0.29	0.67	0.48
Control Delay	5.6	6.0	11.3	10.6	42.7	15.8	53.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	11.3	10.6	42.7	15.8	53.4	16.2
Queue Length 50th (m)	4.6	21.3	5.1	37.3	11.2	5.0	25.8	9.2
Queue Length 95th (m)	12.0	38.2	14.7	63.8	21.9	16.7	41.5	25.9
Internal Link Dist (m)		536.1		189.9		128.6		151.2
Turn Bay Length (m)	50.0		50.0		40.0		25.0	
Base Capacity (vph)	566	2477	450	2201	326	591	427	635
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.28	0.15	0.37	0.20	0.16	0.33	0.29
Intersection Summary								

HCM Signalized Intersection Capacity Analysis
4: Bloor Street & Fieldgate Drive

<Existing> Weekday PM Peak Hour
12/14/2021

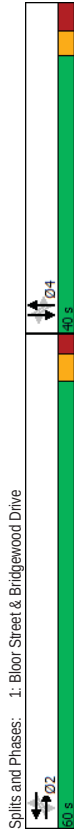
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBT
Lane Configurations												
Traffic Volume (vph)	93	551	80	61	641	101	58	27	57	126	49	116
Future Volume (vph)	93	551	80	61	641	101	58	27	57	126	49	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.99	1.00	0.95	1.00	0.99	1.00	0.97	1.00	1.00	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.90	1.00	0.89	1.00	0.89
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1782	3480	1757	3467	1758	3467	1758	1643	1739	1641	1739	1641
Flt Permitted	0.30	1.00	0.39	1.00	0.53	1.00	0.53	1.00	0.70	1.00	0.70	1.00
Satd. Flow (perm)	554	3480	712	3467	976	1643	976	1643	1276	1641	1276	1641
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)	103	612	89	68	712	112	64	30	63	140	54	129
RTOR Reduction (vph)	0	7	0	0	7	0	0	53	0	0	108	0
Lane Group Flow (vph)	103	694	0	68	817	0	64	40	0	140	75	0
Confl. Peds. (#/hr)	35	27	27	35	26	35	26	35	35	35	26	35
Confl. Bikes (#/hr)		1			1							1
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2		6			4				8	
Permitted Phases	2			6			4				8	
Actuated Green, G (s)	71.0	71.0	62.7	62.7	62.7	62.7	16.5	16.5	16.5	16.5	16.5	16.5
Effective Green, g (s)	71.0	71.0	62.7	62.7	62.7	62.7	16.5	16.5	16.5	16.5	16.5	16.5
Actuated g/C Ratio	0.71	0.71	0.63	0.63	0.63	0.63	0.16	0.16	0.16	0.16	0.16	0.16
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	458	2470	446	2173	446	2173	161	271	271	210	270	270
v/s Ratio Prot	0.01	c0.20		0.10	c0.24		0.07			c0.11		0.05
v/c Ratio Perm	0.15			0.15			0.40	0.15		0.67	0.28	
v/c Ratio	0.22	0.28	0.28	0.15	0.38	0.40	0.15	0.15	0.15	0.67	0.28	0.28
Uniform Delay, d1	4.9	5.3	5.3	7.7	9.1	9.1	37.3	35.7	39.2	36.5	36.5	36.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.2	0.1	0.1	0.1	1.6	0.3	7.8	0.6	0.6	0.6
Delay (s)	5.0	5.5	5.5	7.9	9.2	9.2	38.9	36.0	46.9	37.1	37.1	37.1
Level of Service	A	A	A	A	A	A	D	D	D	D	D	D
Approach Delay (s)		5.5		9.1			37.2			41.4		
Approach LOS		A		A			D			D		
Intersection Summary												
HCM 2000 Control Delay			14.6				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			15.5		
Intersection Capacity Utilization			75.6%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Timings
1: Bloor Street & Bridgwood Drive

<Background> 2027 Weekday AM Peak Hour

05-25-2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4TB		4TB		4TB		4TB
Traffic Volume (vph)	36	770	28	445	124	12	56	9
Future Volume (vph)	36	770	28	445	124	12	56	9
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2	4	4		4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase								
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effect Green (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.45	0.45	0.28	0.28	0.70	0.42	0.42	0.42
Control Delay	9.1	9.1	7.5	7.5	39.8	21.8	21.8	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	9.1	7.5	7.5	39.8	21.8	21.8	21.8
LOS	A	A	A	A	D	D	C	C
Approach Delay	9.1	9.1	7.5	7.5	39.8	21.8	21.8	21.8
Approach LOS	A	A	A	A	D	D	C	C



HCM Signalized Intersection Capacity Analysis
1: Bloor Street & Bridgwood Drive

<Background> 2027 Weekday AM Peak Hour

05-25-2022

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBT
Lane Configurations		4TB		4TB		4TB		4TB	
Traffic Volume (vph)	36	770	28	445	124	12	56	9	64
Future Volume (vph)	36	770	28	445	124	12	56	9	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	0.99	1.00	1.00	1.00
Fr	0.99	0.99	0.99	0.99	0.96	0.96	0.93	0.93	0.93
Flt Protected	1.00	1.00	1.00	1.00	0.97	0.97	0.98	0.98	0.98
Satd. Flow (prot)	3484	3484	3480	3480	1756	1756	1708	1708	1708
Flt Permitted	0.91	0.91	0.87	0.87	0.75	0.75	0.78	0.78	0.78
Satd. Flow (perm)	3181	3181	3049	3049	1357	1357	1360	1360	1360
Peak-Hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	38	819	61	473	46	132	67	60	68
RTOR Reduction (vph)	0	4	0	0	5	0	20	0	42
Lane Group Flow (vph)	0	914	0	0	544	0	192	0	96
Confl. Peds. (#/hr)	13	10	10	13	17	9	9	9	17
Heavy Vehicles (%)	6%	3%	4%	2%	3%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	2	2	2	2	4	4	4	4	4
Permitted Phases	2	2	2	2	4	4	4	4	4
Actuated Green, G (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7	17.7
Effective Green, g (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.21	0.21
Clearance Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2042	1958	1958	1958	284	284	285	285	285
v/s Ratio Prot	c0.29	c0.18	c0.14	c0.14	0.07	0.07	0.07	0.07	0.07
v/s Ratio Perm	0.45	0.28	0.28	0.28	0.68	0.68	0.34	0.34	0.34
v/c Ratio	7.6	6.6	6.6	6.6	30.7	30.7	28.4	28.4	28.4
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.7	0.7	0.7	0.7	6.3	6.3	0.7	0.7	0.7
Incremental Delay, d2	8.3	6.9	6.9	6.9	37.0	37.0	29.1	29.1	29.1
Delay (s)	A	A	A	A	D	D	C	C	C
Level of Service	A	A	A	A	D	D	C	C	C
Approach Delay (s)	8.3	6.9	6.9	6.9	37.0	37.0	29.1	29.1	29.1
Approach LOS	A	A	A	A	D	D	C	C	C
Intersection Summary									
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B						
HCM 2000 Volume to Capacity ratio	0.50								
Actuated Cycle Length (s)	84.4	Sum of lost time (s)	12.5						
Intersection Capacity Utilization	75.2%	ICU Level of Service	D						
Analysis Period (min)	15								
c Critical Lane Group									

HCM Unsignalized Intersection Capacity Analysis<Background> 2027 Weekday AM Peak Hour
 2. Bloor Street & 1785 Bloor Street Driveway

05-25-2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4T	4T		W	
Traffic Volume (veh/h)	9	871	633	7	5	9
Future Volume (Veh/h)	9	871	633	7	5	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	10	947	688	8	5	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None				
Median storage (veh)						
Upstream signal (m)		21	179		0.92	0.97
pX platoon unblocked	0.97				1186	348
VC, conflicting volume	696					
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	635				904	278
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
CM capacity (veh/h)	920				252	701
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	326	631	459	237	15	
Volume Left	10	0	0	0	5	
Volume Right	0	0	0	8	10	
cSH	920	1700	1700	1700	440	
Volume to Capacity	0.01	0.37	0.27	0.14	0.03	
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.8	
Control Delay (s)	0.4	0.0	0.0	0.0	13.5	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		13.5	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			A
Intersection Capacity Utilization			40.4%			
Analysis Period (min)			15			



Timings
 3. 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

05-25-2022

<Background> 2027 Weekday AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4T	4T	4T	4T	4T	4T	4T
Traffic Volume (vph)	5	835	10	642	29	0	12	0
Future Volume (vph)	5	835	10	642	29	0	12	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2	4		4	
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0		6.5		6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode		Max	Max	Max	None	None	None	None
Act Effct Green (s)		63.0		63.0	12.1	12.1	12.1	12.1
Actuated g/C Ratio		0.77		0.77	0.15	0.15	0.15	0.15
v/C Ratio		0.36		0.28	0.29	0.10	0.10	0.10
Control Delay		4.8		4.4	20.2	9.1	9.1	9.1
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		4.8		4.4	20.2	9.1	9.1	9.1
LOS		A		A	C	C	A	A
Approach Delay		4.8		4.4	20.2	9.1	9.1	9.1
Approach LOS		A		A	C	C	A	A
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 82.3								
Natural Cycle: 60								
Control Type: Semi Act-Uncoord								
Maximum v/C Ratio: 0.36								
Intersection Signal Delay: 5.3								
Intersection Capacity Utilization 47.4%								
Analysis Period (min) 15								



Splits and Phases: 3. 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street



HCM Signalized Intersection Capacity Analysis <Background> 2027 Weekday AM Peak Hour
3. 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

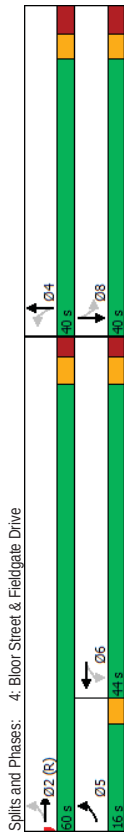
05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	835	14	10	642	2	29	0	36	12	0	9
Traffic Volume (vph)	5	835	14	10	642	2	29	0	36	12	0	9
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Total Lost time (s)	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.94	0.94	0.94	0.94
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.97	0.97	0.97	0.97
Satd. Flow (prot)	3569	3574	3574	3574	3574	3574	1705	1705	1724	1724	1724	1724
Flt Permitted	0.95	0.94	0.94	0.94	0.94	0.94	0.84	0.84	0.79	0.79	0.79	0.79
Satd. Flow (perm)	3359	3359	3359	3359	3359	3359	1472	1472	1392	1392	1392	1392
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	908	15	11	698	2	32	0	39	13	0	10
RTOR Reduction (vph)	0	1	0	0	0	0	0	35	0	0	20	0
Lane Group Flow (vph)	0	927	0	0	711	0	0	36	0	0	3	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	2	2	2	2	4	4	4	4	4	4
Permitted Phases	2	2	2	2	2	2	4	4	4	4	4	4
Actuated Green, G (s)	61.7	61.7	61.7	61.7	61.7	61.7	9.4	9.4	9.4	9.4	9.4	9.4
Effective Green, g (s)	61.7	61.7	61.7	61.7	61.7	61.7	9.4	9.4	9.4	9.4	9.4	9.4
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74	0.74	0.11	0.11	0.11	0.11	0.11	0.11
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2508	2479	2479	2479	2479	2479	165	165	165	165	165	165
v/s Ratio Prot	c0.27	0.21	0.21	0.21	0.21	0.21	c0.02	0.00	0.00	0.00	0.00	0.00
v/c Ratio Perm	0.37	0.29	0.29	0.29	0.29	0.29	0.22	0.02	0.02	0.02	0.02	0.02
Uniform Delay, d1	3.9	3.6	3.6	3.6	3.6	3.6	33.8	33.8	33.0	33.0	33.0	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3	0.3	0.3	0.3	0.3	0.7	0.7	0.0	0.0	0.0	0.0
Delay (s)	4.4	3.9	3.9	3.9	3.9	3.9	34.4	34.4	33.0	33.0	33.0	33.0
Level of Service	A	A	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)	4.4	3.9	3.9	3.9	3.9	3.9	34.4	34.4	33.0	33.0	33.0	33.0
Approach LOS	A	A	A	A	A	A	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	5.8											
HCM 2000 Volume to Capacity ratio	0.35											
Actuated Cycle Length (s)	83.6											
Intersection Capacity Utilization	47.4%											
Analysis Period (min)	15											
c Critical Lane Group												

Timings <Background> 2027 Weekday AM Peak Hour
4. Bloor Street & Fieldgate Drive

05-25-2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	4	4	4	4	4	4	4	4
Traffic Volume (vph)	150	584	35	509	35	509	35	177
Future Volume (vph)	150	584	35	509	35	509	35	177
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	8	8
Permitted Phases	5	2	6	6	4	4	8	8
Detector Phase	5	2	6	6	4	4	8	8
Switch Phase	5.0	8.0	1.0	1.0	8.0	8.0	1.0	1.0
Minimum Initial (s)	10.0	34.0	34.0	34.0	40.0	40.0	40.0	40.0
Minimum Split (s)	16.0	60.0	44.0	44.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	None	None	None	None
Recall Mode	None	C-Max	None	None	None	None	None	None
Act Effct Green (s)	68.4	65.4	54.4	54.4	22.1	22.1	22.1	22.1
Actuated g/C Ratio	0.68	0.65	0.54	0.54	0.22	0.22	0.22	0.22
v/c Ratio	0.30	0.30	0.10	0.36	0.28	0.28	0.28	0.28
Control Delay	8.3	8.7	15.7	14.7	36.0	12.5	52.0	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	8.7	15.7	14.7	36.0	12.5	52.0	10.0
LOS	A	A	B	B	D	B	D	A
Approach Delay	8.7	14.7	14.7	20.8	29.0	29.0	29.0	29.0
Approach LOS	A	B	B	C	C	C	C	C
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 100								
Offset: 0 (0%), Referenced to phase 2EBTL, Start of Green								
Natural Cycle: 85								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.74								
Intersection Signal Delay: 15.7								
Intersection Capacity Utilization 83.7%								
Analysis Period (min) 15								



HCM Signalized Intersection Capacity Analysis <Background> 2027 Weekday AM Peak Hour
4: Bloor Street & Fieldgate Drive

05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	150	584	41	35	509	79	59	35	74	177	38	176
Future Volume (vph)	150	584	41	35	509	79	59	35	74	177	38	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flpb. ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.97	1.00	0.97
Flpb. ped/bikes	0.99	1.00	0.99	1.00	0.98	1.00	0.98	1.00	1.00	0.95	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (prot)	1796	3452	1735	3448	1735	3448	1675	1631	1666	1618	1668	1618
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (perm)	667	3452	713	3448	713	3448	826	1631	1193	1618	1193	1618
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	642	45	38	559	87	65	38	81	195	42	193
RTOR Reduction (vph)	0	4	0	0	9	0	0	63	0	0	150	0
Lane Group Flow (vph)	165	683	0	38	637	0	65	56	0	195	85	0
Confl. Peds. (#/hr)	29	30	30	30	29	30	30	66	66	66	30	30
Heavy Vehicles (%)	1%	4%	7%	3%	1%	3%	1%	7%	0%	1%	4%	0%
Turn Type	pm-plt	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	5	2			6			4			8	
Permitted Phases	2		6	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated Green, G (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Effective Green, g (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated G/C Ratio	0.65	0.65	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	526	2257	387	1875	182	360	263	357				
v/s Ratio Prot	0.03	c0.20		c0.18		0.03						
v/s Ratio Perm	0.31	0.30	0.05	0.08	0.08	0.16	c0.16					
v/c Ratio	0.31	0.30	0.10	0.34	0.34	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Uniform Delay, d1	7.0	7.5	11.0	12.8	12.8	32.9	31.4	36.3	32.0	32.0	32.0	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.1	0.1	0.1	1.2	0.2	10.7	0.3	0.3	0.3	0.3
Delay (s)	7.1	7.8	11.1	12.9	12.9	34.1	31.6	47.0	32.4	32.4	32.4	32.4
Level of Service	A	A	B	B	B	C	C	D	D	D	C	C
Approach Delay (s)	7.7			12.8		32.5		39.0				
Approach LOS	A			B		C		D				
Intersection Summary												
HCM 2000 Control Delay			17.7			HCM 2000 Level of Service		B				
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		15.5				
Intersection Capacity Utilization			83.7%			ICU Level of Service		E				
Analysis Period (min)			15									
c Critical Lane Group												

Timings <Background> 2027 Weekday PM Peak Hour
1: Bloor Street & Bridgewood Drive

05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	22	629	73	839	59	10	38	20				
Future Volume (vph)	22	629	73	839	59	10	38	20				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flpb. ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.97	1.00	0.97
Flpb. ped/bikes	0.99	1.00	0.99	1.00	0.98	1.00	0.98	1.00	1.00	0.95	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (prot)	1796	3452	1735	3448	1735	3448	1675	1631	1666	1618	1668	1618
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (perm)	667	3452	713	3448	713	3448	826	1631	1193	1618	1193	1618
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	642	45	38	559	87	65	38	81	195	42	193
RTOR Reduction (vph)	0	4	0	0	9	0	0	63	0	0	150	0
Lane Group Flow (vph)	165	683	0	38	637	0	65	56	0	195	85	0
Confl. Peds. (#/hr)	29	30	30	30	29	30	30	66	66	66	30	30
Heavy Vehicles (%)	1%	4%	7%	3%	1%	3%	1%	7%	0%	1%	4%	0%
Turn Type	pm-plt	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	5	2			6			4			8	
Permitted Phases	2		6	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated Green, G (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Effective Green, g (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated G/C Ratio	0.65	0.65	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	526	2257	387	1875	182	360	263	357				
v/s Ratio Prot	0.03	c0.20		c0.18		0.03						
v/s Ratio Perm	0.31	0.30	0.05	0.08	0.08	0.16	c0.16					
v/c Ratio	0.31	0.30	0.10	0.34	0.34	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Uniform Delay, d1	7.0	7.5	11.0	12.8	12.8	32.9	31.4	36.3	32.0	32.0	32.0	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.1	0.1	0.1	1.2	0.2	10.7	0.3	0.3	0.3	0.3
Delay (s)	7.1	7.8	11.1	12.9	12.9	34.1	31.6	47.0	32.4	32.4	32.4	32.4
Level of Service	A	A	B	B	B	C	C	D	D	D	C	C
Approach Delay (s)	7.7			12.8		32.5		39.0				
Approach LOS	A			B		C		D				
Intersection Summary												
HCM 2000 Control Delay			17.7			HCM 2000 Level of Service		B				
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		15.5				
Intersection Capacity Utilization			83.7%			ICU Level of Service		E				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis <Background> 2027 Weekday PM Peak Hour
 1: Bloor Street & Bridgewood Drive

05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T	4T		4T		4T	4T		4T	4T	4T
Traffic Volume (vph)	22	629	101	73	839	52	59	10	52	38	20	28
Future Volume (vph)	22	629	101	73	839	52	59	10	52	38	20	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.5				6.5	
Lane Util. Factor		0.95			0.95		1.00				1.00	
Flpb. ped/bikes		1.00			1.00		1.00				1.00	
Flt		0.98			0.99		0.94				0.96	
Flt Protected		1.00			1.00		0.98				0.98	
Satd. Flow (prot)		3483			3566		1748				1784	
Flt Permitted		0.90			0.81		0.83				0.82	
Satd. Flow (perm)		3156			2909		1493				1490	
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)	24	676	109	78	902	56	63	11	56	41	22	30
RTOR Reduction (vph)	0	8	0	0	3	0	0	35	0	0	22	0
Lane Group Flow (vph)	0	801	0	0	1033	0	0	95	0	0	71	0
Confl. Peds. (#/hr)	13	6	6	13	7	7	5	5	5	5	7	7
Heavy Vehicles (%)	0%	2%	3%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		2		4		4		4	
Actuated Green, G (s)		56.9			56.9		12.7		12.7		12.7	
Effective Green, g (s)		56.9			56.9		12.7		12.7		12.7	
Actuated G/C Ratio		0.69			0.69		0.15		0.15		0.15	
Clearance Time (s)		6.0			6.0		6.5		6.5		6.5	
Vehicle Extension (s)		3.0			3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)		2187			2016		230		230		230	
v/s Ratio Prot		0.25			0.36		0.06		0.06		0.05	
v/s Ratio Perm		0.37			0.51		0.41		0.41		0.31	
Uniform Delay, d1		5.2			6.0		31.3		30.8		30.8	
Progression Factor		1.00			1.00		1.00		1.00		1.00	
Incremental Delay, d2		0.5			0.9		1.2		0.8		0.8	
Delay (s)		5.7			6.9		32.6		31.6		31.6	
Level of Service		A			A		C		C		C	
Approach Delay (s)		5.7			6.9		32.6		31.6		31.6	
Approach LOS		A			A		C		C		C	
Intersection Summary												
HCM 2000 Control Delay		9.2			HCM 2000 Level of Service		A					
HCM 2000 Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		82.1			Sum of lost time (s)		12.5					
Intersection Capacity Utilization		75.9%			ICU Level of Service		D					
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis<Background> 2027 Weekday PM Peak Hour
 2: Bloor Street & 1785 Bloor Street Driveway

05-25-2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4T	4T	4T	4T	4T
Traffic Volume (veh/h)	7	864	926	10	10	10
Future Volume (Veh/h)	7	864	926	10	10	10
Sign Control		Free	Free	Stop		
Grade		0%	0%	0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	939	1007	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		None	None			
Median type						
Median storage (veh)						
Upstream signal (m)		21	179			
pK, platoon unblocked	0.89			0.94	0.89	
VC, conflicting volume	1018			1498	509	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol	785			990	216	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)	2.2			3.5	3.3	
IF (s)	99			95	98	
p0 queue free %	742			225	706	
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	321	626	671	347	22	
Volume Left	8	0	0	0	11	
Volume Right	0	0	0	11	11	
CSH	742	1700	1700	342		
Volume to Capacity	0.01	0.37	0.39	0.20	0.06	
Queue Length 95th (m)	0.2	0.0	0.0	0.0	1.6	
Control Delay (s)	0.4	0.0	0.0	0.0	16.3	
Lane LOS	A				C	
Approach Delay (s)	0.1		0.0		16.3	
Approach LOS					C	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			38.8%			
Analysis Period (min)			15			
ICU Level of Service						A

Timings
3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

HCM Signalized Intersection Capacity Analysis <Background> 2027 Weekday PM Peak Hour
3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4P	4P	4P	4P	4P	4P	4P
Traffic Volume (vph)	14	851	16	936	15	0	6	0
Future Volume (vph)	14	851	16	936	15	0	6	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	2	2	4	4	4	4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?	Max	Max	Max	Max	None	None	None	None
Recall Mode								
Act Effect Green (s)	70.0	70.0	70.0	70.0	12.1	12.1	12.1	12.1
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.14	0.14	0.14	0.14
v/c Ratio	0.36	0.37	0.37	0.37	0.13	0.05	0.05	0.05
Control Delay	3.8	3.9	3.9	3.9	12.4	3.5	3.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	3.9	3.9	3.9	12.4	3.5	3.5	3.5
LOS	A	A	A	A	B	B	B	B
Approach Delay	3.8	3.9	3.9	3.9	12.4	3.5	3.5	3.5
Approach LOS	A	A	A	A	B	B	A	A
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 83.8								
Natural Cycle: 60								
Control Type: Semi-Act-Uncoord								
Maximum v/c Ratio: 0.37								
Intersection Signal Delay: 4.0					Intersection LOS: A			
Intersection Capacity Utilization 57.8%					ICU Level of Service B			
Analysis Period (min) 15								

Splits and Phases: 3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

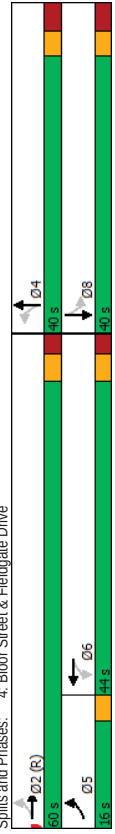


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4P	4P	4P	4P	4P	4P	4P	4P	4P	4P	4P
Traffic Volume (vph)	14	851	42	16	936	6	15	0	13	6	0	5
Future Volume (vph)	14	851	42	16	936	6	15	0	13	6	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94	0.94
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.97	0.97
Satd. Flow (prot)	3551	3551	3551	3551	3551	3551	1719	1719	1719	1719	1719	1719
Flt Permitted	0.93	0.93	0.93	0.93	0.93	0.93	0.83	0.83	0.83	0.83	0.83	0.83
Satd. Flow (perm)	3316	3316	3316	3316	3316	3316	1459	1459	1459	1459	1459	1459
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	925	46	17	1017	7	16	0	14	7	0	5
RTOR Reduction (vph)	0	2	0	0	0	0	0	28	0	0	11	0
Lane Group Flow (vph)	0	984	0	0	1041	0	0	2	0	0	1	0
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA
Protected Phases	2	2	2	2	2	2	4	4	4	4	4	4
Permitted Phases	2	2	2	2	2	2	4	4	4	4	4	4
Actuated Green, G (s)	67.3	67.3	67.3	67.3	67.3	67.3	6.8	6.8	6.8	6.8	6.8	6.8
Effective Green, g (s)	67.3	67.3	67.3	67.3	67.3	67.3	6.8	6.8	6.8	6.8	6.8	6.8
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.78	0.78	0.08	0.08	0.08	0.08	0.08	0.08
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2576	2576	2576	2576	2576	2576	114	114	114	114	114	114
v/s Ratio Prot	0.30	0.30	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00
v/s Ratio Perm	0.38	0.38	0.38	0.38	0.38	0.38	0.02	0.02	0.02	0.02	0.02	0.02
v/c Ratio	3.1	3.1	3.1	3.1	3.1	3.1	36.8	36.8	36.8	36.8	36.8	36.8
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.4	0.4	0.4	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1
Incremental Delay, d2	3.5	3.5	3.5	3.5	3.5	3.5	36.9	36.9	36.9	36.9	36.9	36.9
Delay (s)	A	A	A	A	A	A	D	D	D	D	D	D
Level of Service	A	A	A	A	A	A	D	D	D	D	D	D
Approach Delay (s)	3.5	3.5	3.5	3.5	3.5	3.5	36.9	36.9	36.9	36.9	36.9	36.9
Approach LOS	A	A	A	A	A	A	D	D	D	D	D	D
Intersection Summary												
HCM 2000 Control Delay	4.2	4.2	4.2	4.2	4.2	4.2	HCM 2000 Level of Service	A	A	A	A	A
HCM 2000 Volume to Capacity ratio	0.37	0.37	0.37	0.37	0.37	0.37						
Actuated Cycle Length (s)	86.6	86.6	86.6	86.6	86.6	86.6	Sum of lost time (s)	12.5	12.5	12.5	12.5	12.5
Intersection Capacity Utilization	57.8%	57.8%	57.8%	57.8%	57.8%	57.8%	ICU Level of Service	B	B	B	B	B
Analysis Period (min)	15	15	15	15	15	15						
c Critical Lane Group												

Timings
4: Bloor Street & Fieldgate Drive

HCM Signalized Intersection Capacity Analysis <Background> 2027 Weekday PM Peak Hour
4: Bloor Street & Fieldgate Drive

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	5	4	4	4	4	4	4	4
Traffic Volume (vph)	95	664	61	692	58	27	129	49
Future Volume (vph)	95	664	61	692	58	27	129	49
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	8	8
Permitted Phases	2	2	6	6	4	4	8	8
Detector Phase	5	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	8.0	1.0	1.0	8.0	8.0	1.0	1.0
Minimum Split (s)	10.0	34.0	34.0	34.0	40.0	40.0	40.0	40.0
Total Split (s)	16.0	60.0	44.0	44.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None
Act Effect Green (s)	73.7	70.7	61.4	61.4	16.8	16.8	16.8	16.8
Actuated g/C Ratio	0.74	0.71	0.61	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.24	0.33	0.18	0.41	0.39	0.29	0.67	0.48
Control Delay	5.9	6.5	12.0	11.5	42.0	15.6	53.4	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.5	12.0	11.5	42.0	15.6	53.4	16.0
LOS	A	A	B	B	D	D	D	B
Approach Delay	6.4	6.4	11.6	11.6	26.3	26.3	32.4	32.4
Approach LOS	A	A	B	B	C	C	C	C



Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	5	4	4	4	4	4	4	4
Traffic Volume (vph)	95	664	61	692	58	27	129	49
Future Volume (vph)	95	664	61	692	58	27	129	49
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	8	8
Permitted Phases	2	2	6	6	4	4	8	8
Effective Green, G (s)	70.7	70.7	61.3	61.3	16.8	16.8	16.8	16.8
Actuated g/C Ratio	0.71	0.71	0.61	0.61	0.17	0.17	0.17	0.17
Clearance Time (s)	3.0	3.0	6.0	6.0	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	440	2469	386	2129	164	275	214	275
v/s Ratio Plot	0.02	0.024	0.15	0.025	0.07	0.02	0.11	0.05
v/s Ratio Perm	0.24	0.33	0.18	0.41	0.39	0.15	0.67	0.28
Uniform Delay, d1	5.2	5.6	8.4	10.0	37.0	35.5	39.0	36.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4	0.2	0.1	1.5	0.3	7.7	0.5
Delay (s)	5.3	6.0	8.6	10.1	38.6	35.7	46.7	36.8
Level of Service	A	A	A	B	D	D	D	D
Approach Delay (s)	5.9	5.9	10.0	10.0	36.9	36.9	41.1	41.1
Approach LOS	A	A	B	B	D	D	D	D

Intersection Summary								
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B					
HCM 2000 Volume to Capacity ratio	0.46							
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5					
Intersection Capacity Utilization	75.9%	ICU Level of Service	D					
Analysis Period (min)	15							
c Critical Lane Group								

Timings
1: Bloor Street & Bridgewood Drive

<Total> 2027 Weekday AM Peak Hour
05-25-2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	36	797	28	454	124	12	56	9
Future Volume (vph)	36	797	28	454	124	12	56	9
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	2	2	4	4	4	4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effect Green (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.46	0.46	0.29	0.29	0.70	0.70	0.42	0.42
Control Delay	9.2	7.6	39.8	39.8	21.8	21.8	21.8	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	7.6	39.8	39.8	21.8	21.8	21.8	21.8
LOS	A	A	A	A	D	D	C	C
Approach Delay	9.2	7.6	39.8	39.8	21.8	21.8	21.8	21.8
Approach LOS	A	A	A	A	D	D	C	C

Splits and Phases: 1: Bloor Street & Bridgewood Drive



HCM Signalized Intersection Capacity Analysis
1: Bloor Street & Bridgewood Drive

<Total> 2027 Weekday AM Peak Hour
05-25-2022

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	36	797	57	28	454	43	124	12	63
Future Volume (vph)	36	797	57	28	454	43	124	12	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	0.99	1.00	1.00	1.00
Prt	0.99	0.99	0.99	0.99	0.96	0.96	0.93	0.93	0.93
Flt Protected	1.00	1.00	1.00	1.00	0.97	0.97	0.98	0.98	0.98
Satd. Flow (prot)	3486	3486	3481	3481	1756	1756	1708	1708	1708
Flt Permitted	0.91	0.91	0.87	0.87	0.75	0.75	0.78	0.78	0.78
Satd. Flow (perm)	3184	3184	3044	3044	1357	1357	1360	1360	1360
Peak-Hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	38	848	61	30	483	46	132	13	67
RTOR Reduction (vph)	0	4	0	0	5	0	20	0	0
Lane Group Flow (vph)	0	943	0	0	554	0	192	0	0
Confl. Peds. (#/hr)	13	10	10	13	17	9	9	9	17
Heavy Vehicles (%)	6%	3%	4%	2%	3%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Permitted Phases	2	2	2	2	4	4	4	4	4
Actuated Green, G (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7	17.7
Effective Green, g (s)	54.2	54.2	54.2	54.2	17.7	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.21	0.21
Clearance Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2044	1954	1954	1954	284	284	285	285	285
v/s Ratio Prot	c0.30	0.18	c0.14	c0.14	0.07	0.07	0.07	0.07	0.07
v/s Ratio Perm	0.46	0.28	0.68	0.68	0.34	0.34	0.34	0.34	0.34
Uniform Delay, d1	7.7	6.6	30.7	30.7	28.4	28.4	28.4	28.4	28.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.4	6.3	6.3	0.7	0.7	0.7	0.7	0.7
Delay (s)	8.4	7.0	37.0	37.0	29.1	29.1	29.1	29.1	29.1
Level of Service	A	A	A	A	D	D	C	C	C
Approach Delay (s)	8.4	7.0	37.0	37.0	29.1	29.1	29.1	29.1	29.1
Approach LOS	A	A	A	A	D	D	C	C	C
Intersection Summary									
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B						
HCM 2000 Volume to Capacity ratio	0.51								
Actuated Cycle Length (s)	84.4	Sum of lost time (s)	12.5						
Intersection Capacity Utilization	75.9%	ICU Level of Service	D						
Analysis Period (min)	15								
c Critical Lane Group									

HCM Unsignalized Intersection Capacity Analysis <Total> 2027 Weekday AM Peak Hour
 2. Bloor Street & 1785 Bloor Street Driveway 05-25-2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4T	4T		W	
Traffic Volume (veh/h)	21	871	633	16	32	41
Future Volume (Veh/h)	21	871	633	16	32	41
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	23	947	688	17	35	45
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None				
Median storage (veh)						
Upstream signal (m)		21	179			
pX platoon unblocked	0.97				0.92	0.97
VC, conflicting volume	705				1216	352
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	638				924	276
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	97				85	94
CM capacity (veh/h)	915				241	701
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	339	631	459	246	80	
Volume Left	23	0	0	0	35	
Volume Right	0	0	0	17	45	
cSH	915	1700	1700	382		
Volume to Capacity	0.03	0.37	0.27	0.14	0.21	
Queue Length 95th (m)	0.6	0.0	0.0	0.0	5.9	
Control Delay (s)	0.9	0.0	0.0	0.0	16.9	
Lane LOS	A				C	
Approach Delay (s)	0.3		0.0		16.9	
Approach LOS					C	
Intersection Summary						
Average Delay				0.9		
Intersection Capacity Utilization				50.1%		A
Analysis Period (min)				15		

Timings <Total> 2027 Weekday AM Peak Hour
 3. 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street 05-25-2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		4T	4T	4T	4T	4T	4T	4T
Traffic Volume (vph)	5	847	10	674	29	0	12	0
Future Volume (vph)	5	847	10	674	29	0	12	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2	4		4	
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase								
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)								
Lead/Lag		6.0		6.0		6.5		6.5
Lead-Lag Optimize?								
Recall Mode		Max		Max		None		None
Act Effct Green (s)		63.0		63.0		12.1		12.1
Actuated g/C Ratio		0.77		0.77		0.15		0.15
g/C Ratio		0.36		0.29		0.29		0.10
Control Delay		4.9		4.5		20.2		9.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		4.9		4.5		20.2		9.1
LOS		A		A		C		A
Approach Delay		4.9		4.5		20.2		9.1
Approach LOS		A		A		C		A
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 82.3								
Natural Cycle: 60								
Control Type: Semi Act-Uncoord								
Maximum v/c Ratio: 0.36								
Intersection Signal Delay: 5.4								
Intersection Capacity Utilization 47.8%								
Analysis Period (min) 15								

Splits and Phases: 3. 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street



HCM Signalized Intersection Capacity Analysis
 3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

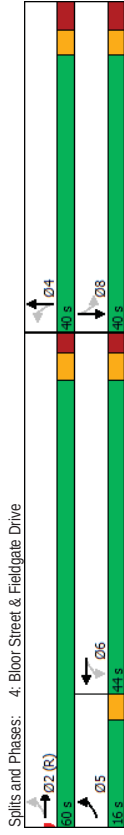
Timings
 4: Bloor Street & Fieldgate Drive

<Total> 2027 Weekday AM Peak Hour
 05-25-2022

<Total> 2027 Weekday AM Peak Hour
 05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	847	14	10	674	2	29	0	36	12	0	9
Traffic Volume (vph)	5	847	14	10	674	2	29	0	36	12	0	9
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Total Lost time (s)	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.94	0.94	0.94
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.97	0.97	0.97	0.97
Satd. Flow (prot)	3569	3574	3574	3574	3574	3574	1705	1705	1724	1724	1724	1724
Flt Permitted	0.95	0.94	0.94	0.94	0.94	0.94	0.84	0.84	0.79	0.79	0.79	0.79
Satd. Flow (perm)	3399	3360	3360	3360	3360	3360	1472	1472	1392	1392	1392	1392
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	921	15	11	733	2	32	0	39	13	0	10
RTOR Reduction (vph)	0	1	0	0	0	0	0	35	0	0	20	0
Lane Group Flow (vph)	0	940	0	0	746	0	0	36	0	0	3	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	2	2	2	2	4	4	4	4	4	4
Permitted Phases	2	2	2	2	2	2	4	4	4	4	4	4
Actuated Green, G (s)	61.7	61.7	61.7	61.7	61.7	61.7	9.4	9.4	9.4	9.4	9.4	9.4
Effective Green, g (s)	61.7	61.7	61.7	61.7	61.7	61.7	9.4	9.4	9.4	9.4	9.4	9.4
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74	0.74	0.11	0.11	0.11	0.11	0.11	0.11
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2508	2479	2479	2479	2479	2479	165	165	165	165	165	165
v/s Ratio Prot	c0.28	0.22	0.22	0.22	0.22	0.22	c0.02	0.00	0.00	0.00	0.00	0.00
v/c Ratio	0.37	0.30	0.30	0.30	0.30	0.30	0.22	0.02	0.02	0.02	0.02	0.02
Uniform Delay, d1	4.0	3.7	3.7	3.7	3.7	3.7	33.8	33.8	33.0	33.0	33.0	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3	0.3	0.3	0.3	0.3	0.7	0.7	0.0	0.0	0.0	0.0
Delay (s)	4.4	4.0	4.0	4.0	4.0	4.0	34.4	34.4	33.0	33.0	33.0	33.0
Level of Service	A	A	A	A	A	A	C	C	C	C	C	C
Approach Delay (s)	4.4	4.0	4.0	4.0	4.0	4.0	34.4	34.4	33.0	33.0	33.0	33.0
Approach LOS	A	A	A	A	A	A	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	5.8											
HCM 2000 Volume to Capacity ratio	0.35											
Actuated Cycle Length (s)	83.6											
Intersection Capacity Utilization	47.8%											
Analysis Period (min)	15											
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	847	14	10	674	2	29	0	36	12	0	9
Traffic Volume (vph)	5	847	14	10	674	2	29	0	36	12	0	9
Future Volume (vph)	150	596	35	541	59	35	541	59	35	177	38	177
Turn Type	pm-plt	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	2	6	6	6	4	4	4	8	8	8
Permitted Phases	5	2	2	6	6	6	4	4	4	8	8	8
Detector Phase	5	2	2	6	6	6	4	4	4	8	8	8
Switch Phase	5.0	8.0	1.0	1.0	1.0	1.0	8.0	8.0	1.0	1.0	1.0	1.0
Minimum Initial (s)	10.0	34.0	34.0	34.0	34.0	34.0	40.0	40.0	40.0	40.0	40.0	40.0
Minimum Split (s)	16.0	60.0	44.0	44.0	44.0	44.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	None	None	None	None	None	None
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	68.4	65.4	54.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1
Actuated g/C Ratio	0.68	0.65	0.54	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.32	0.31	0.10	0.36	0.36	0.36	0.28	0.28	0.28	0.28	0.28	0.28
Control Delay	8.4	8.8	15.7	14.9	14.9	14.9	36.0	36.0	36.0	36.0	36.0	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	8.8	15.7	14.9	14.9	14.9	36.0	36.0	36.0	36.0	36.0	36.0
LOS	A	A	B	B	B	B	D	D	D	D	D	D
Approach Delay	8.7	14.9	14.9	14.9	14.9	14.9	20.8	20.8	20.8	20.8	20.8	20.8
Approach LOS	A	B	B	B	B	B	C	C	C	C	C	C
Intersection Summary												
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 0 (0%), Referenced to phase 2EBTL, Start of Green												
Natural Cycle: 85												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.74												
Intersection Signal Delay: 15.7												
Intersection Capacity Utilization 84.0%												
Analysis Period (min) 15												



HCM Signalized Intersection Capacity Analysis
4: Bloor Street & Fieldgate Drive

<Total> 2027 Weekday AM Peak Hour

05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	150	596	41	35	541	79	59	35	74	177	38	176
Future Volume (vph)	150	596	41	35	541	79	59	35	74	177	38	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flpb. ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.95	1.00	0.97
Flpb. ped/bikes	0.99	1.00	0.99	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.95	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.98	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (prot)	1798	3453	1736	3453	1736	3453	1675	1631	1666	1618	1668	1618
Flt Permitted	0.34	1.00	0.39	1.00	0.47	1.00	0.47	1.00	0.68	1.00	0.68	1.00
Satd. Flow (perm)	634	3453	704	3453	826	1631	826	1631	1193	1618	1193	1618
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	655	45	38	595	87	65	38	81	195	42	193
RTOR Reduction (vph)	0	4	0	0	9	0	0	63	0	0	150	0
Lane Group Flow (vph)	165	696	0	38	673	0	65	56	0	195	85	0
Confl. Peds. (#/hr)	29	30	30	30	29	30	30	66	66	66	30	30
Heavy Vehicles (%)	1%	4%	7%	3%	1%	7%	0%	1%	4%	0%	1%	1%
Turn Type	pm-plt	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2		6		4						8
Permitted Phases	2		6	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated Green, G (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Effective Green, g (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated g/C Ratio	0.65	0.65	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	507	2258	382	1878	182	360	263	357				
v/s Ratio Prot	0.03	0.20		0.19		0.03		0.05				
v/s Ratio Perm	0.33	0.31	0.05	0.10	0.36	0.16	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.33	0.31	0.10	0.10	0.36	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Uniform Delay, d1	7.0	7.5	11.0	12.9	32.9	31.4	36.3	32.0				
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4	0.1	0.1	1.2	0.2	10.7	0.3				
Delay (s)	7.2	7.9	11.1	13.0	34.1	31.6	47.0	32.4				
Level of Service	A	A	B	B	C	C	D	C				
Approach Delay (s)	7.7	12.9		12.9		32.5	39.0					
Approach LOS	A	B		B		C	D					
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service	B					
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)	15.5					
Intersection Capacity Utilization			84.0%			ICU Level of Service	E					
Analysis Period (min)			15									
c Critical Lane Group												

Timings
1: Bloor Street & Bridgewood Drive

<Total> 2027 Weekday PM Peak Hour

05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	22	646	73	871	59	10	38	20				
Future Volume (vph)	22	646	73	871	59	10	38	20				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flpb. ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.95	1.00	0.97
Flpb. ped/bikes	0.99	1.00	0.99	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.95	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.98	1.00	0.95	1.00	0.95	1.00	0.88	1.00
Satd. Flow (prot)	1798	3453	1736	3453	1736	3453	1675	1631	1666	1618	1668	1618
Flt Permitted	0.34	1.00	0.39	1.00	0.47	1.00	0.47	1.00	0.68	1.00	0.68	1.00
Satd. Flow (perm)	634	3453	704	3453	826	1631	826	1631	1193	1618	1193	1618
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	165	655	45	38	595	87	65	38	81	195	42	193
RTOR Reduction (vph)	0	4	0	0	9	0	0	63	0	0	150	0
Lane Group Flow (vph)	165	696	0	38	673	0	65	56	0	195	85	0
Confl. Peds. (#/hr)	29	30	30	30	29	30	30	66	66	66	30	30
Heavy Vehicles (%)	1%	4%	7%	3%	1%	7%	0%	1%	4%	0%	1%	1%
Turn Type	pm-plt	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases	5	2		6		4						8
Permitted Phases	2		6	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated Green, G (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Effective Green, g (s)	65.4	65.4	54.4	54.4	54.4	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Actuated g/C Ratio	0.65	0.65	0.54	0.54	0.54	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	507	2258	382	1878	182	360	263	357				
v/s Ratio Prot	0.03	0.20		0.19		0.03		0.05				
v/s Ratio Perm	0.33	0.31	0.05	0.10	0.36	0.16	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.33	0.31	0.10	0.10	0.36	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Uniform Delay, d1	7.0	7.5	11.0	12.9	32.9	31.4	36.3	32.0				
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4	0.1	0.1	1.2	0.2	10.7	0.3				
Delay (s)	7.2	7.9	11.1	13.0	34.1	31.6	47.0	32.4				
Level of Service	A	A	B	B	C	C	D	C				
Approach Delay (s)	7.7	12.9		12.9		32.5	39.0					
Approach LOS	A	B		B		C	D					
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service	B					
HCM 2000 Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)	15.5					
Intersection Capacity Utilization			84.0%			ICU Level of Service	E					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis <Total> 2027 Weekday PM Peak Hour
 1: Bloor Street & Bridgewood Drive 05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T	4T	4T	4T	4T	4T	4T	4T	4T	4T	4T
Traffic Volume (vph)	22	646	101	73	871	52	59	10	52	38	20	28
Future Volume (vph)	22	646	101	73	871	52	59	10	52	38	20	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0		6.0		6.5		6.5		6.5
Lane Util. Factor		0.95		0.95		1.00		1.00		1.00		1.00
Flpb. ped/bikes		1.00		1.00		1.00		1.00		1.00		1.00
Flt		0.98		0.99		0.94		0.94		0.96		0.96
Flt Protected		1.00		1.00		0.98		0.98		0.98		0.98
Satd. Flow (prot)		3485		3568		1748		1748		1784		1784
Flt Permitted		0.90		0.81		0.83		0.83		0.82		0.82
Satd. Flow (perm)		3154		2910		1493		1493		1490		1490
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)	24	695	109	78	937	56	63	11	56	41	22	30
RTOR Reduction (vph)	0	8	0	0	3	0	0	35	0	0	22	0
Lane Group Flow (vph)	0	820	0	0	1068	0	0	95	0	0	71	0
Confl. Peds. (#/hr)	13	6	6	13	7	7	7	5	5	5	7	7
Heavy Vehicles (%)	0%	2%	3%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2		2		2		4		4		4	
Permitted Phases	2		2		2		4		4		4	
Actuated Green, G (s)	56.9		56.9		56.9		12.7		12.7		12.7	
Effective Green, g (s)	56.9		56.9		56.9		12.7		12.7		12.7	
Actuated G/C Ratio	0.69		0.69		0.69		0.15		0.15		0.15	
Clearance Time (s)	6.0		6.0		6.0		6.5		6.5		6.5	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	2185		2016		230		230		230		230	
v/s Ratio Prot		0.26		0.37		0.06		0.06		0.05		0.05
v/s Ratio Perm		0.38		0.53		0.41		0.41		0.31		0.31
Uniform Delay, d1	5.2		6.1		31.3		30.8		30.8		30.8	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	0.5		1.0		1.2		0.8		0.8		0.8	
Delay (s)	5.7		7.1		32.6		31.6		31.6		31.6	
Level of Service	A		A		C		C		C		C	
Approach Delay (s)	5.7		7.1		32.6		31.6		31.6		31.6	
Approach LOS	A		A		C		C		C		C	
Intersection Summary												
HCM 2000 Control Delay		9.2		HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		82.1		Sum of lost time (s)			12.5					
Intersection Capacity Utilization		77.2%		ICU Level of Service			D					
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis <Total> 2027 Weekday PM Peak Hour
 2: Bloor Street & 1785 Bloor Street Driveway 05-25-2022

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4T	4T	4T	4T	4T
Traffic Volume (veh/h)	29	864	926	42	27	28
Future Volume (Veh/h)	29	864	926	42	27	28
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade		0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	939	1007	46	29	30
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		None	None			
Median type						
Median storage (veh)						
Upstream signal (m)		21	179			
pK platoon unblocked	0.89			0.93	0.89	
VC, conflicting volume	1053			1564	526	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol	804			1032	210	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	96			86	96	
CM capacity (veh/h)	723			203	705	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	345	626	671	382	59	
Volume Left	32	0	0	0	29	
Volume Right	0	0	0	46	30	
CSH	723	1700	1700	1700	319	
Volume to Capacity	0.04	0.37	0.39	0.22	0.19	
Queue Length 95th (m)	1.1	0.0	0.0	0.0	5.1	
Control Delay (s)	1.4	0.0	0.0	0.0	18.8	
Lane LOS	A				C	
Approach Delay (s)	0.5		0.0		18.8	
Approach LOS					C	
Intersection Summary						
Average Delay				0.8		
Intersection Capacity Utilization				54.9%		
ICU Level of Service				A		
Analysis Period (min)				15		

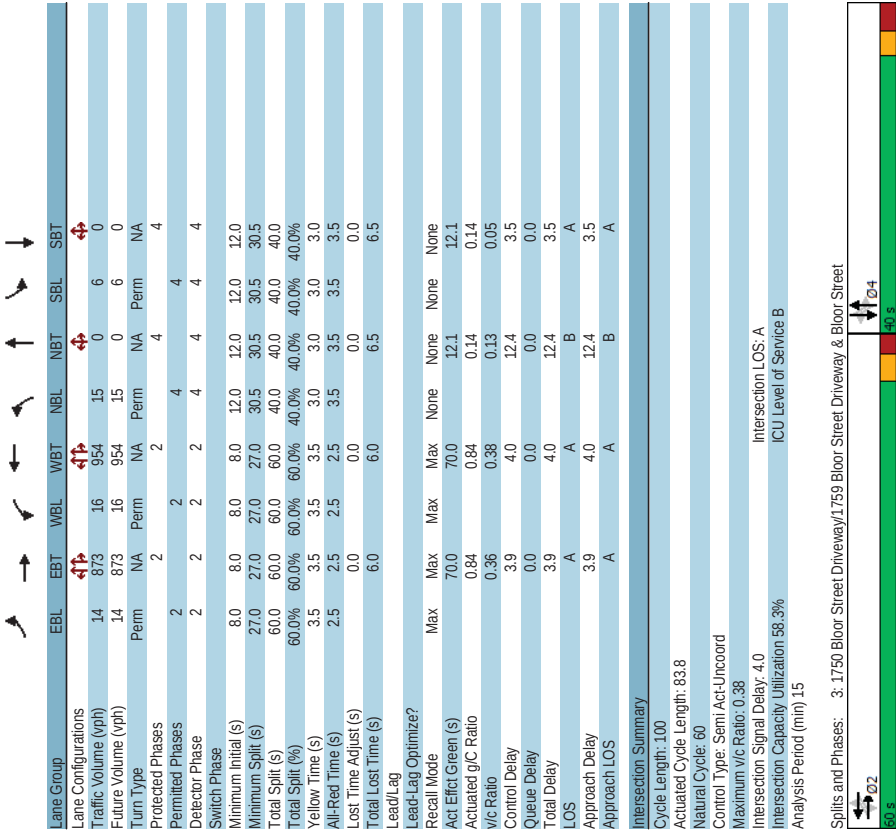
Timings
3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

HCM Signalized Intersection Capacity Analysis
3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street

<Total> 2027 Weekday PM Peak Hour
05-25-2022

<Total> 2027 Weekday PM Peak Hour
05-25-2022

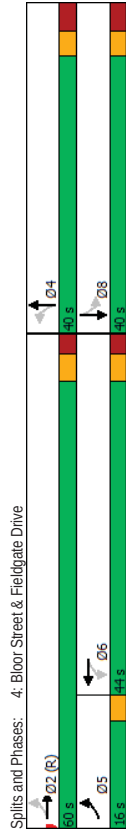
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	873	16	954	15	0	6	0
Future Volume (vph)	14	873	16	954	15	0	6	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	2	2	4	4	4	4
Permitted Phases	2	2	2	2	4	4	4	4
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	12.0	12.0	12.0	12.0
Minimum Split (s)	27.0	27.0	27.0	27.0	30.5	30.5	30.5	30.5
Total Split (s)	60.0	60.0	60.0	60.0	40.0	40.0	40.0	40.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effect Green (s)	70.0	70.0	70.0	70.0	12.1	12.1	12.1	12.1
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.14	0.14	0.14	0.14
v/c Ratio	0.36	0.36	0.38	0.38	0.13	0.05	0.05	0.05
Control Delay	3.9	3.9	4.0	4.0	12.4	3.5	3.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	3.9	4.0	4.0	12.4	3.5	3.5	3.5
LOS	A	A	A	A	B	B	A	A
Approach Delay	3.9	3.9	4.0	4.0	12.4	3.5	3.5	3.5
Approach LOS	A	A	A	A	B	B	A	A
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 83.8								
Natural Cycle: 60								
Control Type: Semi-Act-Uncoord								
Maximum v/c Ratio: 0.38								
Intersection Signal Delay: 4.0					Intersection LOS: A			
Intersection Capacity Utilization 56.3%					ICU Level of Service B			
Analysis Period (min) 15								
Splits and Phases:	3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street							
	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	40%	40%	40%	40%	40%	40%	40%	40%



Timings
4: Bloor Street & Fieldgate Drive

<Total> 2027 Weekday PM Peak Hour
05-25-2022

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	5	4	4	4	4	4	4	4
Traffic Volume (vph)	95	686	61	710	58	27	129	49
Future Volume (vph)	95	686	61	710	58	27	129	49
Turn Type	pm-pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	8	8
Permitted Phases	2	2	6	6	4	4	8	8
Detector Phase	5	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	8.0	1.0	1.0	8.0	8.0	1.0	1.0
Minimum Split (s)	10.0	34.0	34.0	34.0	40.0	40.0	40.0	40.0
Total Split (s)	16.0	60.0	44.0	44.0	40.0	40.0	40.0	40.0
Total Split (%)	16.0%	60.0%	44.0%	44.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None
Act Effect Green (s)	73.7	70.7	61.4	61.4	16.8	16.8	16.8	16.8
Actuated g/C Ratio	0.74	0.71	0.61	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.24	0.34	0.18	0.42	0.39	0.29	0.67	0.48
Control Delay	5.9	6.6	12.2	11.6	42.0	15.6	53.4	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.6	12.2	11.6	42.0	15.6	53.4	16.0
LOS	A	A	B	B	D	D	D	B
Approach Delay	6.5	6.5	11.7	11.7	26.3	26.3	32.4	32.4
Approach LOS	A	A	B	B	C	C	C	C
Intersection Summary								
Cycle Length: 100								
Actuated Cycle Length: 100								
Offset: 0 (0%), Referenced to phase 2EBTL, Start of Green								
Natural Cycle: 85								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.67								
Intersection Signal Delay: 13.4								
Intersection Capacity Utilization 76.0%								
Analysis Period (min) 15								



HCM Signalized Intersection Capacity Analysis
4: Bloor Street & Fieldgate Drive

<Total> 2027 Weekday PM Peak Hour
05-25-2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBT	SBT
Lane Configurations	5	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	95	686	82	61	710	101	58	27	58	129	49	116	116
Future Volume (vph)	95	686	82	61	710	101	58	27	58	129	49	116	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99	1.00	0.99	1.00	0.99	1.00	0.97	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.98	1.00	0.97	1.00	1.00	1.00
Fr	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.90	1.00	0.89	1.00	0.89	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1783	3496	1763	3476	1783	3476	1758	1641	1739	1641	1739	1641	1739
Flt Permitted	0.26	1.00	0.33	1.00	0.33	1.00	0.53	1.00	0.70	1.00	0.70	1.00	0.70
Satd. Flow (perm)	493	3496	615	3476	615	3476	982	1641	1274	1641	1274	1641	1274
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	0.90
Adj. Flow (vph)	106	762	91	68	789	112	64	30	64	143	54	129	129
RTOR Reduction (vph)	0	6	0	0	7	0	0	53	0	0	107	0	107
Lane Group Flow (vph)	106	847	0	68	894	0	64	41	0	143	76	0	76
Confl. Peds. (#/hr)	35	27	27	35	26	35	26	35	35	35	26	35	26
Confl. Bikes (#/hr)	1	1	1	1	1	1	1	1	1	1	1	1	1
Turn Type	pm-pt	NA	NA	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Permitted Phases	5	2	2	6	6	6	4	4	4	4	8	8	8
Actuated Green, G (s)	70.7	70.7	70.7	61.3	61.3	61.3	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Effective Green, g (s)	70.7	70.7	70.7	61.3	61.3	61.3	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Actuated g/C Ratio	0.71	0.71	0.71	0.61	0.61	0.61	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	431	2471	376	2130	2130	164	275	275	214	275	275	275	275
v/s Ratio Prot	0.02	0.024	0.11	0.07	0.07	0.07	0.11	0.11	0.11	0.11	0.11	0.11	0.11
v/s Ratio Perm	0.25	0.34	0.18	0.42	0.42	0.39	0.15	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	5.3	5.7	8.4	10.1	10.1	37.0	35.5	35.5	35.5	35.5	35.5	35.5	35.5
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.1	0.4	0.2	0.1	0.1	0.1	1.5	0.3	7.7	0.5	7.7	0.5	0.5
Incremental Delay, d2	5.4	6.0	8.7	10.2	10.2	38.6	35.7	35.7	46.7	36.8	46.7	36.8	36.8
Delay (s)	A	A	A	B	B	D	D	D	D	D	D	D	D
Level of Service	A	A	A	B	B	D	D	D	D	D	D	D	D
Approach Delay (s)	6.0	6.0	10.1	10.1	10.1	36.9	41.1	41.1	41.1	41.1	41.1	41.1	41.1
Approach LOS	A	A	B	B	B	D	D	D	D	D	D	D	D
Intersection Summary													
HCM 2000 Control Delay	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
HCM 2000 Volume to Capacity ratio	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Actuated Cycle Length (s)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intersection Capacity Utilization	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%
Analysis Period (min)	15	15	15	15	15	15	15	15	15	15	15	15	15
c Critical Lane Group													

Intersection: 1: Bloor Street & Bridgewood Drive											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LT	TR	LT	TR	LT	TR	LT	TR	LT	TR	LT
Maximum Queue (m)	65.4	66.4	40.1	39.4	60.9	36.7					
Average Queue (m)	39.3	40.9	19.8	18.2	27.9	15.9					
95th Queue (m)	62.3	67.2	33.5	36.3	49.5	28.4					
Link Distance (m)	165.6	165.6	503.7	509.7	75.1	152.2					
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bloor Street & 1785 Bloor Street Driveway											
Movement	EB	WB	WB	WB	SB	SB	SB	SB	SB	SB	SB
Directions Served	LT	T	TR	LR							
Maximum Queue (m)	15.2	35.5	29.9	9.1							
Average Queue (m)	2.3	7.3	10.4	3.0							
95th Queue (m)	10.0	21.7	27.6	10.1							
Link Distance (m)	12.1	165.6	165.6	65.1							
Upstream Blk Time (%)	0										
Queuing Penalty (veh)	1										
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LT	TR	LT	TR	LT	TR	LT	TR	LT	TR	LT
Maximum Queue (m)	52.0	53.3	15.8	22.2	22.4	8.9					
Average Queue (m)	22.7	24.9	12.7	13.1	11.3	3.2					
95th Queue (m)	44.8	47.4	19.6	22.5	20.6	10.3					
Link Distance (m)	199.8	199.8	12.1	12.1	37.8	43.0					
Upstream Blk Time (%)			8	9							
Queuing Penalty (veh)			25	27							
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: Bloor Street & Fieldgate Drive											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	40.5	54.9	55.9	20.9	61.7	77.4	34.3	34.0	49.0	53.0	
Average Queue (m)	19.1	31.7	33.1	5.8	34.5	40.4	12.6	14.7	28.8	28.5	
95th Queue (m)	34.5	49.1	52.0	14.9	57.8	65.2	28.5	27.8	46.2	48.3	
Link Distance (m)		552.4	552.4	199.8	199.8	141.4				163.6	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	50.0			50.0		40.0			25.0		
Storage Blk Time (%)	0			2		0			19		8
Queuing Penalty (veh)	0			1		0			40		13

Network Summary											
Network wide Queuing Penalty: 108											

Intersection: 1: Bloor Street & Bridgewood Drive											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LT	TR	LT	TR	LT	TR	LT	TR	LT	TR	LT
Maximum Queue (m)	70.8	83.6	73.5	57.5	34.1	33.8					
Average Queue (m)	25.0	33.6	37.3	31.9	16.9	13.3					
95th Queue (m)	54.1	64.6	57.9	56.5	29.2	24.9					
Link Distance (m)	165.6	165.6	509.7	509.7	75.1	152.2					
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bloor Street & 1785 Bloor Street Driveway											
Movement	EB	WB	WB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served	LT	T	TR	LR							
Maximum Queue (m)	15.3	72.6	68.1	15.5							
Average Queue (m)	7.5	38.2	43.6	4.6							
95th Queue (m)	18.8	67.7	68.7	13.1							
Link Distance (m)	12.1	165.6	165.6	65.1							
Upstream Blk Time (%)	4										
Queuing Penalty (veh)	17										
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 3: 1750 Bloor Street Driveway/1759 Bloor Street Driveway & Bloor Street											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LT	TR	LT	TR	LT	TR	LT	TR	LT	TR	LT
Maximum Queue (m)	73.5	70.8	19.4	22.6	15.7	8.9					
Average Queue (m)	27.7	32.2	15.8	15.8	6.0	1.3					
95th Queue (m)	48.9	56.3	17.2	18.0	13.7	6.4					
Link Distance (m)	199.8	199.8	12.1	12.1	37.8	43.0					
Upstream Blk Time (%)			29	32							
Queuing Penalty (veh)			133	147							
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: Bloor Street & Fieldgate Drive											
Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	34.6	49.3	51.9	28.7	47.4	47.8	34.9	21.0	59.6	101.1	
Average Queue (m)	14.0	29.8	33.2	11.9	16.3	20.0	12.8	10.8	25.0	24.4	
95th Queue (m)	26.0	46.5	51.2	24.0	35.5	39.9	25.8	19.0	48.9	55.5	
Link Distance (m)		552.4	552.4		199.8	199.8		141.4		163.6	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	50.0			50.0		40.0		25.0			
Storage Blk Time (%)	0			0		0		13		5	
Queuing Penalty (veh)	0			0		0		22		6	

Network Summary											
Network wide Queuing Penalty: 326											



APPENDIX D

Pedestrian Crossover (PXO) Survey

Signalized Pedestrian Crossing Survey



Location: Bloor Street PXO, 40m west of 1785 Bloor Street Driveway

Ped Signal Duration: 30 Seconds

Interval	Ped Call	Number of Cars Queued (West Leg)	Ped Calls/Hour = 13	
			Average Number of Cars Queued = 5	
8:00	x	4		
	x	4		
	x	1		
8:15	x	10		
	x	8		
	x	1		
	x	9		
	x	0		
8:30	x	5		
	x	5		
	x	4		
8:45	x	12		
	x	1		
Total	13			

3:00	x	5	Ped Calls/Hour = 14	
	x	3	Average Number of Cars Queued = 9	
	x	6		
	x	8		
	x	14		
3:15	x	12		
	x	13		
3:30	x	8		
	x	12		
	x	6		
	x	11		
	x	12		
3:45	x	12		
	x	6		
Total	14			



APPENDIX E

City of Mississauga Zoning By-law 0225-2007

You are printing a partial view of the Mississauga Interactive Zoning By-law 0225-2007 on 5/24/2022, 6:51:38 PM based on your selection(s). This information is provided for convenience purposes only as it may not reflect recently approved amendments. To view the entire Interactive Zoning By-law, visit www.mississauga.ca/zoningbylaw

Mississauga Zoning By-law 0225-2007 (In Effect)

Disclaimer about print version. Disclaimer: The online version of Zoning By-law 0225-2007 is provided for convenience purposes only as it may not reflect recently approved amendments. Review unconsolidated by-law amendments. It should not be relied on when making decisions in connection with real estate transactions, development proposals or building permits.

3 Parking, Loading and Stacking Lane Regulations

3.1 Parking, Loading and Stacking Lane Regulations

3.1.1 Parking Regulations

3.1.2 Required Number of Parking Spaces

3.1.2.1 Required Number of Parking Spaces for Residential Uses

Off-street parking spaces for residential uses shall be provided in accordance with Table 3.1.2.1 - Required Number of Parking Spaces for Residential Uses.

Table 3.1.2.1 - Required Number of Parking Spaces for Residential Uses

Column A	B
Line 1.0	MINIMUM OFF-STREET PARKING REGULATIONS
2.0	Condominium <u>Apartment</u> (0207-2008), (0174-2017), (0179-2018) 1.00 resident space per studio unit 1.25 resident spaces per one-bedroom unit 1.40 resident spaces per two-bedroom unit 1.75 resident spaces per three-bedroom unit 0.20 visitor spaces per unit
3.0	Rental <u>Apartment</u> (0207-2008), (0174-2017), (0179-2018) 1.00 resident space per studio unit 1.18 resident spaces per one-bedroom unit 1.36 resident spaces per two-bedroom unit 1.50 resident spaces per three-bedroom unit 0.20 visitor spaces per unit
4.0	<u>Apartment</u> (within CC1 to CC4 zones) (0207-2008), (0174-2017) 1.0 resident space per unit 0.15 visitor spaces per unit ⁽¹⁾ For the visitor component, a shared parking arrangement may be used for the calculation of required visitor/non-residential parking in accordance with the following: the greater of 0.15 visitor spaces per unit ⁽¹⁾⁽²⁾ or Parking required for all non-residential <u>uses</u>, located in the same <u>building</u> or on the same <u>lot</u> as the residential <u>use</u>, except <u>banquet hall/conference centre/convention centre</u>, <u>entertainment establishment</u>, <u>overnight accommodation</u>, <u>place of religious assembly</u>, <u>recreational establishment</u> and <u>restaurant</u>. ⁽¹⁾⁽²⁾ Parking for <u>banquet hall/conference centre/convention centre</u>, <u>entertainment establishment</u>, <u>overnight accommodation</u>, <u>place of religious assembly</u>, <u>recreational establishment</u> and <u>restaurant</u> shall not be included in the above shared parking arrangement and shall be provided in accordance with applicable regulations contained in <u>Table 3.1.2.2</u> of this By-law.
5.0	<u>Detached Dwelling</u>, <u>Linked Dwelling</u>, <u>Semi-Detached</u>, <u>Street Townhouse</u> (0297-2013), (0174-2017), (0181-2018)/LPAT Order 2019 February 15) 2.0 spaces per unit



APPENDIX F

Parking Utilization Survey Results

**1785 Bloor Street - Parking
Utilization Study**



Site: 1785 Bloor Street, Mississauga
 Land Use: 76-unit Rental Apartment
 Start time, date: Thursday, November 25, 2021
 Parking Supply: 99 parking spaces

Start Time	Occupied Spots	Start Time	Occupied Spots
0:00	62	12:00	37
0:30	62	12:30	36
1:00	63	13:00	30
1:30	64	13:30	30
2:00	63	14:00	31
2:30	63	14:30	33
3:00	64	15:00	33
3:30	64	15:30	36
4:00	64	16:00	31
4:30	63	16:30	33
5:00	63	17:00	35
5:30	60	17:30	37
6:00	55	18:00	46
6:30	54	18:30	51
7:00	52	19:00	54
7:30	51	19:30	56
8:00	43	20:00	56
8:30	40	20:30	54
9:00	40	21:00	58
9:30	39	21:30	60
10:00	36	22:00	61
10:30	34	22:30	62
11:00	33	23:00	65
11:30	33	23:30	70